



# **SAFE-WORK-PRACTICES MANUAL**

**Protecting People & The Environment**



# S.W.A.P. INC.

Southern Well Abandonment & Peddling

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Implemented: July, 2018

## **COMPANY SAFETY STANDARDS**

### **PURPOSE**

The purpose of this program is to educate & inform employees on Company's Management Structure as well as how to recognize, avoid and prevent unsafe acts & conditions in the workplace.

### **1.0 COMPANY STRUCTURE AND EMPLOYEE QUALIFICATIONS**

- A. The Company shall maintain a current Organizational Chart as well as a list of job titles and positions that detail minimum qualifications required to perform each role and job classification, which may be achieved through a combination of formal education and work experience. This information shall be made readily available to all Company Employees.
- B. In order to consistently provide a safe work environment for all employees, the Company shall also maintain procedures to ensure that documentation is acquired from employees as proof that they are qualified to perform their job duties. Proof of documentation that employees meet the qualifications of their job shall include, but not limited to, "Annual Test-Outs" & "Hands-On Evaluations" specific to job tasks requirements.
- C. Job specific training shall be provided for new or transferred employees. Company Employees shall receive training on the job tasks they perform on a regular basis. A competent person (Company Supervisor and/or Manager) shall verify that an employee is competent to perform their roles and responsibilities before being allowed to work independently.

### **2.0 RESPONSIBILITIES**

- A. To achieve the Company's safety objectives, Management will comply with all applicable federal, state, local requirements and applicable industry standards and will be ultimately responsible for:
  - Conducting, documenting and participating in weekly and monthly scheduled safety meetings,
  - Ensuring Employees are trained on all Company Safety Policies, Procedures and Job Specific related tasks,
  - Ensuring training is documented and readily available for internal & external audits, and
  - Resolving safety related issues brought to their attention by Company personnel.

- B. Frontline Supervisors are responsible for providing Management with assistance towards enforcing Company safety standards including but not limited to:
  - Conducting, documenting and participating in weekly and monthly scheduled safety meetings,
  - Communicating any changes to Company safety policies,
  - Advising Client Representatives of all identified hazards in the workplace,
  - Resolving deficiencies and implementing safety suggestions at field locations,
  - Ensuring that all Company safety and regulatory requirements are adhered to by all personnel under their supervision,
  - Report and investigate all accidents, determine the source of the accident and implement corrective actions that will prevent recurrence in a timely manner
- C. Company Employees are responsible for:
  - Attending and participating in monthly safety meetings,
  - Proactively participating in all Company required Safety, Regulatory and Job Specific training,
  - Utilizing the training they have received while performing any occupational related task, and
  - Adhering to all Company Safety Policies and Job Specific Procedures.

### 3.0 WORKING ALONE OR NEAR WATER

- A. Employees who will be performing work over or near water, where the danger of drowning exists will not permitted to work alone at any time.
- B. Prior to the start of any job task, a hazard assessment shall be conducted and a pre-task plan shall be completed and signed by all members of the a crew that may be working over or near water. Employees working over or near water shall be adequately trained in their responsibilities as well as the safe work practices associated with this task. Additionally, a hazard/risk assessment shall be conducted to identify control measures that must be implemented prior to any employee performing a job task while working alone. A Lone-Worker must carry a cellular phone or a two-way radio and shall communicate with the Company's Onsite Supervisor or Person-In-Charge at a minimum of 15-Minute intervals or based on determinations made during the risk assessment. Check-In intervals shall be documented.
- C. Employees working over or near water shall be provided with a U.S. Coast Guard-approved life jacket or buoyant work vest when the danger of drowning exists. Workers shall inspect buoyant work vests or life preservers for defects which could alter their strength or buoyancy prior to, and after, each use. Defective units shall not be used. Additionally, ring buoys must be provided with at least 90 feet of line and the distance between ring buoys may not exceed 200 feet.

- D. At least one lifesaving skiff shall be made available when employees are working over or near water. Additionally, Lone-Workers shall be provided with a First-Aid Kit. In the event that a Lone-Worker does not respond within the established communication intervals, the Company's Onsite Supervisor and/or the Person-In-Charge will be immediately dispatched to the site of the Lone-Worker. Emergency Services and local authorities shall be contacted within 15-Minutes if the Lone-Worker is injured or missing.

#### 4.0 EQUIPMENT MAINTENANCE

- A. The Company shall maintain a current inventory list of machinery & equipment. When new machinery or equipment is acquired, it shall be added to the inventory.
- B. Additionally, the Company shall maintain a preventative maintenance schedule based on manufacturer requirements and industry standards. Preventive maintenance performed on machinery or equipment shall be documented and retained for the life of the machinery or equipment. Defects observed in machinery or equipment shall be reported to a Company Supervisor or Manager and must be repaired or replaced before being used again.

#### 5.0 ALTERNATIVE CUTTING TOOLS

- A. The objective of utilizing Alternative Cutting Tools is to reduce and/or eliminate the risk of employees being cut or injured by knives or hand-held tool blades during cutting operations.
- B. Company Employees shall utilize one the following Alternative Cutting Tools during any hand-held cutting operation:
  - Self-Retracting Utility Knife,
  - Diagonal Cutting Pliers, or
  - Ratcheting PVC Cutter
- C. As part of the Company's Safe Work Practices, cutting gloves shall be utilized during any hand-held knife (cutting) operation. Note: It is imperative that the glove be the correct size.

#### 6.0 MATERIAL & STORGE HANDLING (29 CFR 1926.250)

- A. Containers, bundles and boxes shall be stacked, blocked, and limited in height so that they are stable and secure against sliding, falling or collapse.

- B. Permanent aisles and passageways shall be kept clear to provide for the free and safe movement of material handling, equipment and/or employees. Where mechanical equipment is to be used, sufficient safe clearances shall be allowed for aisles, at loading docks, and through doorways.
- C. Materials stored on pallets shall not exceed four (4) pallets in height. If empty pallets are to be stored inside an enclosed storage area or warehouse, they shall be stacked no more than 6 feet in height.
- D. Non-compatible materials and chemicals shall be segregated in storage.

#### 7.0 SANITATION (29 CFR 1926.51)

- A. The Company shall ensure that an adequate supply of potable water shall be provided in all places of employment.
- B. Outlets for non-potable water, such as water for industrial or firefighting purposes only, shall be identified by signs to indicate clearly that the water is unsafe and is **not** to be used for drinking, washing, or cooking purposes.
- C. The Company shall provide adequate washing facilities for employees engaged in the application of chemicals (e.g., paints, coatings, or in other operations where contaminants may be harmful to the employees). The wash facilities shall be in near proximity to the worksite and shall be equipped as to enable employees to remove any harmful chemicals.
- D. During any operational procedure that involves the use of chemicals, no employee shall be allowed to consume food or beverages in any restroom or area exposed to a toxic material.

#### 8.0 SIGN, SIGNALS & BARRICADES (29 CFR 1926.200)

- A. During any operational task, the Site Supervisor shall ensure that all applicable hazard signs and symbols are visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.
- B. Danger signs shall be used only where an immediate hazard exists.
- C. Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices.
- D. Construction areas shall be posted with legible traffic signs at points of hazard.

- E. Accident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc.

*Note: Accident prevention tags shall **not** be used in place of, or as a substitute for, accident prevention signs.*

## 9.0 GENERAL EMPLOYEE SAFETY

- A. Employees are exposed to many hazards, which might not be easily recognizable to the untrained eye. To avoid injury, they must exercise reasonable care and good judgment in the performance of their daily work.
- B. Consequently, the following safety precautions shall be adhered to by all employees with an ultimate goal of preventing bodily injury or damage to property:
  - 1. No horseplay of any kind is allowed in the office. Examples of unacceptable horseplay may include, but not be limited to practical jokes as well as those incidents bordering on sexual harassment.
  - 2. Good housekeeping is paramount to promoting office safety, and assisting in effective fire prevention. Additionally, good housekeeping has been proven to be effective in reducing the number of slip, trip and fall accidents occurring in the work place.
  - 3. Take your time when exiting doorways into halls or from other rooms.
  - 4. Evaluate all items which will be manually lifted, and get help when lifting an object which is clearly too heavy for one person to lift safely.
  - 5. Use caution when going down stairs. Always maintain "three-points of contact" (at least one foot, eyes on path, and one hand on the railing or rung at all times) when ascending or descending stairs.
  - 6. Supervisors or a Competent Person shall conduct daily inspections of job sites, materials and equipment.
  - 7. Smoking is only permitted in "Designated Smoking Areas" only.
  - 8. Due to "Hot Work" operations, employees are required to have shirt-tails tucked in at all times.
  - 9. Report all work related incident and injuries to your immediate Supervisor, regardless of severity.

## 10.0 GENERAL EMPLOYEE TRAINING

- A. The Company shall instruct each employee in the recognition and avoidance of unsafe acts & conditions as well as regulations applicable to their work environment to control or eliminate any hazards or other exposures that could cause injury or illness.
- B. Only qualified employees by training or experience shall operate equipment and machinery. Before being assigned any work tasks, employees shall be trained on the hazards of equipment, machinery operations and maintenance including mobile and hydro-blast equipment. Training shall address the potential bodily hazards specific to each type of equipment (i.e., penetration of the skin by high pressure water, etc.). If an accident occurs, medical attention must be given immediately.
- C. Training shall be provided for all employees whose duties include working in or around an Inert Space. The Company shall certify that the required training has been accomplished. The certification shall include employee name, trainer signature/initials, and dates of training. Certification shall be made available to employees & their authorized representative.



## **ACCESS TO MEDICAL RECORDS**

"29 CFR 1910.1020"

### **PURPOSE**

The purpose of this program is to provide employees and their designated representative(s), a right of access to relevant exposure and medical records and to provide representatives of the Assistant Secretary a right to access to these records in order to fulfill responsibilities under the Occupational Safety and Health Act.

### **1.0 DEFINITIONS**

- A. Access – means the right and opportunity to examine and copy.
- B. Analysis Using Exposure or Medical Records – means any compilation of data, or any research, statistical or other study based at least in part on information collected from individual employee exposure or medical records or information collected from health insurance claims records, provided that either the analysis has been reported to the Company or no further work is currently being done by the person responsible for preparing the analysis.
- C. Designated Representative – means any individual or organization to which an employee gives written authorization to exercise a right of access. For the purpose of access to employee exposure records and analysis using exposure or medical records, a recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.
- D. Employee – means a current employee, a former employee, or an employee being assigned or transferred to work where there will be exposure to toxic substances or harmful physical agents. In the case of a deceased or legally incapacitated employee, the employee's legal representative may directly exercise all the employee's rights under this section.
- E. Employee Exposure Records – means a record containing any of the following kinds of information concerning employee exposure to toxic substances or harmful physical agents:
  - 1. Environmental (workplace) monitoring or measuring, including personal, area, grab, wipe, or other form of sampling, as well as related collection and analytical methodologies, calculations, and other background data relevant to interpretation of the results obtained:

2. Biological monitoring results which directly assess the absorption of a toxic substance or harmful physical agent by body systems (e.g., the level of a chemical in the blood, urine, breath, hair, fingernails, etc.), but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs;
  3. Material safety data sheets indicating that the material may pose a hazard to human health; or,
  4. In the absence of the above, any other record which reveals the identity (e.g. chemical, common, or trade name) of a toxic substance or harmful physical agent.
- F. Employee Medical Record – means a record concerning the health status of an employee which is made or maintained by a physician, nurse, or other health care personnel, or technician, including:
1. Medical and employment questionnaires or histories (including job description and occupational exposures)
  2. The results of medical examinations (pre-employment, pre-assignment or periodic) and laboratory tests (including X-ray examinations and all biological monitoring),
  3. Medical opinions, diagnoses, progress notes and recommendations,
  4. Descriptions of treatments and prescriptions, and
  5. Employee medical complaints.
- G. Employee Medical Record – does not include the following:
1. Physical specimens (e.g. blood or urine samples) which are routinely discarded as a part of normal medical practice, and are not required to be maintained by other legal requirements.
  2. Records concerning health insurance claims if maintained separately from the Company's medical program and its records, and not accessible to the Company by employee name or other direct personal identifier (e.g. social security number, payroll number, etc.) or
  3. Records concerning voluntary employee assistance programs (alcohol, drug abuse, or personal counseling programs) if maintained separately from the Company's medical program and its records.

- H. Company – means the current Company, a former Company, or a successor Company.
- I. Exposure or Exposed – means that an employee is subjected to a toxic substance or harmful physical agent in the course of employment through any route of entry (inhalation, ingestion, skin contact or absorption, etc.) and includes past exposure and potential (e.g. accidental or possible) exposure, but does not include situations where the Company can demonstrate that the toxic substance or harmful physical agent is not used, handled, stored, generated or present in the workplace in any manner different from typical non-occupational situations.
- J. Record – means any item, collection or grouping of information regardless of the form or process by which it is maintained (e.g. paper document, microfiche, microfilm, X-ray film, or automated data processing).
- K. Specific Written Consent – means a written authorization containing the following:
1. The name and signature of the employee authorizing the release of medical information.
  2. The data of the written authorization.
  3. The name of the individual or organization that is authorized to release the medical information.
  4. The name of the designated representative (individual or organization) that is authorized to receive the release information.
  5. A general description of the medical information is authorized to be released.
  6. A general description of the purpose for the release of the medical information, and
  7. A date or condition upon which the written authorization will expire (if less than one year).
  8. A written authorization – does not operate to authorize the release of medical information not in existence on the date of written authorization, unless this is expressly authorized, and does not operate for more than one year from the date of written authorization.
  9. A written authorization may be revoked in writing prospectively at any time.

- L. Toxic Substance or Harmful Physical Agent – means any chemical substance, biological agent (bacteria, virus, fungus, etc.) or physical stress (noise, heat, cold, vibration, repetitive motion, ionizing and non-ionizing radiation, hypo- or hyper baric pressure, etc.) which:
1. Is regulated by any Federal law or rule due to a hazard to health,
  2. Is listed in the latest printed edition of the National Institute for Occupational Safety and Health (NIOSH) Registry of Toxic Effects of Chemical Substances (RTECS),
  3. Has yielded positive evidence of an acute or chronic health hazard in human, animal or other biological testing conducted by, or known to, the Company, or
  4. Has material safety data sheet available to the Company indicating that the material may pose a hazard to human health.

## 2.0 PRESERVATION OF RECORDS

- A. Unless a specific occupational safety and health standard provides a different period of time, each Company shall assure the preservation and retention of records as follows:
1. Employee Medical Records – Each employee medical record shall be preserved and maintained for at least the duration of employment plus thirty (30) years, except that health insurance claims records maintained separately from the Company's medical program and its records need not be retained for any specified period.
  2. Employee Exposure Records – Each employee exposure record shall be preserved and maintained for at least thirty (30) years, except that:
    - a. Background data to environmental (workplace) monitoring or measuring, such as laboratory reports and worksheets, need only be retained for one (1) year so long as the sampling results, the collection methodology (sampling plan), a description of the analytical and mathematical methods used, and a summary of other background data relevant to interpretation of the results obtained, are retained for at least thirty (30) years; and

- b. Material safety data sheets and records concerning the identity of a substance or agent need not be retained for any specified period as long as some record of the identity (chemical name if known) of the substance or agent, where it was used, and when it was used is retained for at least thirty (30) years.
- B. Nothing in this section is intended to mandate the form, manner, or process by which the Company preserves a record so long as the information contained in the record is preserved and retrievable, except that x-ray films shall be preserved in their original state.

### 3.0 GENERAL ACCESS

- A. Whenever an employee or designated representative requests access to a record, the Company shall assure that access is provided in a reasonable time, place and manner, but in no event later than fifteen (15) days after the request for access is made.
- B. Whenever an employee or designated representative requests a copy of a record, the Company shall, within the period of time previously specified, assure that either:
  - 1. A copy of the record is provided without cost to the employee or representative.
  - 2. The necessary mechanical copying facilities (e.g. photocopying) are made available without cost to the employee or representative for copying the record, or
  - 3. The record is loaned to the employee or representative for a reasonable time.
- C. Whenever a record has been previously provided without cost to an employee or designated representative, the Company may charge reasonable, non-discriminatory administrative costs (i.e. search and copying expenses but not including overhead expenses) for a request by the employee or designated representative for additional copies of the record, except that:
  - 1. The Company shall not charge for an initial request for a copy of new information that has been added to a record which was previously provided; and
  - 2. The Company shall not charge for an initial request by a recognized or certified collective bargaining agent for a copy of an employee exposure record or an analysis using exposure or medical records.

- D. Nothing in this section is intended to preclude employees and collective bargaining agents from collectively bargaining to obtain access to information in addition to that available under this section.

#### 4.0 EMPLOYEE & DESIGNATED REPRESENTATIVE ACCESS

- A. Employee Exposure Records – The Company shall, upon request, assure the access of each employee and designated representative to employee exposure records relevant to the employee. For the purpose of this section, exposure records relevant to the employee consist of:

1. Records of the employee's past or present exposure to toxic substances or harmful physical agents,
2. Exposure records of other employees with past or present job duties of working conditions related to or similar to those of the employee,
3. Records containing exposure information concerning the employee's workplace to working conditions, and
4. Exposure records pertaining to workplaces or working conditions to which the employee is being assigned or transferred.

#### B. EMPLOYEE MEDICAL RECORDS

1. The Company shall, upon request, assure the access of each employee-to-employee medical records of which the employee is the subject.
2. The Company shall, upon request, assure the access of each designated representative to the employee medical records of any employee who has given the designated representative specific written consent.
3. Whenever access to employee medical records is requested, a physician representing the Company may recommend that the employee or designated representative:
  - a. Consult with the physician for the purpose of reviewing and discussing the records requested,
  - b. Accept a summary of material facts and opinions in lieu of the records requested, or
  - c. Accept release of the requested records only to a physician or other designated representative.

4. Whenever an employee requests access to his or her employee medical records, and a physician representing the Company believes that direct employee access to information contained in the records regarding a specific diagnosis of a terminal illness or a psychiatric condition could be detrimental to the employee's health, the Company may inform the employee that access will only be provided to a designated representative of the employee's request for direct access to this information only. Where a designated representative with specific written consent requests access to information so withheld, the Company shall assure the access of the designated representative to this information, even when it is known that the designated representative will give the information to the employee.
5. Nothing in this section precludes a physician, nurse or other responsible health care personnel maintaining employee medical records from deleting from requested medical records the identity of a family member, personal friend, or fellow employee who has provided confidential information concerning an employee's health status.

#### C. ANALYSIS USING EXPOSURE OR MEDICAL RECORDS

1. The Company shall, upon request, assure the access of each employee and designated representative to each analysis using exposure or medical records concerning the employee's working conditions or workplace.
2. Whenever access is requested to an analysis which reports the contents of employee medical records by either direct identifier (name, address, social security number, payroll number, etc.) or by information which could reasonably be used under the circumstances indirectly to identify specific employees (except age, height, weight, race, sex, date of initial employment, job title, etc.), the Company shall assure that personal identifiers are removed before access is provided. If the Company can demonstrate that removal of personal identifiers from an analysis is not feasible, access to the personally identifiable portions of the analysis need not be provided.

#### 5.0 OSHA ACCESS

- A. The Company shall, upon request, assure the immediate access of representatives of the Assistant Secretary of Labor for Occupational Safety and Health to employee exposure and medical records and to analysis using exposure or medical records. Rules of agency practice and procedure governing OSHA access to employee medical records are contained in 29 CFR 1913.10.

- B. Whenever OSHA seeks access to personally identifiable employee medical information by presenting to the Company a written access order pursuant to 29 CFR 1913.10 (d), the Company shall prominently post a copy of the written access order and its accompanying cover letter for at least fifteen (15) working days.

## 6.0 TRADE SECRETS

- A. Nothing in this section precludes the Company from deleting from records requested by an employee or designated representative any trade secret data which discloses manufacturing processes, or discloses the percent of a chemical substance in a mixture, as long as the employee or designated representative is notified that information has been deleted. Whenever deletion of trade secret information substantially impairs evaluation of the place where or the time when exposure to a toxic substance or harmful physical agent occurred, the Company shall provide alternative information which is sufficient to permit the employee to identify where and when exposure occurred.
- B. Notwithstanding any trade secret claims, whenever access to records is requested, the Company shall provide access to chemical or physical agent identities including chemical names, levels of exposure, and employee health status data contained in the requested records.
- C. Whenever trade secret information is provided to an employee or designated representative, the Company may require, as a condition of access, that the employee or designated representative agree in writing not to use the trade secret information for the purpose of commercial gain and not to permit misuse of the trade secret information by a competitor, potential competitor or the Company.

## 7.0 EMPLOYEE INFORMATION

- A. Upon an employee's first entering into employment, and at least annually thereafter, the Company shall inform employees exposed to toxic substances or harmful physical agents of the following:
  - 1. The existence, location and availability of any records covered by this section:
  - 2. The person responsible for maintaining and providing access to records; and
  - 3. Each employee's rights of access to these records.



- B. The Company shall make readily available to employees a copy of this standard and its appendices, and shall distribute to employees any informational materials concerning this standard, which are made available to the Company by the Assistant Secretary of Labor for Occupational Safety and Health.

## 8.0 TRANSFER OF RECORDS

- A. Whenever an employee is ceasing to do business, the Company shall transfer all records subject to this section to the successor Company. The successor Company shall receive and maintain these records.
- B. Whenever the Company is ceasing to do business and there is no successor Company to receive and maintain the records subject to this standard, the Company shall notify affected employees of their rights of access to records at least three (3) months prior to the cessation of the Company's business.
- C. Whenever the Company either ceases to do business and there is no successor Company to receive and/or maintain the records, the Company shall ensure that records are preserved for at least thirty (30) years by:
  - 1. Transferring the records to the Director of the National Institute for Occupational Safety and Health (NIOSH) if so required by a specific occupational safety and health standard; or
  - 2. Notifying the Director of NIOSH in writing of the impending disposal of records at least three (3) months prior to the disposal of the records.

## **ASBESTOS AWARENESS & MANAGEMENT**

### **PURPOSE**

The purpose of this program is to provide information about asbestos, the potential health effects associated with exposure, and safety procedures that should be followed to reduce exposure and protect the health of employees.

### **1.0 IDENTIFYING ASBESTOS**

- A. There are many substances that workers contact that may contain asbestos and have the potential to release fibers. The presence of asbestos cannot be confirmed visually. The only way to positively identify asbestos is through laboratory analysis of samples.
- B. If the presence of asbestos is suspected, always assume that it is an asbestos containing material and have it analyzed.

### **2.0 HEALTH HAZARDS**

- A. Exposure to asbestos can cause disabling respiratory diseases and several types of cancer. The main routes of exposure are inhalation and ingestion. Though Asbestos fibers cannot penetrate the skin, Asbestos has been shown to cause asbestosis, lung cancer, mesothelioma, and cancer of the stomach and colon. The majority of people who have died from asbestos exposure were exposed to very high concentrations of asbestos fibers at work and had little or no protection. These employees worked with asbestos regularly and for long periods of time. Examples include workers who held jobs in industries such as shipbuilding, mining, milling, and fabricating. Many of these workers were also smokers.
- B. The most dangerous exposure to asbestos is from inhaling airborne fibers. The body's defenses can trap and expel many of the particles. However, as the level of asbestos fibers increase many fibers bypass these defenses and become embedded in the lungs. The fibers are not broken down by the body and can remain in body tissue indefinitely.

### 3.0 GENERAL SAFETY PROCEDURES

- A. Everyone has probably been exposed to asbestos because it is so widely used. Asbestos materials are used in the manufacturing of heat-resistant clothing, automotive brake and clutch linings, and a variety of building materials including insulation, soundproofing, floor tiles, roofing felts, ceiling tiles, asbestos-cement pipe and fire-resistant drywall. Asbestos is also present in pipe and boiler insulation materials, pipeline wrap and in sprayed-on materials located on beams, in crawlspaces, and between walls. The health risks associated with asbestos are directly related to the amount and frequency of exposure. Decreasing exposure to asbestos will decrease the health risks associated with it. This can be done by following safe work practices and taking proper precautions.
- B. The following general precautions will reduce exposure and lower the risk of asbestos related health problems:
- Avoid drilling, sawing, or using nails on asbestos materials that can release asbestos fibers.
  - Avoid sanding on floor tiles, ceiling tiles or adhesives that contain asbestos.
  - Use care not to damage asbestos when moving furniture, ladders, etc.
  - Avoid touching or disturbing asbestos materials on walls, ceilings, pipes, ducts, or boilers.
  - Report any damage, change in condition, or loose asbestos containing material to a supervisor.
  - All removal or repair work involving asbestos must be done by specially trained personnel.
  - Always handle asbestos wet to help prevent fibers from being released.
  - Always use an approved asbestos respirator when working with asbestos dust.
  - Avoid dusting, sweeping, or vacuuming asbestos dust with a standard vacuum cleaner that will put the fibers back into the air.
  - Air monitoring shall be conducted to ensure that no employee is exposed to an airborne concentration of asbestos in excess of 1.0 fiber per cubic centimeter of air (1 f/cc) in 30 minutes. The air quality (safety) is to be determined from breathing zone air samples. The samples shall be representative of the 8-hour TWA and 30-minute short-term exposure. All measurements shall be documented.
  - Always post signs and labels in regulated areas to identify asbestos material, its location, and appropriate work practices which, if followed, will ensure that asbestos containing material (ACM) and/or presumed asbestos containing material (PACM) will not be disturbed. The Company shall ensure that signs & labels meet OSHA requirements.

- The Onsite Supervisor shall limit access to regulated areas whenever airborne concentrations of asbestos are present. The limit shall comply with that of the TWA and/or excursion limit. The procedures shall indicate that access is limited to regulated areas.
- When feasible, the Onsite Supervisor shall address engineering controls & work practices to reduce and/or maintain the exposure below time weighted average (TWA). This may include exhaust systems for hand tools, wet methods, clean-up procedures & PPE. PPE shall include, but not limited to, coveralls, gloves, head coverings, foot coverings, face shields & vented goggles.
- If the time weighted average (TWA) and/or excursion limit is exceeded, a written program to reduce employee exposure shall be implemented to reduce employee exposures to below the TWA or below the excursion limit.
- *Note: When on multi-contractor worksites, the Company shall remove employees from any area adjacent to a Class I Asbestos jobsite if there is inadequate containment of asbestos materials or dust.*

#### 4.0 EMPLOYEE TRAINING

- A. The Company shall provide Asbestos awareness training for employees whose work activities may contact asbestos containing material (ACM) or presumed asbestos containing material (PACM), but do not disturb the ACM or PACM during their work activities.
- B. Additional training shall be provided to employees directly involved in Asbestos operations prior to or at the time of initial assignment & at least annually thereafter. The training program shall be done in a manner that the employee is able to understand & shall include health effects associated with exposure to asbestos. The training curriculum shall include written materials that are provided to all affected employees and shall be made readily available to the assistant Secretary of Labor for Occupational Safety and Health and the director of the National Institute for Occupational Safety and Health.
- C. Respirators shall be used in the following 4 circumstances;
  - Work Operations,
  - Work Practice Controls,
  - To Reduce Exposure, &
  - In Emergencies Response Procedures

The respirator shall be provided at no cost to the employees and shall be chosen from those approved by NIOSH.

- D. The Company shall maintain records of training to include, dates of training, employees trained, sign-in sheets and signature of person providing training.

## **ASSURANCE EQUIPMENT GROUNDING CONDUCTOR PROGRAM "GROUND FAULT CIRCUIT INTERRUPTER"**

### PURPOSE

The purpose of this program is to assure that the Company's "Grounding Conductor Program" covers all electrical cords, building and structural receptacles & equipment connected by electrical cord sets that are used by employees.

### 1.0 DEFINITIONS

- A. Ground Fault: refers to a receptacle or outlet as they are more commonly known, that detects if electrical current escapes from the intended flow.
- B. Circuit Interrupter: refers to an electrical outlet that will trigger an automatic shutoff or reset switch within the circuit flow to protect personnel from any escaping electricity.

### 2.0 ONSITE COMPANY REQUIREMENTS

- A. The Onsite Supervisor shall designate one or more competent persons to establish and maintain the requirements of this program in accordance with 1926.32(f). Any equipment that does not meet these requirements shall be prohibited from being used by Company employees. Damaged items shall not be used until repaired.
- B. The Onsite Supervisor shall ensure that a GFCI is provided for all electrical cords, receptacles, attachment caps and equipment connected by electrical cord sets.
- C. The Onsite Supervisor shall have available a copy of this written program at the job site for any affected employee, customer representative or government agency such as the Assistant Secretary.
- D. All equipment grounding conductors shall be electrically continuous as well as tested for continuity.
- E. Each receptacle, attachment cap or plug shall be tested for correct attachment of the equipment grounding conductors.
- F. The equipment grounding conductor shall be connected to its proper terminal;
  - Before each use,
  - Before equipment is returned to service following any repairs,
  - Before placing back in service following an inspection due to possible damage,

- At intervals not to exceed 3 months, except that cord sets & receptacles which are fixed & not exposed to damage shall be tested at intervals not exceeding 6 months, &
- Tests performed as required by this program shall be recorded as to the identity of each receptacle, cord set, & cord & plug connected equipment that passed the test and shall indicate the last date tested or interval for which it was tested. Records shall be kept by means of logs, color coding, or other effective means & shall be maintained until replaced by a more current record. These records shall be made available at the job site for inspection by any affected employees or Assistant Secretary.

### 3.0 EMPLOYEE TRAINING

The Company's training program will cover at a minimum:

- A. The proper use and inspections of all Ground Fault Circuit Interrupters;
- B. The GFCI's roll in the electrical system: If the electrical system is working properly, the GFCI reset switch remains "on" or in the open position indefinitely. If the GFCI outlet detects a loss of current, meaning electricity has found an alternate path, then the GFCI switches "off" in a matter of milliseconds to shut off the flow of electricity;
- C. Minimum Distances: At a minimum, any outlet or switch within 5-feet of a water source shall be equipped with GFCI protection.
- D. Equipment Inspections: daily visual inspection shall be conducted to determine any external defects or indications of internal damage prior to use. Inspections shall cover electrical cords, receptacles, attachment caps & any other equipment connected by electrical cord sets. Damaged items such as electrical cords with missing prongs or insulation damage shall be removed from service until properly repaired.

### 4.0 RECORDKEEPING

Tests performed as required by this program shall be recorded as to the identity of each receptacle, electrical cord set & connected equipment that passed the test and shall indicate the last date tested or interval for which is was tested. This record shall be kept by means of logs, color coding, or other effective means & shall be maintained until replaced by a more current record. These records shall be made available at the job site for inspection by the Assistant Secretary & any affected employees.

## **BEHAVIOR BASED SAFETY PROGRAM**

### **PURPOSE**

The primary purpose of the program is to raise awareness related to employee behaviors in the workplace through observations and feedback.

#### **1.0 GENERAL**

- A. The Company's "Behavior Based Safety Program" was developed in order to improve employee safety performance by increasing the frequency of critical safe behaviors.
- B. Direct employee involvement with management support, shall be the basis for continuous improvement. The Company shall designate the HSE Manager to execute and gather necessary information to successfully execute this program.

#### **2.0 OBSERVATIONS**

- A. Observations provide direct, measurable information on employee work practices, which identify both safe and unsafe behaviors.
- B. This information is then gathered and tracked in order to determine a plan of action to identify "At-Risk" behaviors and encourage safe behavior.

*Note: The quality of our observations is essential to the success.*

#### **3.0 POST OBSERVATION FEEDBACK**

- A. Upon completion of an observation, the observer is expected to discuss findings with the observed personnel.
- B. The observer shall:
  - Review the observation with observed employee
  - Start with a positive comment
  - Reinforce safe behaviors observed first
  - Describe and discuss what was unsafe
  - Solicit from observed employee explanation of his/her unsafe behavior with open-ended questions
  - Re-emphasize no consequence to observed employee

#### 4.0 DATA COLLECTION & TREND ANALYSIS

- A. The Company shall collect the data from each observation and input safe and unsafe behaviors into a database.
- B. The Company will use a tracking and trending method so that numerical and statistical comparisons can be made over time.
- C. A trend analysis shall be completed at a minimum of once every six months.

#### 5.0 ACTION PLANNING

- A. Once trend analysis is complete, appropriate action plans must be developed to address unsafe behaviors.
- B. The action plan will include:
  - Management's support
  - Defining who is responsible for action planning
  - Evaluations of unsafe behaviors from trending analysis and prioritize as needed
  - Develop appropriate actions for unsafe behaviors based on comments and feedback from observation cards
  - Designate responsible parties and timeframes with the action plan

#### 6.0 EMPLOYEE TRAINING

- A. The Company shall explain and communicate this process to all employees expected to use this process including managers, supervisor, employees and new hires.
- B. Training shall address:
  - Program objectives,
  - How to conduct the observation,
  - Proper feedback and communication,
  - How to complete the observation card, and
  - That Employees may be observed at any time.



## **BENZENE AWARENESS**

"29 CFR 1910.1028"

### PURPOSE

The purpose of this written program is to provide guidance to Company personnel towards implementing engineering and work practice controls to reduce employee exposure to benzene at or below the Permissible Exposure Limit (PEL).

### 1.0 GENERAL

- A. Benzene is a hydrocarbon that occurs naturally in petroleum crude oils and natural gas condensates and is an intermediate in petroleum processing commonly found in distillates, condensates and solvents.
- B. Benzene is toxic, colorless, flammable, aromatic odor and is **not** soluble in water.

### 2.0 HEALTH EFFECTS

- A. Acute health effects include:
  - Headache
  - Dizziness
  - Breathless
  - Drowsiness
  - Euphoric Feeling
  - Eye & Skin Irritation
  - Respiratory Irritation
- B. Chronic health effects may result in blood disorders:
  - Cancer (i.e., leukemia or anemia)

### 3.0 WORKPLACE EXPOSURE

- A. Company personnel may be required to work at customer sites where benzene is present. Locations where employees may be exposed to Benzene during their job functions may include, but not limited to petroleum refining sites, tank gauging and field maintenance areas.

- B. Benzene concentrations are usually greater in lighter crude oils and condensates. Benzene is also present in small percentages in gasoline and in many processing and cleaning fluids where it is used as an additive. It is also produced in various steps of hydrocarbon processing.
- C. Intermediate streams and products that may contain 0.1 percent or more of benzene and will be considered as a possible source of benzene exposure include:
- Oils
  - Gasoline
  - Solvents
  - Distillates
  - Condensates
- D. In the event that personnel are required to perform any work in an area containing airborne concentrations of benzene in excess of one part of benzene per million parts of air (1ppm) as an 8-hour time-weighted average (TWA), or a short-term exposure limit (STEL) in excess of 5 ppm as averaged over any 15-minute period, a site specific written Benzene plan will be scheduled, developed and implemented prior to the start of the operation. The plan shall reflect the most recent exposure monitoring data and shall be made available to the Assistant Secretary, the Director, affected employees and designated employee representatives.

#### 4.0 PROCEDURES

- A. Under normal operating conditions, benzene should not be present in hazardous airborne concentrations in customer facilities. Company personnel are prohibited from entering work sites posted as benzene regulated areas and shall obey posted "No Smoking" signs. The Company shall also make available Fire Extinguishers in designated benzene areas. If a customer site has hazardous airborne benzene concentrations, they should be identified by signs with the following warning:

**DANGER**  
**BENZENE**  
**CANCER HAZARD**  
**FLAMMABLE - NO SMOKING**

- B. If an employee suspects that a benzene spill or leak has occurred, they must vacate the area immediately and notify the appropriate personnel at the customer facility.

## 5.0 DETECTING BENZENE

A benzene spill or leak can be detected by:

- Odor: Benzene has an aromatic, slightly sweet odor
- Physical Symptoms: Benzene causes headaches, dizziness, drowsiness, and respiratory irritation
- Monitor: For example, a personal gas monitor, worn by workers, that alarms if benzene is detected in dangerous concentrations

## 6.0 PERSONAL PROTECTIVE EQUIPMENT

- A. The Company shall provide PPE at no cost to all employees including but not limited to boots, gloves, sleeves, aprons, eye and face protection.
- B. Respiratory protection must be worn to prevent potential exposures to benzene when engineering controls or work practices are not feasible, or in emergencies. Respirators selected shall be NIOSH approved and shall be selected according to airborne concentrations of benzene or condition of use.
- C. Personal protective eyewear shall be provided and worn to prevent eye contact and limit dermal exposure to liquid benzene.

## 7.0 EMPLOYEE TRAINING & MEDICAL SURVEILLANCE

- A. Employee training will address Permissible Exposure Limits (PEL) and standards for reducing employee exposure. The Company will ensure employees are aware of a Customer's contingency plan and are informed of areas where benzene is used.
- B. A medical surveillance program shall be available for employees;
  - who are or may be exposed to benzene at or above the action level 30 or more days per year;
  - who are or may be exposed to benzene at or above the PELs 10 or more days per year; or
  - who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by their current employer.

*Note: The Company shall establish and maintain an accurate records of exposure measurements and medical surveillance.*

## **BLOODBORNE PATHOGENS**

"29 CFR 1910.1030"

### **PURPOSE**

The purpose of this program is to establish the Company's written procedures for the elimination of a "reasonably anticipate exposure" of employees to infectious diseases, which are transmitted by blood and/or bodily fluids.

#### **1.0 EXPOSURE DETERMINATION**

- A. The Occupational Safety and Health Administration (OSHA) requires employees to perform an exposure determination concerning which employees are likely to be occupationally exposed to blood or other potentially infectious materials.
- B. The exposure determination is made regardless of the use of personal protective equipment whenever such equipment fails to protect the employee as intended.
- C. This exposure determination includes the listing of all job classifications in which any employee may become exposed, regardless of frequency of exposure.
- D. The Company will consider the below job classifications and/or positions, subject to exposure:
  - First Aid Responders;
  - Department Supervisors who are trained in First Aid;
  - Field Supervisors who have been trained in First Aid.
  - Company Drivers who may have secondary first aid exposure;
  - Shop cleanup personnel who might assist in cleaning up of an area, which has been contaminated with blood

#### **2.0 ENGINEERING AND WORK PRACTICE CONTROLS**

- A. The Company expects all employees to exercise the practice of universal precautions at all times, whenever there is a possibility of exposure to blood, bodily fluids or other pathological or microbiological wastes containing blood or other potentially infectious materials.
- B. Impervious vinyl or latex gloves, located in the First Aid Kit, is available and shall be worn when examining, cleaning, and/or treating wounds; and cleaning contaminated instruments and equipment.

- C. Gloves are to be discarded into disposal container, which have the plastic liners, and red biohazard signs on the container. Supervisors should have a separate disposal container with plastic liner, for use on temporary job site locations. Whenever a box of gloves has been opened, it shall be packaged in a sealable plastic bag, and stored away from sources of direct sunlight, heat or dust. Unused gloves should be inspected and/or replaced on a quarterly basis. Unused gloves, which have not been re-bagged, shall be disposed of immediately.
- D. Running water, soap and paper towels shall be made available at each Company work location. Hands should be washed and dried with the paper towels immediately after the gloves have been removed from the hands of the treating employee. Only white towels will be used when caring for an injury.
- E. On temporary job sites the hand washing facilities will be designated by the facilities operator. Follow prescribed disposal procedures. In the absence of running water or other appropriate hand washing facilities, the Company shall provide employees with appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes. *Note: Clean unopened paper towels shall be available and stored away from sources of heat and dust to assist in the cleaning/sanitizing effort.* Employees should replace all unused packages of paper towels whenever they have become accidentally opened; they have been crushed, soiled or the level of sterility has been compromised; or whenever they have been in storage for more than 30 days without use whichever occurs first.
- F. Sharps (i.e., broken glass, tops of cans, razor blades, etc.) containers are available in the shop area. Supervisors should use the sharps container provided by the facility while on temporary job sites, or store sharps on containers separate from ordinary trash. The container should be sealable or so constructed that sharps will remain secured inside the container once disposed.
- G. Eating, drinking, smoking, handling of contact lenses, applying cosmetics or lip balm, etc., is prohibited in work areas where there is a reasonable probability that exposure to a hazardous substance can occur in the area. Employees should immediately flush with clean running water, for at least fifteen (15) minutes, any exposed skin or mucous membrane, should exposure occur.
- H. Employees are prohibited from contacting blood or other infectious materials by mouth (i.e., for treatment of a snake bite, providing mouth to mouth breathing, etc.).

- I. Employees who are designated to clean an area which has been exposed to blood or other bodily fluid, will need to follow the below procedures for cleanup:
  1. The area where employees will be treated is to be cleaned and will be washed with soap and water. It will be sprayed and wiped with a 1 part to 10 parts chlorine and water solution after cleaning. The chlorine solution must not be pre-mixed; it should be a fresh batch.
  2. Where there has been contamination due to injury or other circumstances, all equipment or environmental surfaces shall be cleaned & decontaminated after contact with blood or other infectious materials.
  3. Waste cans and pails in the restrooms or shop area will be lined with plastic bags, and will be cleaned and disinfected monthly by spraying them with the 1 to 10 parts bleach and water solution.
  4. Broken glassware that may be contaminated will be picked up with forceps and placed in the sharps container. Small fragments will be picked up with wet paper towels, or swept up using a broom and dustpan. Employees should never use their hands, gloved or ungloved, to pick up sharps. Employees who will work offshore should avoid having any glass containers in their possession at any time.
  5. Disposable towels, cloths or other materials will be used to limit laundry handling of contaminated articles.
  6. Toilets, urinals, sinks, showers, waste cans and pails in the restrooms, located in areas where the program is in effect, will be maintained cleaned and disinfected by washing with soap and water, then sprayed with a 1 to 10 bleach and water solution and wiped dry.
  7. Non-sharp waste, (bandages, swabs, dressings, etc.), that are not classified as "regulated waste" will be disposed of as domestic waste.
  8. Non-sharp waste, which is heavily contaminated and therefore regulated by the standard, will be placed in red bags and red disposable containers, and collected for disposal. If outside contamination should occur, the bag will be placed in a second red closable container. Bags and container will display the biohazard label.
- J. All procedures involving blood and other potentially infectious materials should be performed in such a manner as to minimize splash, spray, spattering, and generation of droplets. The use of engineering controls will be assessed on a periodic basis (contingent upon actual use), to determine continued effectiveness.

### 3.0 PERSONAL PROTECTIVE EQUIPMENT

- A. The Company will provide personal protective equipment, for the protection of the designated employee against infection to bloodborne pathogens, at no cost to the employee. Personal Protective Equipment provided by the Company includes:
- Masks
  - Gloves
  - Face Shield
  - Eye Protection
  - Disposal Mouth Shields
  - Disposable Impermeable Apron
- B. PPE shall be used unless the employee temporarily declines to use under rare circumstances, in which case, the employee will be removed from the contaminated area or task. The Company shall repair and/or replace PPE as needed to maintain its effectiveness.
- C. PPE will be available in various sizes. Employees are responsible for selecting the size which offers the best fit.
- D. Cleaning: The Company will provide laundering, maintaining, and disposal of personal protective equipment:
1. If the garment or bandage is penetrated by blood or other infectious materials, then it should be removed as soon as possible. Contaminated laundry will be disposed of in red plastic bags displaying the biohazard label.
  2. Personal protective equipment will be removed prior to leaving the work area and placed in appropriately designated areas. The employee who last used it should clean it.
  3. Gloves will be worn when it can be anticipated that the employee may have hand contact with blood, other potentially infectious materials, and when touching or handling contaminated items or surfaces.
  4. Single use, disposable gloves should be replaced as soon as practical when contaminated, punctured, or when their ability to act as a barrier is compromised.
  5. Masks and eye protection, or a face shield shall be worn whenever splashes, spray, spatter, or droplets of blood or other potentially infectious materials may be generated and eye, nose, and mouth contamination can be reasonably anticipated.

6. The disposable gloves, mask, apron, and glasses will be worn when cleaning up blood or other bodily fluids.
7. All PPE shall be stored in a clean re-sealable plastic bag away from sources of direct sunlight, heat or dust. Face shields and other eye protection should be inspected at least quarterly, and replaced if found to be defective or the protective integrity has otherwise been compromised.

#### 4.0 HEPATITIS B VACCINATION

- A. The Hepatitis B vaccine (Recombivax) is made from yeast and cannot be infected with HIV or other bloodborne pathogens. It is given to employees who have not previously received the series.
- B. The complete series of HBV vaccination is 85 to 97 percent effective at protecting exposed individuals from getting HBV or becoming a carrier for 9 years or longer.
- C. A single dose of Hepatitis B Immune Globulin (HBIG) will be given within 7 days of exposure.
- D. The vaccine will be available at no cost to the employee. It will be available within ten days of the employee's initial assignment to work involving potential exposure.
- E. Prior to the HBV series, antibody testing will be performed by the Company's approved testing/treatment facility. The facility may be selected upon the advice of the Company's authorized physician.
- F. If employees do not choose immunization, they will sign the attached mandatory "Statement of Declination"
- G. Employees may initially decline immunization and choose to accept immunization at a later date under the same conditions as before.
- H. If routine immunization boosters are recommended at a future date, vaccine will be made available to employees at no cost to the employee.
- I. The immunization program will be under the supervision of the treating physician (or designee).
- J. Each employee's immunization status will be maintained in a confidential manner in his/her employee medical file.



## 5.0 POST EXPOSURE EVALUATION AND FOLLOW-UP

- A. If there is an exposure to blood or other potentially infectious materials, the employee will immediately have a medical evaluation performed under the direction of the Company's authorized physician. If exposed, follow these procedures:
1. Suspect that contamination has occurred.
  2. Notify a co-worker to alert supervisory personnel of the exposure, if notification cannot be achieved by the exposed employee.
  3. Proceed to the closest wash station and cleanse the affected area with mild soap and clean running water.
  4. Identify the location where the incident occurred so it can be secured.
  5. Identify the site and route of entry.
  6. Identify the source individual; state his/her name, department, description and present location.
  7. Request the Hepatitis B Vaccination within 24 hours of exposure if not already immunized.
  8. Source blood shall be tested as soon as consent is obtained to determine HIV and HBV status. If consent is not obtained, this will be documented. If the source is known to be HIV or HBV positive, retest is not necessary.
  9. The exposed employee will be informed of the source individual's test results or of their refusal to submit to such testing.
  10. The Company will have testing performed on the source individual as soon as consent is obtained. If consent is not given for HIV testing, the specimen obtained from the exposed employee will be kept for 90 days. If the exposed employee decides to have a baseline test done within the 90-day period, it will be completed as soon as possible after such decision.
  11. Post exposure referral and treatment will be provided as appropriate and as recommended by the U.S. Public Health Service, and an appointed physician.

- B. The Company appointed physician would counsel with the exposed employee and evaluate any reported illness. The Company appointed physician would provide a written opinion within fifteen (15) days stating:
1. Whether Hepatitis B vaccine is needed and if immunization has begun.
  2. What post-exposure evaluation and follow-up is needed.
  3. The employee has been informed of the results of the evaluation of any medical condition(s) resulting from exposure.
  4. All other findings shall be held confidential and shall not be included in the report.

## 6.0 EMPLOYEE TRAINING

- A. Training will cover the different labels & signs that serve as warnings of infectious materials. The Company shall ensure that all employees with occupational exposure participate in a training program.
- B. The Company shall provide training at the time of initial assignment & annual training for all employees will be provided within 1 year of their previous training.
- C. A copy of the Exposure Control Plan shall be accessible to all employees in accordance with 29 CFR 1910.1020(e), and will be retained in the office of the HSE Manager as well as provided to any employee upon request within a reasonable time and manner.
- D. Training will include, but not be limited to:
- Defining exposure
  - Labels and signs
  - Cleaning procedures
  - Universal precautions
  - Recognizing tasks which might result in exposure
  - Explanation of the use and limitations of work practice and engineering controls
  - Information on the types, selection, proper use, location, removal, handling, decontamination and disposal of personal protective equipment
  - Information on the Hepatitis B vaccination such as the safety benefits and methods of administering and availability
  - Information on how to report exposure incidents

- E. The Company shall establish and maintain an accurate record for each employee with occupational exposure in accordance with CFR 1910.1020. A record of training sessions will be prepared and maintained on site for a minimum of three years. The record will include:
- The trainer's name
  - Date of Training
  - Names of Participants
  - Job title of Participants
  - Content of the training program, and applicable videos.
- F. A copy of the training records will be available to employees on request; to any person having written consent of the employee; and to the Assistant Secretary of Labor for OSHA and the Director of NIOSH (National Institute of Occupational Safety and Health).

## 7.0 RECORDKEEPING

- A. The Company will maintain all records related to this program at the main office.
- B. Accurate records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years. The individual responsible for ensuring that these records are maintained by the Company's HSE Manager. Employees may have access to these records, within a reasonable period of time, upon request. The Company will not release any information pertaining to an employee's health condition to any third parties without the written authorization of the affected employee.
- C. All records pertaining to Hepatitis B vaccinations, and post exposure follow-up, shall also be maintained for a period of thirty years. These records will be available at main office (as mentioned under 7.0, A., above) for employee review should they be requested.
- D. The Company shall comply with the requirements involving the transference of records set forth in 29 CFR 1910.1020(h).

## **CONFINED SPACE ENTRY PROGRAM**

"29 CFR 1910.146"

### PURPOSE

The purpose of this program is to establish the Company's procedures regarding entry into those areas designated as "Confined Spaces".

### 1.0 DEFINITIONS

- A. **Acceptable Entry Conditions:** Means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit required confined space can safely enter into work within the space.
- B. **Attendant:** An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the permit program.
- C. **Authorized Entrant:** An employee who is authorized by the employer to enter a permit space.
- D. **Blanking or Blinding:** The absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
- E. **Confined Space:** Any space that is large enough and so configured that an employee can bodily enter and perform assigned work; and has limited or restricted means for entry or exit (i.e., vessels, storage bins, hoppers, tanks, silos, vaults, and pits are spaces that may have limited means of entry); and is not designed for continuous human occupancy.
- F. **Double Block and Bleed:** The closure of a line, duct or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.
- G. **Emergency:** Any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.
- H. **Engulfment:** The surrounding and effective capture of a person by a liquid or finely divided soil substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

- I. **Entry:** The action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.
- J. **Entry Permit:** The written or printed document that is provided by the employer and/or customer to allow for controlled entry of authorized persons into a permit space, and contains the information specified in the standard.
- K. **Entry Supervisor:** The person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.
- L. **Hazardous Atmosphere:** An atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is to be able to escape unaided from a permit space), injury, or acute illness from one or more of the following causes:
- Flammable gas, vapor, or mist in excess of 10% of its lower flammable limit.
  - Airborne combustible dust at a concentration that meets or exceeds its lower flammable limit.
  - Atmospheric oxygen concentration below 19.5% or above 23.5%.
  - Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G of the standard or other which could result in employee exposure in excess of its dose or permissible exposure limit.
  - Any other atmospheric condition that is immediately dangerous to life or health.
- M. **Hot Work Permit:** The employer's or customer's written authorization to perform operations capable of providing a source of ignition. (i.e., riveting, welding, cutting, burning, and heating).
- N. **Immediately Dangerous to Life and Health:** Any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.
- O. **Inerting:** The displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

- P. **Isolation:** The process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as:
- Blanking
  - Blinding
  - Misaligning or removing sections of lines, pipes, or ducts
  - A double block and bleed system
  - Lockout/Tagout of all sources of energy
  - Blocking or disconnecting all mechanical linkages
- Q. **Line Breaking:** The intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive or toxic material, an inert gas, or any fluid at a volume, pressure, or temperature capable of causing death or serious physical harm.
- R. **Non-Permit Confined Space:** A confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.
- S. **Oxygen Deficient Atmosphere:** An atmosphere containing less than 19.5% oxygen by volume.
- T. **Oxygen Enriched Atmosphere:** An atmosphere containing more than 23.5% oxygen by volume.
- U. **Permit Required Confined Space:** A confined space that has one or more of the following characteristics:
- Contains or has a potential to contain a hazardous atmosphere;
  - Contains a material that has the potential for engulfing an entrant;
  - Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section, or
  - Contains any other recognized serious safety or health hazard.
- V. **Prohibited Condition:** Any condition in a permit space that is not allowed by the permit during the period when entry is authorized
- W. **Testing:** The process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space.

## 2.0 HAZARD DETERMINATION

- A. General: Only trained Company employees are permitted to perform confined space entries as part of their assigned job operations and when such is the case, prior arrangements with the customer will be made and entry will be made with consideration to the customer's policy and permit requirements. Subsequently, confined space entry hazards will be discussed during new employee orientation.
- B. The Company will take into consideration, the flammability and toxicity characteristics of those substances previously occupying cellars or other compartments where employees will enter based on information obtained or provided by the customer.

## 3.0 IDENTIFYING A CONFINED SPACE

The Company, after having performed an evaluation of those locations on site where employees would be required to enter a confined space to perform a servicing activity, has concluded that the employees' greatest exposure will result from work performed inside crawl spaces on the customer's property.

## 4.0 CONFINED SPACE CHARACTERISTICS

- A. The Company, based upon information contained in 29 CFR 1910.146, will consider an area which meets the below characteristics, as a confined space for the purpose of this policy.
  - The area is large enough and so configured that an employee can bodily enter into it to perform an assigned activity.
  - The area has limited or restricted means for entry or exit.
  - The area is not designed for continuous employee occupancy.
  - The employee can be exposed to moving parts while in the space.
  - The employee can be exposed to electrocution hazards while in the space.
  - The employee can be exposed to slip and fall hazards while in the space.
  - The space may contain flammable, or toxic vapors or gases, and/or oxygen deficient atmosphere (less than 19.5%) or oxygen enriched atmosphere (22.5% or greater), and
  - The authorized activity being performed by the employee is likely to create an additional hazard in the work location.
- B. Site Entry Supervisors shall require employees to review safety data sheets (SDS) or other documents to evaluate the physical and health hazards presented by the space, prior to entry.

- C. Entry Supervisors will monitor on-going conditions to ensure that such remains safe for entry, per the conditions of the permit.

## 5.0 HAZARD CONTROL

- A. Entry Supervisors will deem the use of an approved entry permit as the only acceptable means by which employees will enter a confined space. In addition, it is the Company's policy that only employees whose name physically appear on the entry permit will be allowed to enter the space.
- B. Entry Supervisors will make available, the type of personal protective equipment approved for use in the environment to which the entrant(s) will be exposed.
- C. Entry Supervisors shall require that the below posting be conspicuously placed to communicate the confined space hazard:
  - **"NO ENTRY-AUTHORIZED PERSONNEL ONLY"**: On the outer perimeter barricade tape.
  - **"DANGER CONFINED SPACE-ENTRY BY PERMIT ONLY"**: Near the entry into the confined space.
- D. Entry Supervisors will initiate an onsite hazard control in conjunction with customer Safety Representative, and/or third-party emergency response teams by performing at a minimum, the following:
  1. Identify other on-going work activities in areas immediately adjacent to the designated work area.
  2. Gather information (visually, etc.), regarding the configuration of the space.
  3. Perform atmospheric testing as outlined in the entry permit, review material safety data sheets (MSDS).
  4. Establish a schedule of continuous atmospheric monitoring.
  5. Assess the type and degree of hazards the work activity will create.
  6. Conduct a pre-job meeting with the work crew. Discuss at a minimum, the following:
    - Methods to be used to isolate the vessel;
    - How entry will be controlled;
    - Job specific responsibilities;
    - Personal protective equipment required;
    - Administration of engineering controls;



- Required postings; and
- Emergency procedures.

E. Entry Supervisors may limit enforcement of this policy whenever:

1. The work area previously contained no flammable or toxic substances, nor has the potential of containing such substances.
2. Forced air ventilation is not required to maintain acceptable oxygen levels or dissipate vapors or gases.
3. Supplied air respirator equipment is not required, or
4. The nature of the work to be performed is not conducive to the creation of additional hazards in the space.

## 6.0 ENTRY PROCEDURES

- A. In accordance with OSHA standards and Company policy, only those employees whose names appear on the entry permit will be allowed to enter confined spaces.
- B. The Entry Supervisor in charge of the approved activity will work together with the customer representative to prepare the entry permit, ensuring to complete each section in its entirety. After obtaining approval the permit is presented to the workman or crew and "Hole-Watch" person.
- C. The Entry Supervisor in charge of the approved activity should proceed to discuss the specifics of the task to be performed, as well as the known and potential hazards inherent to the task, at a minimum. While reviewing the entry operations, the supervisor should address such areas as:
  - Unauthorized entries;
  - Employee complaints;
  - Hazard not covered by the permit;
  - The occurrence of an injury or near miss;
  - What substance the vessel previously contained;
  - Physical and health hazards inherent to the assigned task;
  - Existing oxygen and explosive/flammable gas and vapor readings and information regarding how subsequent testing will be conducted; and
  - The type and degree of personal protective equipment required for each stage of the activity, and an explanation as to how this information was attained

- D. Review of engineering controls to be deployed (e.g., mechanical ventilation, lockout/Tagout, bonding and grounding, etc.);
- E. Explanation of the respective duties of the crew members and "hole watch".
- F. Area security and control and how it will be achieved, and
- G. Fire, rescue and emergency response actions; the Company will rely on 3<sup>rd</sup> party rescue response teams. These teams will be given an opportunity to examine the entry site, practice rescue and decline if deemed appropriate. All rescue teams will be provided PPE, training and practice rescues at least every 12 months at no cost. IDLH conditions will require trained rescue on site while work is being performed.

## 7.0 ENTRY SUPERVISOR'S RESPONSIBILITIES

- A. The Company's Entry Supervisor will make determinations to ensure that necessary procedures, practices, and equipment are in effect prior to allowing entry into a vessel (i.e., testing, summoning rescue and emergency services, rescuing entrants, providing first aid and preventing unauthorized personnel from attempting a rescue.
- B. The Entry Supervisor will ensure that monitoring of the space must inform entrants of the potential hazards and results; entrants must participate in the permit review and signing. Ventilation must be used & testing must be conducted before entry & during work.
- C. Entry Supervisors are responsible for selecting the specific procedures and equipment to be used for entry into permit-confined space. This responsibility will include developing site-specific procedures for the following:
  - 1. A means to identify and evaluate each hazard in the permit required confined space(s), including those elements, which are characteristic of permit-confined spaces;
  - 2. Procedures for coordinating entry operations for multi employer's so that employees of one employer do not endanger the employees of any other employer;
  - 3. A written permit system for confined space entry that will include the methods for permit preparation, specific form of communication to summon rescue (e.g., 2-way radios, verbal, etc.), issuance and implementation of confined space entry requirements and designated persons including "authorized entrants", "attendants" and "entry supervisors";

4. An information system to notify employees by the use of visual and audible signals or other appropriate means, of the hazards which may be present, and to assure that only authorized entrants are allowed to enter the permit required confined space;
  5. Assign an attendant outside the confined space for the duration of entry operations as part of the preventative measures for unauthorized entry into hazardous work areas or permit-required confined spaces;
  6. Meetings that will enable each individual to understand their respective role when entering permit required confined spaces;
  7. Providing, maintaining, and ensuring proper use of personal protective equipment required for safe entry;
  8. Ensuring the availability and proper use of equipment for safe rescue of entrants from a permit-confined space during emergencies;
  9. A means of protection from external hazards to personnel in the confined space by restricting unauthorized access of pedestrians, vehicles, etc., from outside of the work space for entry during its duration;
  10. Communicating all information concerning confined space hazards to other parties whose employees may be at risk from the hazards.
- D. Entry Supervisors, in conjunction with appropriate technical consultant(s), shall determine the proper application and guidelines for the use of an approved confined space entry and permit requirements.
- E. Entry Supervisors shall ensure the uniform application of the requirements of this procedure throughout the department through routine, periodic inspections of all department operations.
- F. Company employees are prohibited from being assigned attendant duties that require monitoring of multiple confined space entries.
- G. Entry Supervisors are to ensure that all Company employees clearly understand the policy and applicable procedures, and that the requirements of the procedure are similarly enforced among the work force. The Site Entry Supervisor is responsible for the orientation and administration of this policy/procedure to each field employee, and serves as an extension of management.
- H. Entry Supervisors are responsible for establishing, monitoring and maintaining the on-site Confined Space Entry Program, before and during entry

- I. Entry Supervisors are responsible for assuring that an application of the entry permit program is adequate for the required work task(s).
- J. Entry Supervisors involved directly with a confined space entry must be able to recognize changes in the space conditions, and make the necessary adjustments to preserve the health and safety of the workers entering those spaces. The supervisor shall assure that authorized entrants can recognize the changes and be able to respond properly by initiating Self-Rescue, retrieval or change in work scope. Additionally, employees or their representatives are entitled to request additional monitoring at any time.
- K. If the Entry Supervisor chooses to allow customer employees or contractor employee into the confined space, they must assure that measures are taken to prevent danger to any employee working in the confined space.
- L. Upon job completion, a confined space permit shall be canceled by the Entry Supervisor and forwarded to the appropriate customer representative for filing and subsequent review.
- M. Entry Supervisors must actively participate in the confined space entry and permit training and instructional programs.
- N. Entry Supervisors must ensure that each confined space entry permit include information relative to the known or suspected hazardous atmospheres (e.g., flammable, corrosive and/or toxic atmospheres), and other factors such as:
  - Employee work requirements,
  - Heat or cold stress indices,
  - Necessary operations and rescue equipment,
  - Personal protective equipment (PPE),
  - Concentration of chemical exposure, and
  - The anticipated duration of the entry.

## 8.0 SAFETY MANAGER'S RESPONSIBILITIES

- A. The HSE Manager is responsible for ensuring that all applicable standards, regulations and policies of this plan are complied with and must also certify that the required training has been accomplished. The certification shall include employee name, trainer's signature and dates of training. Certification must be made available to employees & their authorized representative.

B. Other responsibilities include, but may not be limited to:

1. Establishing and updating this Company policy.
2. Supporting this safety policy and applicable regulations.
3. Delegating authority to the proper responsible parties to facilitate application of this safety policy, specifically while performing activities on temporary job site locations.
4. Will ensure that routine, periodic inspections of all Company operations are conducted by Entry Supervisory personnel or his/her designee, for the purpose of determining compliance with the requirements of this procedure while the job is ongoing. The results of such inspections will be formally documented on a designated audit form or on the confined space entry permit.
5. Will perform an annual audit of the Permit Required Confined Space Entry Program. The HSE Manager will review the permit space program, using the canceled permits within 1 year after each entry and revise the program as necessary, to ensure that employees are protected. Note: The Company may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary.

## 9.0 EMPLOYEES AND/OR CONTRACTORS

- A. Employees and/or contractors are required to be cognizant of their work environment and must be able to recognize a confined space and the associated hazards involved with entry into confined space;
- B. Employees and/or contractors are required to understand and properly interpret the terminology, policies and procedures associated with this and on-site permit programs, and the proper application required for confined space entries;
- C. Employees and/or contractors are required to understand and comply with the guidelines dictated by written confined space entry permits. Employees must be able to, as a minimum:
  1. Distinguish the hazards in the confined space previously identified by the Site Entry Supervisor and/or customer representative.
  2. Understand the means by which to control the identified hazards in the permit required confined space.

3. Have the knowledge necessary to safely use the equipment needed to perform the job in a healthy and safe manner while creating no new or additional hazard to himself or co-worker(s).
4. Be able to recognize the need for SELF-RESCUE during emergencies and the means by which to do so.
5. Company employees shall **not** work in permit-required confined spaces unless they have actively participated in formal training and informational programs, and appropriate medical surveillance programs.
6. Any protective gear used for entry into a permit-required confined space must meet the standards set forth by the customer and OSHA/NIOSH guidelines for protection.
7. Employees and/or contractors assigned equipment for use during a permit confined space entry are required to inspect, clean, maintain and properly store the equipment, and be able to recognize when the equipment is in need of maintenance, sanitation or replacement.

#### 10.0 EMERGENCY PROCEDURES

- A. If employee detects any possible hazardous atmosphere during entry:
  1. Each employee shall leave the space immediately;
  2. The space shall be evaluated to determine how the hazardous atmosphere developed; and
  3. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.
- B. When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, the employer shall reevaluate that space and, if necessary, reclassify it as a permit-required confined space.

#### 11.0 EMPLOYEE TRAINING

- A. The Company will ensure that each designee is trained and documented in confined space entry, as per 29 CFR 1910.146.

- B. Each affected employee must be trained prior to initial assignment, or prior to a change in assigned duties if a new hazard has been created or special deviations have occurred. Only trained Company employees are permitted to perform confined space entries during the course of their assigned work activities. During new employee orientation and training classes, employees will receive information pertaining to confined space hazards to establish competency. Employees shall have refresher training on an annual basis. Any confined space entry issues shall be coordinated with the customer.
- C. The Company's training program will consist of, at a minimum:

**Entrant Duties:**

1. Know and understand the hazards they face;
2. Recognize the signs and symptoms of exposure to a hazard (difficulty in breathing, burning sensation to the eyes or skin, coughing, nausea, etc.);
3. Understand acute (short term) and chronic (long term) effects of the hazard to potential exposure;
4. Know and understand the selection, use and limitations of personal protective equipment needed;
5. Remain aware of external barriers set up to restrict unauthorized entry;
6. Know and understand communication signals with attendant;
7. Know when to alert the attendant;
8. Become familiar with emergency procedures;
9. Know when and how to exit a vessel upon being summoned by the hole watch; and
10. Follow the requirements of the entry permit;

**Attendant Duties (Hole-Watch):**

1. Remain at the vessel entrance at all times during entry until relieved by another attendant;
2. Maintain accountability of all entrants;
3. Recognize potential hazards during entry in the vessel including mode, signs or symptoms and consequences of exposure.
4. Is aware of possible behavioral effects of hazard exposure in authorized entrants.
5. Monitor activities inside and outside of the vessel in order to determine if continued entry is safe;

6. Orders the authorized entrants to evacuate the permit space immediately under any of the following conditions:
  - Detects a prohibited condition;
  - Detects the behavioral effects of hazard exposure in an authorized entrant;
  - Detection of an outside situation that could endanger the authorized entrant(s); or
  - If attendant can no longer effectively and safely perform all required duties.
7. Maintain effective and continuous communications;
8. Summon help from a designated person as soon as a determination has been made that an emergency exit of rescue from the vessel is warranted;
9. Performs non-entry rescue only as specified by the employer's rescue procedure (if trained). Properly use rescue and/or emergency equipment, if properly trained, when it is determined that the customer does not provide such services. **\*Never attempt rescue if it requires entering the vessel\***
10. Take the following actions, as necessary, when unauthorized person(s) approach or attempt to enter a vessel while entry is in progress:
  - Warn the unauthorized person(s) away from the vessel,
  - Request the unauthorized person(s) to exit immediately if they entered the vessel,
  - Inform the authorized entrants, that an unauthorized person has entered the vessel and work must stop,
  - Immediately inform supervisory personnel of the occurrence.



## **CRANE OPERATIONS**

### **"SAFE PRACTICES & PROCEDURES"**

#### **PURPOSE**

The purpose of this program is to address safety measures to be used when Crane Operations have the potential to strike, pinch, crush or injure an employee.

#### **1.0 GENERAL REQUIREMENTS**

- A. The Company shall permit only those employees qualified by training and experience to operate a Mobile, Construction or Offshore Crane.
- B. Operating and maintenance manuals shall be made available to each operator. The Company shall comply with all manufacturer's specifications and limitations applicable to the operation of any Mobile, Overhead Crane or Offshore Crane. Where manufacturer's specifications are not available, the limitations assigned to the equipment shall be based on the determinations of a qualified engineer or "Competent Person". Such determinations will be appropriately documented and recorded.
- C. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer. Modifications or additions which affect the safe operation of the Crane may only be made with the manufacturer's written approval. Prior to initial use, all new and altered cranes shall be tested for compliance. A preventive maintenance program based upon the crane manufacturer's recommendations shall be established. Warning or "Out of Order" signs shall be placed on the crane, also on the hook visible to affected personnel.

#### **2.0 INSPECTIONS**

- A. The Company shall designate a "Competent Person" who shall inspect the Crane prior to each use to make sure it is in safe operating condition. The inspection must consist of an observation for apparent deficiencies. Daily inspection items shall include, but not limited to, control mechanisms, pressurized lines, hooks and latches, wire rope, electrical apparatuses, fluid levels, power units, pedestals, deterioration or leakage in lines, tanks, valves, drain pumps, and other parts of air or hydraulic systems, and ground conditions & tires (Mobile Cranes).

A thorough inspection of all running ropes shall be made at least once a month and a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier for the ropes which were inspected shall be kept on file where readily available to appointed person. Any deterioration, resulting in appreciable loss of original strength, shall be carefully observed and a determination made as to whether further use of the rope would constitute a safety hazard. Hooks with deformations or cracks must have a visual inspection daily and a monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the hook inspected.

- B. Safety devices are required to be on all equipment and must be in proper working order before operations begin. If any of the devices are **not** in proper working order, the equipment must be taken out of service and operations must not resume until the device is repaired or replaced. Safety devices may include, but are not limited to, crane level indicator, boom stops, jib stops, foot pedal brake locks, swing locks, horn and anti two-blocking device.
- C. Moderate usage cranes (11-50 Hours per Month) must be inspected monthly and documented by a competent person. Documentation must include the results of the inspection as well as the name and signature of the inspector. Documentation must be retained for a period of 2 Years. Additionally, an annual inspection of the Crane shall be conducted by a certified 3<sup>rd</sup> Party agency recognized by either the U.S. Department of Labor, the Bureau of Ocean Energy Management, Regulation or the American Petroleum Institute's Recommended Practices, 2C Guidelines.

### 3.0 SAFE OPERATING PROCEDURES

- A. Rated load capacities, recommended operating speeds, special hazard warnings and operating instructions shall be conspicuously posted on all cranes. Instructions or warnings shall be visible to the operator while he/she is at his control station.
- B. Mobile Cranes Operations:
  - 1. Always ensure outriggers are placed on firm ground or timber footings. The Crane must not be assembled or used unless ground conditions are firm, drained, and graded to a sufficient extent. If necessary, supporting materials, in accordance with equipment manufacturer's specifications, may be used for adequate support and leveling.

2. Cranes with internal combustion engines shall not be operated in shop environments so as not to expose employees to unsafe concentrations of toxic gases or oxygen deficient atmospheres.
3. When operating around power lines, a pre-operation hazard assessment will be performed to identify the work zone and determine if any part of the equipment could reach closer than 20 feet to a power line.

If it is determined that any part of the equipment, load line or load could get closer than 20 feet to a power line, the Operator shall ensure that the power lines have been deenergized and visibly grounded or no part of the equipment, load line or load gets closer than 20 feet to the power line.

4. The work zone shall be identified by demarcating boundaries such as flag and range limiting devices, or defining the work zone as 360 degrees around the equipment up to the maximum working radius.

#### C. Offshore Cranes Operations:

1. Crane Operators will be designated based on appropriate offshore experience and training which must comprise of minimum amounts of classroom sessions and hands-on training, which will cover lubricating points, adjustments, principles of crane operators, load charts, hand signals and inspections.
2. All Offshore Cranes shall have a documented initial and pre-use inspection prior to usage. Cranes that are considered "Moderate" usage (11-50 Hours per Month) shall require a monthly documented inspection. Cranes that are considered "Heavy" usage (50+ Hours per Month) shall require a quarterly inspection by a qualified 3<sup>rd</sup> Party. All Cranes shall be annually inspected & load tested by a qualified 3<sup>rd</sup> Party in accordance with API RP 2C & 2D guidelines. Inspections records shall be kept on the platform and available for audit purposes for a period of 2 years.
3. All Offshore Crane Operators shall require a visual exam to meet at least 20/30 Snellen in one eye and 20/50 in the other eye with or without glasses, and have depth perception be able to distinguish between red, yellow, and green. Additionally, Operators shall have adequate hearing, with or without a hearing aid, for the specific operation and no history of disabling medical condition which may be sufficient reason for disqualification.

#### D. All Cranes Operations:

1. Daily inspections shall include rigging gear (i.e., Slings, Shackles, Hoist Chains, etc.). Both internal and external lubrication protects a wire rope against wear and corrosion. Field lubrication shall be applied periodically not only to maintain surface lubrication but also to prevent the loss of the internal lubrication. Wire rope shall be removed from service for any of the following: (1) Five broken wires in one strand of one rope lay, (2) Ten randomly distributed broken wires in one rope lay, (3) Kinking, Crushing & Bird Caging, or (4) Severe Corrosion that has caused pitting. Hoist chains, including end connections are inspected for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations and must have a visual inspection daily and monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier of the chain which was inspected. Period inspections must include deformed, cracked, or corroded members, loose bolts or rivets, cracked or worn sheaves and drums, worn parts and excessive wear items.
2. The rated load of the crane shall be plainly marked on the crane. Each hoist shall have its rated load marked on it or its load block and this marking shall be clearly legible from the ground or floor. The crane shall not be loaded beyond its rated load except for test purposes.
3. An accessible fire extinguisher of "5-ABC" rating or higher, shall be available at all operator stations or cabs.
4. The manufacturer's procedures and prohibited operations must be complied with when assembling and disassembling equipment.
5. Assembly & disassembly of equipment must be directed by a competent and qualified person.
6. All manufacturer procedures applicable to the operational functions of the crane, including its use with attachments, must be complied with.
7. The operator shall have access to procedures applicable to the operation of the crane and shall be readily available in the cab at all times.
8. Procedures include rated capacities (load charts), recommended operating speeds, special hazard warnings, instructions and operator's manual.

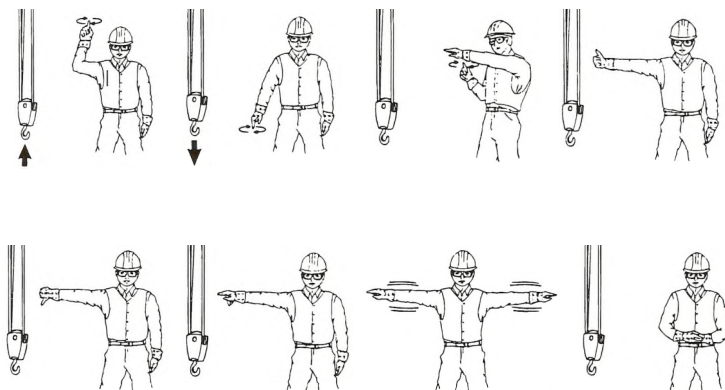
9. The Operator should prevent any sudden acceleration or deceleration of the moving load to ensure load does not contact any obstructions. The Crane shall not be used for side pulls. No hoisting, lowering or traveling shall be permitted while an employee is on the load. The Crane Operator shall avoid moving loads over people. Loads shall not be lowered where there are less than two full wraps of rope on the hoisting drum. The Crane Operator shall not leave his/her position at the controls while the load is suspended.
10. Whenever there is a safety concern, the operator must have the authority to stop and refuse to handle loads until a qualified person has determined that safety has been assured.
11. The operator shall address measures that will be used when the equipment has the potential to strike and injure an employee or pinch/crush an employee against any other object.
12. The manufacturer must approve all modifications and/or additions in writing. A registered professional engineer must be qualified with respect to the Crane involved, and must ensure that the original safety factor of the Crane is not reduced.

#### 4.0 HAND SIGNALS

A. Hand signals for Crane operations shall be those prescribed by the applicable ANSI and/or API RP 2D (6<sup>th</sup> Edition) standard for the type of crane in use. A signal person must be provided for the following situations:

- The view is obstructed when the equipment is traveling
- The point of operation is not in full view of the operator
- The operator or the person handling the load determines it is necessary due to site specific concerns

B. For purposes of this program, the following hand signals shall be used for Cranes owned or operated by Company employees:



## 5.0 HOISTING

Personnel must be in the clear at all times and must not walk, stand or work under suspended loads. Each person participating in the operation must remain alert by watching the crane block, sling and the load. Personnel are prohibited from riding a load being hoisted.

## 6.0 TAG LINES

When required to do so, tag lines shall be used to stabilize loads. Before the hook is moved, personnel using tag lines must be sure the lines are free from knots. Rigger should never wrap tag lines around the hands or wrists.

## 7.0 EMPLOYEE TRAINING

A. All Crane operators must be trained in accordance with the manufacturer's operating and maintenance manual, the user's work instructions, and the requirements listed in this policy before operating. Retraining, Certification, vision and medical condition evaluations for all Company employed Crane Operators shall be required every 4 years by one of the following methods:

- Qualification by a Licensed government entity
- Qualification by an audited employer program
- Certification by an accredited crane operator testing organization (i.e., American Petroleum Institute)

B. In addition, training shall incorporate the use of portable fire extinguishers. The HSE Manager will maintain a written record of all training conducted by qualified 3<sup>rd</sup> Party vendors including employees trained as well as the name and signature of the person conducting the training.

## **DISCIPLINARY POLICY**

### **PURPOSE**

The purpose of this program is to establish the Company's written Disciplinary Policy.

#### **1.0 GENERAL**

- A. The Company strives to create a safe and productive work environment. This disciplinary program does not exist primarily to punish employees, but rather to control the work environment so that workers are protected and accidents are prevented. This policy outlines the responsibilities of Company employees and management with regard to safety and addresses the disciplinary actions that will be taken in the event that safety policies are violated.
- B. In order to ensure that the Company's safe working practices are taken seriously by employees and are actually followed, Company managers and supervisors will always be on the lookout for safety violations and will consistently enforce the Company's commitment to safety. Furthermore, it is the responsibility of the Company HSE Manager and top-level Managers to verify that Supervisors and Foremen are demonstrating a commitment to their role in the Safety Program. The same level of disciplinary actions should be taken at the supervisory level if violations are indicated.
- C. It is the duty of each and every employee to know the Company's safety procedures and to conduct his or her work in compliance thereof. Any disregard of safety procedures shall be grounds for disciplinary action up to and including termination. It is the duty of each employee to make full use of the safeguards provided for their protection. Every employee will receive an orientation when hired and be informed of safety requirements contained in the written safety programs.

#### **2.0 RESPONSIBILITIES**

- A. The Safety Manager is responsible for the following:
  - Establishing safety goals and objectives;
  - Providing a written Safety, Health, and Environmental Program;
  - Coordinating employee safety training and conducting safety meetings;

- Following up on recommendations and suggestions made at safety meetings;
- Addressing all hazards or potential hazards as needed;
- Completing accident investigations;
- Being familiar with OSHA, BSEE, and other local and state safety regulations;
- Maintaining an adequate stock of first aid supplies and other safety equipment to ensure their immediate availability, and to make sure that there are an adequate number of qualified first aid providers on the job.

B. Company Managers & Supervisors shall be responsible for the enforcement HSE policies and procedures as well as enforcement of the Company's disciplinary program including but not limited to the following:

- Establishing an atmosphere which insures that safety is managed with the same emphasis as all other aspects of Company operations;
- Defining the responsibilities for safety and health of all subordinates and holding each person accountable for their actions through appraisals, and where necessary, disciplinary procedures;
- Regularly emphasizing that accident prevention and working safely are a condition of employment;
- Identifying operating oversights that contribute to accidents and could result in injuries and property damage;
- Pro-active participation in Company safety goals and initiatives including documentation of periodic safety audits, inspections and attendance at weekly safety meetings to ensure compliance with safety policies and procedures;
- Spending time with each person hired explaining safety procedures and the hazards of the employee's work;
- Making sure that if a job situation poses an unusual hazard, a trained person will be on hand to oversee others in completing the job;
- Enforcing safety rules consistently and following established discipline/enforcement procedures.

C. Company Employees are responsible for the following:

- Read, understand, and follow Safety Policy rules and procedures;
- Suitable work clothes are required and will be clearly defined;
- Employees observed working in a manner which might cause injury to either themselves or other workers shall be warned of the danger and will immediately correct their method of operation;
- Report all injuries, no matter how slight, to their supervisor immediately, and seek treatment promptly;



- Be aware of the location of first-aid supplies, eye wash area, fire fighting equipment, and other safety devices;
- Attend all required safety and health meetings;
- Until they are properly trained, employees are not to perform potentially hazardous tasks, or to use any hazardous material. Employees are to follow all procedures when performing those tasks;
- Wear Personal Protective Equipment (PPE) at all times when working in areas where PPE is required.

### 3.0 DISCIPLINE & ENFORCEMENT

- A. All employees must understand and follow the established Safety Procedures in order for the program to be successful. When an employee has been adequately trained in these safety rules, but chooses not to follow them, management, upon notice of the infraction, must take whatever steps are appropriate under the circumstances to deal with the situation. Corrective actions shall be taken to address violations of the safety rules for all employees. Corrective actions will be taken to address other inappropriate behaviors and actions pertaining to Safety, Environmental, and Quality Assurance issues. When a violation pertains to a Manager or Supervisor, a senior member of the management team shall investigate and document the infraction and enforce the same disciplinary action as with other employees.
- B. The following steps will be taken in order to address violations to Safety, Health, and Environmental procedures:
  - The employee will meet with the HSE Manager and his/her Supervisor to discuss the infraction & inform employee of the rule or procedure that was violated and the corrective action to be taken.
  - A Disciplinary Warning Notice "Write-Up" will be completed and signed, and copies of the notice will be retained in the employees personnel file. The extent of the disciplinary action taken will be determined based on the seriousness of the infraction. In some cases, no further action beyond the "write-up" will be necessary. In other cases, at the discretion of the HSE Manager and the employees' Supervisor, the employee may be suspended for up to five days without pay. Finally, if Company Management decides that the infraction warrants it, the employee may be terminated from employment. Disciplinary action which includes termination may also be enforced for employees who continue to violate the policy.
  - Violation may be anonymously discussed at Safety Meetings.

C. The following shall constitute a safety violation:

- Failure to wear selected PPE or abuse of selected PPE;
- Not following verbal or written safety procedures and/or guidelines;
- Failure to report an accident to an immediate supervisor upon being injured;
- Fighting, horseplay or other disruptive activities on Company or Customer premises or while on duty;
- Violation of the Company's Substance Abuse Policy and/or related safety rules;
- Possession of weapons, firearms or ammunition while on Company premises, in Company vehicles or at customer facilities.

## **DISTRACTED DRIVING & SEATBELT POLICY**

### **PURPOSE**

The purpose of this policy is to establish the Company's written policy regarding the use of cell phones and other similar devices while operating a Company vehicle and/or performing a work-related task on Company time. Any employee who violates this policy is subject to disciplinary action, up to and including termination.

### **COMPANY POLICY**

In order to increase employee safety and eliminate unnecessary risks behind the wheel, the Company has enacted a Distracted Driving Policy as well as the mandatory use of seatbelts while operating or riding in a vehicle while on Company time. We are committed to ending the epidemic of distracted driving, and have created the following rules, which apply to any employee operating a company owned vehicle or a personal vehicle while on company time:

- A. Company employees shall **not** use a hand-held cell phone or other electronic devices to read and/or type electronic text messages, emails, instant messages, Facebook postings, Twitter messages, etc. while:
  - Operating a motor vehicle, whether the vehicle is in motion or stopped at a traffic light;
  - Operating other equipment on Company time to include, but not limited to, Forklifts, Overhead Cranes, etc.
- B. A Company employee shall **not** knowingly send a text message to another employee that they reasonably believe may be driving on Company time.
- C. If Company employees need to use their cell phones or other electronic devices, they must:
  - Pull over to a safe location such as a parking lot or rest area;
  - Stop all work related activity associated with heavy equipment, hand-held power tools or machinery.
- D. Company employees are required to proactively inform clients, associates, business partners and other co-workers of the Company's policy as an explanation of why calls may not be returned immediately.
- E. Employees are never expected to place themselves at risk to make or receive a business call or communication. Any employee found to be in violation of this policy shall face disciplinary action, which could include termination of employment.

## **DRIVER SAFETY, FATIGUE & JOURNEY MANAGEMENT**

### **PURPOSE**

The purpose of this program is to establish the Company's written safety practices associated with vehicle hazards and work related road trips.

#### **1.0 AFFECTED EMPLOYEES**

The Journey Management Plan shall be reviewed with all applicable Drivers and Employees before they perform any driving on company business. A copy of the plan must be readily available at the workplace. Drivers shall carry a copy of the plan on each road trip.

#### **2.0 ROUTING & SCHEDULING**

Routing and scheduling procedures are location-specific and should be developed and managed in accordance with the hazards and risks associated with driving and transporting.

#### **3.0 MODE OF TRAVEL CONSIDERATIONS**

When mode-of-travel options exist, the following guidelines should be considered to assess and help decide whether driving or road transport is the best solution for moving people and/or goods and services between two or more points:

- If the distance from origin to destination is over 300 miles, involves a significant amount of night driving, requires more than five hours of driving, then "flying" may be the better alternative.

#### **4.0 REDUCING RISKS & COST**

Road journeys shall be taken only when necessary. Whenever possible, the Company shall try to complete multiple tasks in single trips to reduce the amount of driving for improved safety and efficiency. If the trip is being taken to meet with someone, management shall determine if the meeting can be done over the phone instead. Before leaving on a trip, Drivers shall ensure that weather conditions are safe for driving and the vehicle being used is adequate for the weather conditions.

Additionally, Drivers shall conduct a pre-trip inspection to ensure emergency supplies are in the vehicle including, but not limited to water, first-aid kit, warning triangle, flashlight, booster cables, mobile phone and/or a CB Radio. In particularly harsh conditions, management shall consider canceling or rescheduling the trip.

## 5.0 PLANNING AHEAD

When taking a trip to an unfamiliar location, Drivers shall not plan to read directions from a mobile phone while driving. Drivers shall coordinate their travel plans with their Immediate Supervisor or a member of Management. This includes where they are going, when they should be getting there, and when they plan to return.

## 6.0 SELECT THE BEST ROUTE

Minimizing exposure to roadway-related driving hazards and risks should involve the following types of considerations:

- Maximize time on freeways and major roads, and
- Minimize time on rural roads, congested urban areas and city streets

## 7.0 PLANNING REST BREAKS

When driving long distances, sufficient breaks shall be taken to prevent fatigue. When driving alone and having trouble staying awake, pull off the road and get out of the vehicle for fresh air, or take a power nap. If driving late at night, every Company Driver shall consider getting a hotel room and starting fresh the next day. If two licensed drivers are in the vehicle, take turns driving. Drivers shall get plenty of rest before beginning their journey.

## 8.0 NIGHT DRIVING

Driving at night is a hazardous activity because of reduced visibility as well as driver fatigue. Whenever possible, driving should be done during daylight hours rather than after dark. Drivers shall follow posted speed limits which include reducing speed when driving at night and should remain aware of the potential for wildlife to be on the road, especially when driving at dusk or dawn.

## 9.0 MAXIMUM HOURS OF OPERATION

The Company has established a 11 hour work limitation on Driving and 16 Hour limitation on Production or Standby. In addition, the Operations Manager will be responsible for controlling job rotation schedules in order to control fatigue, allow for sufficient sleep and increase mental fitness. Employees are encouraged to report fatigue/tiredness and lack of mental acuity to their immediate Supervisor. Management must take appropriate actions to prevent loss or risk to personnel.

## 10.0 DRIVER SAFETY REQUIREMENTS & FATIGUE TRAINING PROGRAM

- A. Only authorized employees will drive a motor vehicle in the course and scope of work or operate a company- owned vehicle. Drivers shall be appropriately assessed, licensed and trained to operate the vehicle.
- B. Drivers shall not operate a motor vehicle while under the influence of alcohol, illegal drugs, or prescription or over-the counter medications that might impair their driving skills. Authorized drivers will report any collision or traffic violation while driving on Company time to the appropriate personnel.
- C. Driver shall ensure all loads are secure prior to departure. Company vehicles shall only be used for business purposes and shall meet load specifications & manufacturer requirements. Vehicles loads shall **not** exceed legal limits and shall be the correct size and design for the intended use.
- D. All Company vehicles shall be maintained in safe working order. Seatbelts shall be worn by all occupants at all times whenever a vehicle is in motion. Authorized drivers shall follow safe driving practices.
- E. All Company Drivers shall be required to utilize "Back-In / Head-Out Parking". One of the most common causes of accidents is people backing out of standard parking without being able to see on-coming traffic. Reverse parking and/or pull through parking removes this difficulty as well as improves safety for pedestrians and cyclists. Overall, "Back-In / Head-Out Parking" is a good choice when compared to conventional head-in & back-out parking and parallel parking.

- F. Additional safe driving behaviors shall include;
- Hands-free cell phone usage,
  - Not exceeding the posted speed limit,
  - Maintaining a safe distance between other vehicles, and
  - No use of electronic devices or manipulating radio while vehicle is in motion

#### 11.0 DRIVER & FATIGUE MANAGEMENT TRAINING

The Company's Defensive Driver program shall be completed by all Field Service Technicians including a 3-Year Refresher training frequency. The Company will provide initial training on how to recognize fatigue, how to control fatigue through appropriate work and personal habits, and reporting of fatigue to Supervisors and Management. Training shall also include, but not limited to, the following Safe Driving Practices:

- Hours of Service;
- Incident Reporting;
- Load Securement;
- Company Disciplinary Policy;
- Following Posted Speed Limits;
- Motor Vehicle Inspections and Maintenance;
- Maintaining A Safe Traveling Distance Between Vehicles; &
- Company Policy That Prohibits the Use of Cell Phones and/or Electronic Devices While the Vehicle is In Motion

#### 12.0 GENERAL FATIGUE MANAGEMENT

The Company will provide equipment such as anti-fatigue mats for standing, lift assist devices for repetitive lifting and other ergonomic devices as deemed appropriate, chairs for workers to sit periodically, and will provide periodic rest breaks for personnel. The Company will also periodically evaluate and improve work tasks to control fatigue. Employees are prohibited from chronically using over-the-counter or prescription drugs to increase mental alertness. Furthermore, Supervisors shall discourage employees from taking any substance known to increase fatigue in that employee, including fatigue that sets in after the effects of the drug wear off.

## **DROPPED OBJECTS**

### **PURPOSE**

The purpose of this program is to describe measures to prevent the occurrence of dropped objects and align with industry best practices.

### **1.0 OBJECTIVE**

- A. The objective of this program is to provide simple guidance towards eliminating dropped objects by;
  - Identification and understanding of potential workplace dropped objects hazards
  - Understanding the various levels of protection that are available to prevent dropped objects
  - Selecting and supplying the right level of mitigation, and
  - Raising the overall awareness of dropped objects.

### **2.0 DEFINITION**

- A. A dropped object is any object that falls from its previous static position and has the potential to cause injury, death, equipment damage, or harm to the environment.
- B. When referring to dropped objects, consider:
  - Lifting Operations,
  - Operations conducted at heights,
  - Hand tools being used at heights,
  - Temporary equipment at heights,
  - Hand tools and/or equipment left behind after working at heights,
  - Where personnel are working on a level directly below the work site,
  - Equipment mounted at a height that could fall due to vibration and environmental conditions (i.e., piping, lights, cameras, rigging gear, etc.)



### 3.0 FOCUS AREAS

- A. Dropped objects are the principal cause of incidents in the oil and gas industry and contribute to the risk level for offshore and onshore facilities.
- B. Examples of risk areas include:
  - Cranes,
  - Ladders,
  - Pipe Racks,
  - Scaffolding,
  - Forklift Operations,
  - Poorly Stacked Materials,
  - Drilling Rig Derricks & Floors,
  - Areas Below Lifting Operations,
  - Elevated Work areas or Platforms,
  - Temporary or Portable Equipment,
  - Remotely Operated Vehicles (ROVs), and
  - Work Spaces Where Equipment is Mounted Overhead

### 4.0 ROOT CAUSES OF DROPPED OBJECTS

- A. Dropped objects are created by;
  - Weather,
  - Instability,
  - No restraints,
  - Poor designs,
  - Failure to plan,
  - Poor housekeeping,
  - Load miscalculation,
  - Lack of risk assessment,
  - Improperly secured loads,
  - Scrap and debris left aloft,
  - No equipment maintenance,
  - No regular inspection procedures,
  - Carrying equipment while at height, &
  - No lanyards on tools used at height

## 5.0 PREVENTION MEASURES

- A. Conduct a dropped objects risk assessment specific to the site utilizing the "HAZARD ID" tool.
- B. Review and revise JSEA for dropped objects potential.
- C. When necessary, add secondary retention safety systems such as safety nets.

D. All Hand Tools shall be secured by a tool lanyard to prevent dropping to a lower level. Hand tools shall include, but not be limited to the following:

- Pliers,
- Wrenches,
- Hammers,
- Screw Drivers, &
- Tape Measures



- E. Inspect all overhead equipment and locations for loose items that may present a hazard during maintenance activities.
- F. Account for all tools used while working at heights.

## 6.0 EMPLOYEE TRAINING

The Company has established a training program for relevant personnel to identify and mitigate dropped objects in the workplace. Training shall cover the following topics at a minimum:

- Identifying Dropped Objects,
- Maintaining Good Housekeeping,
- Observing and Reporting Incidents,
- Reviewing Dropped Objects During the JSEA Process,
- Securing Tools & Equipment When Working at Heights, &
- Utilizing Stop-Work-Authority When Observing Unsafe Acts and Conditions

## **ELECTRICAL SAFETY**

(QUALIFIED / NON-QUALIFIED)

### PURPOSE

The purpose of this program is to ensure that employees are trained in appropriate electrical safety work practices. In addition, employees that work around, but not on electrical systems, must be trained in the hazards associated with electricity.

### 1.0 GENERAL

- A. Only qualified individuals are permitted to perform electrical work for the Company. A qualified person is considered by the Company as an employee who has the required skills and knowledge to perform electrical work safely. Such persons shall be made familiar with the use of special precautionary techniques, PPE, insulating & shielding materials and insulated tools.
- B. Whenever possible, all circuits or equipment shall be de-energized before beginning any work. Authorized workers shall only perform work on energized circuits as described in the "Lockout/Tagout Energy Control Program". In addition, workers shall use:
  - 1. Proper design, fabrication, installation, and documentation techniques.
  - 2. Proper operational and maintenance procedures.
  - 3. Electrical equipment approved by a nationally recognized testing laboratory (National Electrical Code).
  - 4. Proper personal protective equipment (explained later in this policy).
  - 5. Equipment, which meet the requirements of this program.
- C. Safe work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts when work is performed near or on equipment or circuits which are or may be energized. Safe procedures for deenergizing circuits and equipment shall be determined before circuits or equipment are deenergized. A qualified person shall operate the equipment or otherwise verify that the equipment cannot be restarted, verify that the circuit elements and equipment parts are deenergized and determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back feed even though specific parts of the circuit have been deenergized and presumed to be safe.

- D. All equipment grounding conductors and parts of electrical equipment that have been deenergized but have not been "Locked or Tagged" out shall be treated as live parts.
- E. Each receptacle and attachment cap or plug shall be tested for correct attachment of the equipment and grounding conductors. The equipment-grounding conductor shall be connected to its proper terminal:
  - 1. Before each use;
  - 2. Before equipment is returned to service;
  - 3. Before equipment is used, such as when a cord has been run over;
  - 4. At intervals not to exceed three (3) months, except that cord sets and receptacles, which are fixed and not exposed to damage, shall be tested at intervals not to exceed six (6) months.
- F. Tests performed as required by this program shall be recorded as to the identity of each receptacle, cord set and plug connected equipment that passed the test and shall indicate the last date tested or interval for which it was tested. These records shall be kept by log and shall be maintained by the qualified electrician until replaced by a more current record. These records must be available to employees and to regulatory officials on the job site.

## 2.0 ELECTRICAL EQUIPMENT CONDITIONS OF APPROVAL & USE

- A. All electrical equipment, components, and conductors should be listed, labeled and approved by Underwriters Laboratory for their intended purpose. Custom-made and installed equipment can be approved for use, by the Electrical Authority Having Jurisdiction (AHJ), if built according to specific standards (e.g., UL 508 or one of the ANSI C series standards). Appropriate documentation for such equipment shall be maintained on file and easily accessible by those who wish to research it.
- B. When building, repairing, or modifying electrical systems, NEC-approved equipment must be used.

C. All live electrical parts shall be positively de-energized when employees work on or near exposed energized parts that could result in direct contact, contact by means of tools or materials or being near enough to be exposed to any hazard they present. While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.

D. The additional precautions shall be followed to improve safety in the work area:

1. Follow established rules and procedures, including those of the various electrical manufacturers. Supervisory personnel involved in electrical work shall maintain a copy of this policy on the job site for availability to employees as well as regulatory inspectors, including the Assistant Secretary.
2. Identify and report to your supervisor potential electrical hazards or unexpected occurrences or incidents (i.e., discharges or arcs when applying grounds to circuits thought to be de-energized), including near misses.
3. Anticipate potential electrical problems and hazards.
4. Do not rush to finish a job; never bypass approved procedures and work practices.
5. Plan and analyze for safety during each step of any electrical work.
6. Keep accurate records (e.g., as-built designs) of all pertinent work performed on a project.
7. Use properly rated test equipment and verify its condition and operation before and after use.
8. Know applicable emergency procedures.

### 3.0 MINIMUM CLEARANCE DISTANCES & ILLUMINATION

A. Any vehicle or mechanical equipment working near or capable of having direct contact with an energized overhead line shall be de-energized & grounded or shall be operated within the following clearance distances:

1. For voltages 50kV or below; Minimum of 10 feet
2. For voltages over 50kV; Minimum of 10 feet plus 4 inches

- B. When an unqualified person is working near any energized source, the location shall be such that the person, their tools or materials cannot come closer than the following distances:
1. For voltages 50kV or below; Minimum of 10 feet
  2. For voltages over 50kV; Minimum of 10 feet plus 4 inches
- C. When a qualified person is working in the vicinity of overhead lines, whether in an elevated position or on the ground, the person may not approach or take any conductive object without an approved insulating handle closer to exposed energized parts as outlined in Section 3.0, G.
- D. Protective shields, protective barriers or insulating materials as necessary shall be provided by the Company and used when working in confined or enclosed work spaces where electrical hazards may exist.
- E. Adequate illumination shall be provided for all working spaces around electrical equipment. Employees may not enter spaces containing exposed energized parts unless illumination is provided that enables the employees to work safely.
- F. Where live parts present an electrical contact hazard, employees may not perform housekeeping duties at such close distances to the parts that there is a possibility of contact, unless adequate safeguards are provided. Electrically conductive cleaning materials may not be used in proximity to energized parts unless procedures are followed which will prevent electrical contact.
- G. If the work is performed by a qualified person, the minimum approach distance may be reduced to the distance given in the table below:

<u>Voltage (phase to phase)</u>	<u>Minimum approach distance</u>
300 V and less	Avoid contact
Over 300V, not over 750V	1 foot 0 inches
Over 750V, not over 2Kv	1 foot 6 inches
Over 2kV, not over 15kV	2 feet 0 inches
Over 15kV, not over 37kV	3 feet 0 inches
Over 37kV, not over 87.5kV	3 feet 6 inches
Over 87.5kV, not over 121kV	4 feet 0 inches
Over 121kV, not over 140kV	4 feet 6 inches

#### 4.0 NFPA 70E

- A. The Company shall advise all Clients of any unique hazards related to services being provided. The Company's Onsite Supervisor shall communicate any observed hazards found during operations as well as the actions that will be taken to eliminate or control the hazards and prevent reoccurrence.
- B. Unqualified Persons: Employees shall **not** be permitted to enter areas that are restricted to qualified employees only, unless all applicable electric conductors and/or equipment are in an electrically safe work condition.
- C. To ensure the safety of personnel, Company employees shall be trained in the following skills and techniques:
  - The ability to distinguish exposed energized electrical conductors and circuit parts from other parts of electrical equipment;
  - The ability to determine the nominal voltage of exposed energized electrical conductors and circuit parts;
  - Approach distances as specified in this program, Section 3.0, G; &
  - The jobsite "Walk-Through" process to adequately determine potential hazards, personal protective equipment needed and documentation of the Job Hazard Analysis (JHA) process necessary to perform the task safely.
- D. Prior to the start of the operation, a Risk Assessment shall be completed & documented by a Company Supervisor to account for hazards at the limited approach and arc flash boundaries. The Risk Assessment shall identify site-specific hazards, probability of event, severity of event and methods to eliminate or control the hazards. The Risk Assessment hierarchy places elimination of a hazard as the primary method of control and identifies PPE as the last option. Additionally, the Risk Assessment must determine arc flash boundary requirements to minimize the risk of electric shock as well as the safe-work-practices, permits, signs and personal protective equipment that will be needed to safely perform the job task.

*Note: An annual audit shall be conducted to ensure the requirements in this written program are being performed by employees. The written program must be updated if another issue is identified with potential hazardous exposure. All PPE & signage used must meet requirements found in applicable laws and regulations.*

- E. A Job Safety Analysis (JSA) must be held before starting each job and shall include all affected employees & personnel. The briefing shall address step-by-step job procedures, hazards associated with the job task, special precautions, energy controls, PPE requirements, and work permits, if applicable. If any changes occur during the operation that might affect the safety of personnel, Stop-Work-Authority shall be invoked, which will require a revised "JSA".

- F. Only qualified persons shall perform tasks such as testing, troubleshooting, and voltage measuring within the "Limited Approach Boundary" of energized electrical conductors or circuit parts operating at 50 volts or more or where an electrical hazard exists.
- G. All Company owned test instruments & equipment shall meet the requirements of ANSI/ISA-61010-1. When test instruments are used to test for the absence of voltage on conductors or circuit parts operating at 50 volts or more, the operation of the test instrument shall be verified before and after an absence of voltage test is performed. All insulated tools and PPE must be inspected prior to use and immediately following any incident that can reasonably be suspected of having caused damage. All electrical insulating gloves shall be given an air test, along with the inspection.
- H. The Company has adopted the following maximum test intervals for rubber insulating Personal Protective Equipment:
- Blankets: before first issue & every 12 months thereafter,
  - Gloves: before first issue and every 6 months thereafter,
  - Sleeves: before first issue and every 12 months thereafter, and
  - Covers & Line Hose: shall be testing if insulating value is suspect
- I. Any work-related task on energized electrical conductors or circuit parts that are not placed in an electrically safe work condition, shall be considered energized electrical work and shall require a written work permit.
- J. Company employees are prohibited from entering or working in spaces containing electrical hazards including "Limited Approach Boundaries" unless illumination is provided that enables the employees to perform the work safely.
- K. Company employees shall be trained in safe-work-practices and procedural requirements specific to electrical hazards associated with their respective jobs. Additionally, employees shall be trained to identify electrical hazards, potential injuries associated with electrical shock, work permits, anticipating unexpected events and electrical flash arc hazard analysis. Training records shall be maintained for the duration of employment including the content of the training, each employee's name and date of training. An employee shall receive additional training (or retraining) whenever the following conditions occur:
- The Onsite Supervisor indicates that the employee is not complying with the Company's safety-related work practices;
  - When new technology, equipment, or changes in procedures affect the Company's established safe-work -practices that the employee was previously trained on; or
  - If an employee is asked to perform a safe-work-practice that he or she is not familiar with.

*Note: Retraining shall be performed at intervals not to exceed 3 years.*



## 5.0 EXTENSION CORDS & MULTIPLE OUTLET BOXES

- A. Use only three-wire extension cords and cables that conform to the rating, grounding, and non-inter-changeability stated in NEC Article 210-7 (Receptacles and Cord Connectors).
- B. Check extension cords before use to ensure they are adequate for the intended purpose. Plug high-current equipment (e.g., space heaters, hot plates, and coffee pots) directly into a wall receptacle whenever possible.
- C. Use only one extension cord for lamps, appliances, or other equipment in conjunction with the power supply cord. Employees are not permitted to use multiple extension cords (daisy chaining) that will increase resistance in an electrical circuit, which in turn will increase heating of conductors, receptacles, and plugs.
- D. Inspect extension cords daily for damage before placing them in service and during use. Only qualified and authorized persons can repair extension cords; this must be done in a manner approved by the manufacturer. Replace damaged cords with ones listed by Underwriters Laboratory, and mark defective cords "DO NOT USE".
- E. For receptacles connected to circuits with different voltages, frequencies, or current (AC/DC) on the same premises, use a design such that the attachment plugs on the circuits are not interchangeable.
- F. Only highly visible yellow or orange extension cords shall be used outdoors and with portable or integral ground-fault circuit interrupters (GFCIs).

## 6.0 POWER PLUGS & RECEPTACLES

The company as well as those locations on temporary job sites, uses many different voltages, frequencies, and current (ac or dc) in power systems and equipment. Thus, it is essential to ensure that such equipment cannot be inadvertently connected to the wrong power source. For specific purposes, voltage, and current ratings, use a plug receptacle that fully complies with the requirements in ANSI C73 (see the configuration chart form ANSI C73 in the NFPA National Electrical Code Handbook for information about general purpose locking and non-locking plugs and connectors).

## 7.0 PORTABLE ELECTRICAL TOOLS, EQUIPMENT & INSTRUMENTS

- A. Portable electrical equipment or tools shall always be inspected to identify defects; defective equipment shall be removed from service immediately. [Portable electric equipment shall be connected to a portable GFCI \(or circuit that contains a GFCI\) when used outdoors, in damp locations, in any unsafe environment, or for outdoor construction.](#) Ordinarily, the casings for portable electrical equipment are grounded. If it is necessary to operate this type of equipment with other than grounded equipment casing, suitable barriers, guards, or shields shall be installed to protect personnel while working on or near equipment. In addition, a safety procedure shall be written describing the controls for safe operation of the equipment.
- B. Receptacles and flexible cords can be used to connect electrical appliances and equipment (e.g., fans, machine tools, and pumps) to power sources. Receptacles used on a two-wire, single-phase portable generator (or vehicle mounted generator), with a rating of not more than 5kW (where circuit conductors are insulated from the frame and all other grounded surfaces) do not need to be GFCI protected.
- C. [All power tools should be de-energized \(i.e., unplugged, breakers turned off, etc.\) when not in use.](#)

## 8.0 EQUIPMENT GROUNDING

- A. All electrical apparatuses, equipment, and systems shall be grounded in accordance with NEC Article 250 (Grounding) and ANSI standards. The conductor used for grounding shall meet the following criteria:
  - 1. Be permanent and continuous.
  - 2. Facilitate operation of the circuit's protective devices.
  - 3. Have sufficiently low impedance to limit the voltage to ground to a safe level at all frequencies and fault-current conditions anticipated.
  - 4. Have the capacity (size and rating) to safely conduct any fault that may be imposed on it for the time required for protective device operation.
- B. The HSE Manager will be responsible for maintaining training and related records, and provide training under the applicable standard, specific to the duties of company employees.

- C. The on-site qualified electrician and/or competent person will be responsible for developing and implementing this procedure on the temporary job site and ensuring compliance thereto by other employees. In addition, he/she shall continually evaluate and assess the integrity of the grounding conductor policy to determine if changes to existing procedures are required.

## 9.0 STATIC ELECTRICITY

- A. A static charge is an imbalance of electrons on an object (matter) that can build up on all matter and transfer from one object to another by conduction or induction. The discharge of static electricity can cause shock or a fire or explosion.
- B. Although this type of shock is painful, it is not normally physically hazardous and therefore is not considered reportable as electric shock. It should be noted, however, that injuries might result from reaction to shock (i.e., by a person rapidly pulling his hand away from a metal object and hitting an elbow against a wall or cabinet).

## 10.0 PERSONNEL GUIDELINES

When working with electrical equipment, employees shall follow the guidelines below for their own protection and that of the equipment:

1. Grounding of the metal parts or enclosures will continuously discharge static. Therefore, wrist straps and other connections used to ground employees shall be solidly grounded where static-safe workstations are used for semi-conductor, electronic, or explosive work. Grounding prevents the wrist strap from becoming a shock hazard in the event of a short circuit from a voltage to the wrist strap conductor.
2. Bonding will equalize the potential between two adjacent non-current-carrying metal parts or enclosures. Thus, only approved or listed grounding clamps are acceptable for static bonding and grounding. Alligator clamps are not acceptable.
3. Upon reenergizing equipment, a qualified person shall conduct tests and visual inspections to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed. Employees exposed to the hazards shall be warned to stay clear of circuits and equipment. Each lock and tag shall be removed by the employee who applied it. There shall be visual determination that all employees are clear of the circuits and equipment.

4. When working with or near electrical energized parts, use the following guidelines:

- Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping or other insulating means.
- Never allow any electrical-powered office equipment to become wet while it is turned on, and never turn on any electronic equipment when it is wet.
- Never use metal ladders when performing electrical work. Portable ladders shall have non-conductive side rails.
- When handling long dimensional conductor objects (ducts or pipes), near energized equipment, steps for safe work practices shall be listed in the "Job Safety Analysis".
- Always note the positioning of power lines which run from a pole to a building when working around buildings.

## 11.0 PERSONAL PROTECTIVE EQUIPMENT

- A. Personal protective equipment is required when installing, examining, adjusting, servicing, fabricating, testing, or maintaining electrical equipment. The work supervisor shall provide employees with the appropriate PPE, and shall ensure that the equipment is used properly. Alternatively, employees may contact the office for assistance in selecting the appropriate PPE for the operation. Protective footwear, hard hats, and insulated nonmetallic-framed safety glasses shall meet the requirements of ASTM-2413, ANSI Z87.1, and ANSI Z89.2. Conductive items of jewelry or clothing shall not be worn unless they are rendered non-conductive by covering, wrapping, or other insulating means.
- B. Rubber insulated (nonconductive) protective equipment shall be visually inspected at the beginning of each work day before use and after performing work that can cause damage to PPE. This inspection shall include an air test of the gloves used. Hot sticks, grounds, aerial-lift equipment and booms, hot rope, and hot ladders shall also be visually inspected.

## 12.0 EMERGENCY ASSISTANCE & RESCUE

Anyone who witnesses or discovers a serious electric shock should do the following:

1. Call 911;
2. If you are qualified, ensure that all potential sources of energy are safe and in a neutral state;
3. If appropriate, initiate First-Aid / CPR (Only trained personnel should perform this procedure);

4. Notify the victim's supervisor and the appropriate customer representative as soon as possible if not done already;
5. Properly secure the area once the victim is under care, leaving items and equipment in the same position as much as possible;
6. Record:
  - the time, date, and location of the accident;
  - the name of the victim and any witnesses;
  - who was notified;
  - the voltage and current;
  - the contact parts of the body;
  - what equipment or system was being serviced; and
  - the shock reaction and duration of the shock.

### 13.0 EMPLOYEE TRAINING (ELECTRICAL WORKERS)

- A. Employees who perform electrical work shall be trained to recognize the hazards associated with their work environment and use appropriate procedures and protective equipment to minimize the risk of an accident or injury. Work supervisors shall verify the qualifications and training of all electrical workers before they are permitted to perform electrical work.
- B. Employee training shall be documented with respect to the specific equipment and tasks for which the employee is qualified. Much of the experience required for an employee to be considered qualified is specific to the equipment and tasks involved. The depth of the training and how training is provided shall be determined by the hazards associated with the employee's respective tasks.

### 14.0 RESPONSIBILITIES UNDER THIS PROGRAM

- A. Employees:
  - Only perform the tasks for which you are qualified.
  - Understand the basic principles of electricity and electrical safety.
  - Follow applicable OSHA requirements.
  - Use the proper tools and required PPE.
  - Request additional training to avoid working beyond your level of qualifications or comfort.
  - Comply with the requirements set forth by DOE, OSHA, NEC, and other regulatory agencies.

B. Supervisors:

- Ensure that all employees have the appropriate PPE available and are adequately qualified to perform their jobs.
- Determine the work each employee is qualified to perform and make work assignments accordingly, while making routine inspections of the working equipment and monitoring of employee work practices.

C. HSE Manager:

- Provide support primarily through supervisory and management personnel, which are an initial point of contact for all safety issues raised by individuals.
- Identify electrical safety hazards and make recommendations for resolution.
- Provide support to program line management responsible for analyzing electrical accidents and incidents.
- Evaluate electrical accidents and incidents to determine trends.
- Develop, review and approve electrical safety training programs.
- Interact on a continual basis with groups charged with providing a safe environment for employees.
- Inform management and employees of lessons learned from electrical accidents and incidents.

15.0 EMPLOYEE TRAINING (NON-ELECTRICAL WORKERS)

A. Employees who face a risk of electric shock but who are not qualified persons shall receive formal classroom training to include the following:

- Clearance distances;
- Electrically related safety practices;
- Safety related work practices that pertain to their respective job assignment;
- The proper handling of portable tools and appliance cords;
- Procedures for resetting over-current protective devices;
- Techniques for approaching distances to overhead conductors;
- The meaning of electrical safety warnings and barriers;
- Electrical hazards associated with water;
- The proper response to electric shock.

B. Qualified persons shall, at a minimum, be trained in and familiar with the skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment, the nominal voltage of exposed live parts, and the clearance distances and the corresponding voltages to which the qualified person will be exposed. The training shall be of the classroom or on-the-job type. The degree of training provided shall be determined by the risk to the employee

## **EMERGENCY ACTION PLAN**

"29 CFR 1910.38"

### **PURPOSE**

The purpose of an Emergency Action Plan is to protect the employees from serious injury, property loss, or loss of life, in the event of an actual or potential emergency. An emergency may include, but not limited to, any of the following: fire, tornado, earthquake, bomb threat, or hazardous chemical spill.

### **1.0 GENERAL**

- A. The Company shall maintain an employee alarm system with a distinctive signal in accordance with 29 CFR 1910.165. Company operations do not require any personnel to continue operating critical equipment during an emergency evacuation. Following an emergency evacuation, no employee is permitted to re-enter the building until authorized.
- B. A written copy of the Emergency Action Plan shall be kept in the workplace and available to employees for review.

### **2.0 EMPLOYEE TRAINING**

- A. The Safety Manager has overall responsibility of designating and training employees to assist in a safe and orderly evacuation as well as implementing this plan and updating as needed. Additionally, the Safety Manager will provide a "Points of Contact" list and an explanation of their duties to Office Staff, Shop Employees, Field Service Personnel and Safety Monitors who need more information regarding the plan. All employees shall be trained in the following areas:
  - The Alarm System
  - Preferred means of reporting fires and other emergencies,
  - Emergency escape procedures and route assignments,
  - Procedures to account for all employees after emergency evacuation has been completed,
  - Rescue and medical duties for those employees who perform them, and
  - Muster Area
- B. Refresher training is required; (1) When the plan is developed or the employee is assigned initially to a job, (2) When the employee's responsibilities under the plan change, or (3) When the plan is changed.

### 3.0 ALERTING BUILDING OCCUPANTS

- A. In case of a fire, call the local Fire Department at 911. In addition, the smoke alarms will alert building occupants of the need for evacuation. Any pertinent fire or rescue information should be conveyed to the Fire Department.
- B. Persons discovering a **fire, smoky condition or any other emergency** shall activate the fire alarm system and make a verbal and/or PA announcement immediately.

### 4.0 EVACUATION PROCEDURES

- A. When the fire alarm sounds or a verbal announcement is made, all personnel should ensure that nearby personnel are aware of the emergency, quickly shutdown operating equipment, close doors and exit the building.
- B. All occupants should proceed to their Designated Muster Area via their primary or alternate exits and await further instructions from their Safety Monitor.
- C. REMEMBER **R.A.C.E.**
  - **Rescue:** When you discover a fire, rescue people in immediate danger if you can do so without endangering yourself.
  - **Alarm:** Sound the alarm by pulling a fire box and call 911 from a safe distance.
  - **Confine:** Close all doors, windows and other openings.
  - **Evacuate:** Evacuate the building.

### 5.0 DESIGNATED MEETING AREA

When an alarm sounds or a verbal announcement is made, all occupants will proceed to the nearest exit and gather @ the designated "Muster Area". Once the evacuation has been completed, the Safety Monitor shall conduct a head count. The "Receptionist" will have the responsibility of bringing the "Sign-In Roster" to the Muster Area to account for all employees and visitors after the evacuation.

### 6.0 RESCUE & MEDICAL DUTIES

- A. Do not move injured personnel.
- B. Always keep injured personnel lying down, covered and warm.
- C. Emergency Medical Technicians (EMT) will conduct all rescue and medical duties.



## **ENVIRONMENTAL MANAGEMENT PLAN**

### **PURPOSE**

The purpose of this plan is to control all potential negative environmental impacts as well as comply with all relevant laws associated with pollution control, waste management and environmental quality.

### **1.0 COMPANY RESPONSIBILITIES**

- A. Establish environmental protection policies based on regulatory requirements, customer needs and community expectations.
- B. Insure employees are aware of environmental concerns, actions and responsibilities relating to our activities and promote an understanding of the business value of ecologically sustainable operation, through training and communications.
- C. Design processes that reduce or eliminate waste that may environmentally damage land, air, or water.
- D. Design processes that reuse or recycle waste materials as opposed to treatment and/or disposal of such wastes.
- E. Select materials and/or products to use in processing, when possible, that are environmentally friendly.
- F. Assess the environmental condition of property and appropriately address possible environmental impacts caused by our operations, if any.

### **2.0 MANAGEMENT RESPONSIBILITIES**

- A. Establish and maintain operations that support the integration of environmental factors into the Company's daily business.
- B. Ensure compliance with all state and federal guidelines concerning Company operations.
- C. Review verbally with work crews any job task that has known or potential negative environmental impacts prior to work commencement.

### 3.0 SAFETY DEPARTMENT RESPONSIBILITIES

- A. Develop and implement all training as related to General Safety.
- B. Conduct & document internal and job-site environmental audits.
- C. Ensure compliance with all state and federal guidelines concerning emergency procedures.
- D. Communicate all updates or revisions to the entire workforce through safety meetings and annual safety training.
- E. The HSE Manager shall be the designated environmental manager and the person to whom environmental concerns should be directed.

### 4.0 EMPLOYEE RESPONSIBILITIES

- A. Acquire all information from the Supervisor and/or Site Representative pertaining to proper disposal procedures, wash water runoff and containment, spill containment, and other essential components to contamination prevention.
- B. Evaluate tasks prior to initiation (including opening valves and loosening bolts), and take into account those elements involving emissions, inspections of seals and connections, vapor return and other environmental controls.
- C. Report promptly to the site supervisor, evidence of oil sheen on water, spills and accidental releases.
- D. Attain a basic awareness and understanding of the possible impact of the Company's operations on the environment at all times while the activity is being conducted, from start to finish.
- E. Assist, in any way feasible, remediation of environmental incidents concerning a Company operation.
- F. Participate in Company and customer mandated programs for the purpose of achieving environmental excellence, such as recycling and waste management programs.
- G. Properly dispose of oil rags.
- H. Avoid bringing butane lighters and/or plastic bags to offshore locations.

## 5.0 INCIDENT PREVENTION

- A. All considerable preventive measures will be discussed during the pre-job meeting; viable methods shall be documented on the JSA and implemented prior to job start.
- B. Measures shall include but not be limited to:
  - 1. Precautions necessary to prevent exposure and/or contamination,
  - 2. Proper containment measures,
  - 3. Proper waste disposal and recycling procedures,
  - 4. Awareness of site-specific chemical and processes essential in avoiding fires, chemical emissions, leaks or spills, and
  - 5. Review of appropriate MSDS or product information data.

## 6.0 SUCCESSFUL JOB COMPLETION

For the purpose of this policy, the Company will consider a job as being successfully completed when all facets of the job have been administered, to include:

- 1. Visually performing and documenting a Job Safety & Environmental Analysis and assigning site specific functions,
- 2. Setting up the job,
- 3. Performing the job,
- 4. Reviewing the end result of the task with customer representative,
- 5. De-mobilizing the job, and
- 6. Returning to the shop without incident.

## 7.0 WASTE MINIMIZATION PLAN

- A. The Company shall estimate the waste that will be generated prior to work being performed so that the need for containers and waste removal, if necessary, can be determined.

- B. The Company will coordinate with the client representative to ensure proper disposal of wastes or scrap materials. The Company's onsite Supervisor will ensure that the client representative is aware of whether wastes and scrap materials will be taken off site by the Company or will be disposed of by the client.
- C. To ensure proper disposal or reuse, the Company has assigned the responsibility for proper waste or scrap materials to the onsite Supervisor. The Company's onsite Supervisor shall identify locations at each facility where waste products are to be stored or diverted. Proper labeling shall accompany all containers of waste, which require special handling.
- D. Company personnel will dispose of aluminum cans and other recyclable items in proper containers.

## 8.0 STORAGE & DISPOSAL METHODS

- A. The Company will provide training to all employees regarding practices related to the immediate storage and handling of waste, scrap or leftover materials. When PPE or other precautions are necessary to handle waste, these shall be identified during the Job Safety Analysis prior to handling any waste materials.
- B. Waste materials shall be properly stored and handled to minimize the potential for a spill or impact to the environment. During outdoor activities, receptacles must be covered to prevent dispersion of waste materials and to control the potential for run-off.
- C. The Company shall ensure that any project related wastes are stored and maintained in an organized fashion to encourage proper disposal and minimize risks to employee. The Company will provide proper waste receptacles at all Company facilities for trash and materials that may be reused or recycled during a project.
- D. All Company employees shall be instructed on the proper disposal method of wastes. This will include general instruction on disposal of non-hazardous wastes, trash or scrap materials. If wastes generated are classified as hazardous, employees shall be trained to ensure proper disposal.
- E. The Company shall encourage proper segregation of waste materials to ensure opportunities for reuse or recycling. Company facilities will use a licensed third-party vendor for recycling any hazardous materials.

- F. Employees must adhere to Storm Water Discharge requirements during cleaning activities and utilize absorbent pads or booms to contain visible oil-based residue prior to its entering the public drain system. Any spent absorbent material will be placed in a plastic liner, inside a container separate from ordinary trash.
- G. Customer guidelines may vary from site-to-site; therefore, employees are instructed to adhere to Customer Site Specifications as discussed in Site Specific Orientations. Employees are also encouraged to ask questions, if they are uncertain about proper disposal methods and containment.

## 9.0 INCIDENT RESPONSE

- A. Emergency response telephone numbers and alarm codes shall be documented and reviewed with the entire crew prior to job commencement.
- B. All personnel are instructed to follow local protocol and/or customer specifications when reporting an environmental incident and shall report immediately. Employees are never to put themselves at risk and shall not exceed the level of their training or expertise.
- C. For the purpose of this policy, proper notification is as follows:
  - Activate emergency alarm or effect notification to surrounding personnel.
  - Notify the facility safety representative or on-site supervisor.
  - Notify the Company representative.
  - The Company will notify the state or federal agency as required.
- D. The Company will provide absorbent pads and protective equipment as needed.

## 10.0 EMPLOYEE & SUPERVISOR TRAINING

The Company will provide training to employees within the first thirty days of employment to include at a minimum:

- Recognizing conditions of potential environmental damage.
- Proper disposal of oily rags and filters.
- Proper reporting requirements.
- Personal protective equipment.
- Review applicable definitions pertaining to environmental responsibility.

## **FACILITY SECURITY PLAN**

### **PURPOSE**

The purpose of this program to establish the Company's policies and procedures that will be used to protect Company personnel, facilities and assets by controlling what enters and leaves Company property.

#### **1.0 BUILDING ACCESS**

- A. The front and side door of the facility will be the only points to enter and exit the building during normal operations. A front desk/screening area is positioned to provide an unimpeded view of the front entrance, which shall be used by all visitors. The screener will have the responsibility for screening and granting access to all building entrants. Anyone entering the building should immediately feel that this staff is both welcoming and professional. The buildings bathrooms and other amenities will not be accessible without passing this front desk/screening area.
- B. All other doors will only be used for emergency exits. Routine inspections by the Health & Safety Manager will ensure that the alarms are functioning, that the routes to the emergency exits are clearly marked and unblocked, and that exterior doors are not propped open for any reason which may allow outsiders access into the building.

#### **2.0 AUTHORIZED INDIVIDUALS**

Official staff and clients (regular and well-known customers, congregants, and constituents) shall be admitted to the building without additional screening. All employees must undergo a background check before employment.

#### **3.0 GUEST POLICY**

- A. Any building occupant expecting a guest must notify the front desk and provide the guest's information before the guest's arrival via email or direct communication. The screener should be trained to greet visitors and to ask appropriate questions about the visitor's destination in a courteous and professional manner. The screener will contact the staff person being visited to verify that the guest is welcome and expected before permitting the guest access to the premises.

- B. In some instances, the staff person expecting the guest must come to escort the guest into and out of the premises. Before being permitted access to the premises, all guests must present a valid ID and must sign-in into the log book. The log book requires the person's name written by the screener, the time of arrival, who they are visiting, and the guest's signature. The guest must sign out with the front desk when leaving.

#### 4.0 VENDORS & SERVICE PERSONNEL

Front desk staff/screeners must have a list of all contracted vendors and service personnel on hand and will require proper business-specific identification from the visiting personnel. The front desk staff should be made aware of expected vendor or service visits via emails or direct communication from Company staff members. Any service personnel who must be permitted access to the premises must sign in and out with the visitor log book.

#### 5.0 EMPLOYEE AWARENESS & TRAINING

For our policies to provide effective security, all building occupants must recognize the importance of following and adhering to the developed security procedures. All staff will be informed of policies through New Hire Orientations and will be trained to recognize strangers and report suspicious activity.

## **FALL PROTECTION PROGRAM**

"29 CFR 1926.501-503 & 29 CFR 1910.28"

### **PURPOSE**

The purpose of this program is to protect employees by eliminating injuries resulting from falls and improve the ability of the employee to survive a fall during the waiting period for rescue.

### **1.0 GENERAL**

- A. Fall protection is required whenever employees are potentially exposed to falls from heights that exceed applicable regulatory thresholds. Guard rails, safety nets, or personal fall arrest systems should be used. The applicable regulatory thresholds could include:
  - General Industry 1910.23(b) - Protection for wall openings and holes. Every wall opening from which there is a drop of more than 4 feet shall be guarded.
  - Construction Industry 1926.501(b)(1) - Unprotected sides and edges. Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.
  - Marine Terminals 1917.112(b)(1) - Guardrails shall be provided at locations where employees are exposed to floor or wall openings or waterside edges, including bridges or gangway-like structures leading to pilings or vessel mooring or berthing installations, which present a hazard of falling more than 4 feet (1.22 m) or into the water.
  - Shipyard Industry 1915.73(d) - When employees are exposed to unguarded edges of decks, platforms, flats, and similar flat surfaces, more than 5 feet above a solid surface, the edges shall be guarded by adequate guardrails.
  - Steel Erection 1926.760(a)(1) - Each employee engaged in a steel erection activity who is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.
- B. The HSE Manager shall be responsible for establishing the Company's fall protection training standards. All Company personnel shall be trained to the level of "Competent Person / Rescue". The onsite fall protection plan shall be prepared by a qualified person for the specified worksite operation.
- C. All Fall Protection Equipment shall meet ANSI 359.1 and OSHA 29 CFR 1910.29 & 29 CFR 1926.502 requirements.



## 2.0 DEFINITIONS

- A. Safety Harness – A full body harness consisting of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of personal fall arrest system. The primary “D” ring will be positioned along the line of the spine, between the shoulder blades of the user.
- B. Safety Lanyard – A rope, either wire or nylon, no greater than six (6) feet in length with double locking safety snaps on either end for connecting the safety harness to a deceleration device, lifeline, or anchorage.
- C. Fall Protection System – A personal fall arrest system, a positioning device system, or a personal fall protection system for climbing activities which protects a worker from falling, or safely arrests a worker’s fall, should a fall occur. It consists of an anchorage, a body harness, a lanyard and may include a deceleration device, lifeline, or suitable combinations of these. All system components must be properly used and employees properly trained in the use of the equipment.
- D. Self-Retracting Lifeline – Deceleration device which contains a drum-wound line which may be slowly extracted from, or retraced onto the drum under slight tension during normal worker movement, and which, after the onset of a fall, automatically locks the drum and arrests the fall.
- E. Anchorage – A secure point of attachment for lifelines, lanyards, or deceleration devices, and which is independent of the means of supporting or suspending the employee. The point of anchorage should always be above the highest point of access, for example above the top rung of a fixed ladder. Anchorage point must be capable of supporting 5, 000 lbs. of pressure per employee attached.
- F. Tie-Off – The act of a worker, wearing personal fall protection equipment, to connect directly or indirectly to an anchorage. It also means the condition of a worker being connected to an anchorage.
- G. Competent Person – A person who is capable of identifying hazardous or dangerous conditions in the personal fall arrest system or any component thereof, as well as in their application and use with related equipment, and who has authorization to take prompt corrective measures to eliminate them.

- H. Work Platform – Work platforms more than six (6) feet above adjacent surfaces must be protected by a standard handrail configuration. Handrails must be at least forty-two (42) inches above the platform, and have an intermediate and mid-rail. If there is a potential hazard of material falling onto workers below, there must be a toe-board attached at floor level, a minimum of four (4) inches high.
- I. Snap-Hook – A connector comprised of a hook-shaped member with a normally closed keeper, which may be opened to permit the hook to receive an object, and when released automatically closes to retain the object. Company uses only the double locking type snap-hook, which features a self-closing, self-locking keepers which remains closed and locked until manually unlocked and pressed open for connection or disconnection by the wearer.

### 3.0 GENERAL WORK SITE PROCEDURES

- A. Employees of the Company are not authorized to install or otherwise erect scaffolding.
- B. Any lifeline, safety harness, or lanyard actually subjected to in-service loading, as distinguished from static load testing, shall be immediately removed from service and shall not be used again for employee safeguarding.
- C. Lifelines shall be secured above the point of operation to an anchorage or structural member capable of supporting a minimum tensile load of 5,000 pounds.
- D. Safety lanyard shall be a minimum of ½ inch nylon, or equivalent, with a maximum length to provide for a fall of no greater than six (6) feet. Employees are provided with a double lanyard to ensure compliance with the Company's policy requiring 100% tie-off at all times while working six (6) feet or higher.
- E. All safety harness and lanyard hardware, except rivets, shall be capable of withstanding a tensile loading of 5,000 pounds without cracking, breaking, or taking a permanent deformation.
- F. Fall arrest systems designed to meet the requirements of 29 CFR 1926 and used by an employee with a combined person and tool weight of less than 310 pounds will be considered in compliance.
- G. Safety nets, when in use, shall be installed by a competent person and will be capable of successfully passing a "drop test" of 5,000 pounds without breaking.

- H. Warning lines may be used on low-slope platforms in combination with other controls such as safety monitors, guardrails and personal fall arresting equipment or nets. Warning lines shall be made of rope, wire or chains and flagged every six (6) feet with highly visible material. The line shall be supported by stanchions and the line shall be installed 39 inches above the walking/working surface. The warning line shall have a minimum tensile strength of 500 pounds.
- I. Controlled Access Zones may be used for controlling the access to areas where there is potential for hazards of falling objects. Controlled access zones shall be provided between six (6) and twenty-five (25) feet from an unprotected or leading edge. The controlled access zones will be marked by a line that consists of rope, wire, tape or equivalent materials, supported by stanchions and flagged every six (6) feet. The line must have a minimum breaking strength of 200 pounds, and be located between thirty-nine (39) and forty-five (45) inches above the walking/working surface.
- J. A Safety Monitor system shall be implemented when there are no other alternate methods. The Safety Monitor shall be trained to the level of "Competent Person" and will be assigned to:
  - 1. Recognize fall hazards;
  - 2. Be on same working surface and in visual sight;
  - 3. Remain close enough for verbal communication;
  - 4. Warn employees if they are unaware of a fall hazard or acting in an unsafe manner;
  - 5. Not have other assignments that would take monitor's attention from the monitoring function.
- K. Anchor points must be capable of supporting 5,000 pounds per attached employee. The adequacy of an anchor point must be determined by a competent individual (either the 3<sup>rd</sup> party scaffold erecting crew or a structural engineer). Where there is doubt about the strength of an anchorage point, an engineer must be consulted. Permanently installed anchor points should be provided for fall hazards that are routinely encountered. Anchor points used for fall protection and exposed to corrosive conditions (acids, moisture etc.) should be corrosion-resistant.
- L. "Hole Covers" shall be capable of withstanding at least twice the expected minimum load. Consideration shall be given to concentrated and impacted loads. The covers shall be secured to prevent inadvertent movement and either be color-coded or labeled "Hole" or "Cover".
- M. The need for fall protection will be assessed by the Site Supervisor and Customer Representative for temporary job site activities.

#### 4.0 GENERAL INSTRUCTIONS TO EMPLOYEES REGARDING FALL PROTECTION

- A. When tying off above head, ensure that the object you have selected is immovable and capable of sustaining more than 5,000 pounds. Employees should consider that if a fall occurs while fall protection is being worn, the sudden stop could place a significant amount of stress on the end of the rope. If the lanyard is worn, frayed, or otherwise damaged, it cannot be trusted to sustain your weight in the event of a fall. Therefore, any lanyard, which appears to be in improper condition or is suspected of being same, will not be used and will be immediately taken out of service.
- B. Employees are to ensure that all open areas are barricaded and/or protected in such a manner that no individual will accidentally fall through the opening. Whenever physical barriers are not practical, a Safety Monitor shall be stationed a few feet away from the opening, in plain view of all who approach from either direction, for the sole purpose of diverting persons away from the hazard area.
- C. Employees are to perform a visual inspection of gangways, ramps and other walkway surfaces attached to vessels from a dock, pier or other vessels. Shake the structure from side to side to note the degree of swaying, if any, which is present. Inspect tie-down anchors to ensure that they not only are secure, but also are capable of sustaining the weight of the user in addition to any materials or equipment, which may accompany him.
- D. Report all circumstances where fall protection is needed to Onsite Supervisor prior to any work start-up.
- E. Do not ascend to any height if you are afraid of heights. Make the Site Supervisor aware of this fact before deployment to the job site. You may be assigned other responsibilities, which do not require working on surfaces above ground level.
- F. Never tie lanyards or lifelines to the bumpers of vehicles, cranes, cherry pickers, or to other pieces of equipment, which may be used at any time without advance notice, and which are not designed for personnel support and/or suspension.
- G. Fall Protection & Arrest Equipment shall be utilized when performing any work-related task on scaffolds, ladders or other elevated work platforms.

- H. Employees will receive site-specific training regarding work on elevated platforms prior to the start of the temporary job site activity. Such training shall be specific to the site where such elevated work platform will be erected, and shall include, at a minimum:
1. The OSHA Fall Protection standard;
  2. The nature of the fall hazards in the work area;
  3. The role of employees in the fall protection plans;
  4. The correct procedures for erecting, maintaining, disassembling and inspecting fall protection systems to be used (when applicable);
  5. The use and operation of guardrails, personal fall arrest systems, safety net system, warning line systems, safety monitoring systems, controlled access zones and other protection to be used;
  6. The role of each employee in the safety monitoring system when this system is used;
  7. The limitations of mechanical equipment during the performance of work;
  8. The correct procedure for the handling and storage of equipment and materials and the erection of overhead protection.

## 5.0 EQUIPMENT INSPECTIONS

- A. Personal fall arresting equipment (body harness, lanyard, etc.), which has been subjected to a significant fall, shall be discarded.
- B. Equipment shall be maintained in accordance with the manufacturer's guidelines and inspected prior to use.
- C. The following, at a minimum should be checked during this inspection:
1. Buckles – For distortion, sharp edges or cracks;
  2. D-rings – For cracks, distortion, and corrosion, pitting or excessive wear (Note: D-Rings must be a minimum of 2¼" inside diameter);
  3. Body Harness – For burns, damage due to chemicals, cuts, and abrasion to the material or broken stitches;
  4. Keepers and Snap Locks – To ensure that they operate correctly;

5. Retractable Lines – To ensure that they operate smoothly. The rope or cable should not be damaged. A quick pull of the line should cause the line to lock. The retractable lifeline assemblies shall be returned to the factory for re-certification as specified by the manufacturer. Check the date of the unit for the last certification performed by the manufacturer;
6. Lanyard – For cuts, frayed parts, damaged fibers, and the condition of connections. There should be no knots in the line. A knot can result in a substantial reduction in strength;
7. Shock Absorber – For ripped stitches, signs of impact loading and connections.

## 6.0 PROVISIONS FOR RESCUE

- A. It shall be the responsibility of the Site Supervisor to coordinate the rescue of an employee who has fallen into a net or is suspended by fall arresting equipment, and to conduct investigations of equipment and circumstances coincidental to a fall. Another employee shall be designated to “monitor” the employee until such assistance arrives.
- B. Provisions to rescue such an employee shall include, but not necessarily be limited to:
  1. The availability of a ladder, lift or ropes, themselves equipped for fall arresting, to assist with the retrieval of the employee; or
  2. The telephone number of the local fire department or on-site rescue team to alert in the event that other individuals cannot execute retrieval safely.
  3. The Company’s On-Site Supervisor shall provide prompt rescue of any employee in the event of a fall or shall assure the employee is able to rescue themselves within 15 minutes. All employees who have been involved in a fall should be examined by a licensed medical professional without regard to the use of fall arresting device.
- C. Following any fall related incident, an investigation shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

## 7.0 EMPLOYEE TRAINING

- A. The Company shall provide a training program for each employee who might be exposed to fall hazards. Training shall enable each employee to recognize the hazards of falling & shall train each employee in the procedures to follow to minimize these hazards.
- B. The Company shall maintain written certification records showing the following:
  1. Who was trained, when, dates of training
  2. Signature of person providing training & date the Company determined training was deemed adequate.
  3. Retraining shall provide re-training when the following are noted:
    - Deficiencies in training;
    - When work practices are changed; or
    - When fall protection equipment is modified.

## **PORTABLE FIRE EXTINGUISHERS & FIRE PREVENTION**

"29 CFR 1910.157 & 1910.106"

### **PURPOSE**

The Company's Portable Fire Extinguisher & Fire Prevention Program has been developed to work in conjunction with company emergency plans and other safety programs. Fire prevention measures reduce the incidence of fires by eliminating opportunities for ignition of flammable materials.

### **1.0 GENERAL**

- A. The Company will fund on a recurrent basis all costs associated with the accredited training of Company personnel.
- B. The Company HSE Manager will be responsible for providing accredited incipient firefighting and emergency evacuation training to Company employees, as well as record keeping.
- C. The Company HSE Manager along with the Department Managers will be responsible for conducting investigations and prevention measures such as monthly visual checks and an annual maintenance check on portable fire extinguishers.

### **2.0 CATEGORIES**

- A. Fire Classifications: Portable fire extinguishers shall be provided for employee use and selected and distributed based on the classes of anticipated workplace fires and on the size and degree of hazard which would affect their use
  - Class A – Wood, Paper Trash
  - Class B – Flammable Liquids & Gases
  - Class C – Electrical Fires
  - Class D – Combustible Metals
- B. The Company will utilize a licensed 3<sup>rd</sup> Party to conduct annual inspections on all Portable Fire Extinguishers and to ensure that an adequate number of ABC Fire Extinguishers are available at Company facilities. The Company shall maintain these records for one year.

### **3.0 FIRE PREVENTION METHODS**

- A. To eliminate potential fires, the Company has implemented a NO SMOKING policy in all office locations and inside shop facilities.



- B. Smoking on Company and/or customer property is only allowed in designated areas.
- C. Open flames and/or Smoking is not allowed within 50' of any flammable storage areas.
- D. Smoke detectors are to be checked monthly during monthly Fire Extinguisher inspections.
- E. All isles, fire lanes, and other thruways, which lead to exits, are to remain open and unobstructed. Employees are expected to practice good housekeeping to include the prompt cleanup of chemical spills.
- F. Fire extinguishers are to be accessible in all work areas, unobstructed by equipment or materials.
- G. Faulty electrical equipment should be taken out of service immediately.
- H. Store all flammable liquids in fire-proof cabinets, safes, paint lockers or properly designated storage containers. Cabinets shall be labeled in conspicuous lettering, "Caution - Flammable". No more than 60 gallons of flammable liquids may be stored in a storage cabinet.
- I. Emergency escape routes shall be posted in all Company locations.
- J. The Company will practice at least annually emergency fire drills at each location. These practices will be done as if they were the real thing, and should be taken seriously.
- K. All Company vehicles shall be equipped with portable fire extinguishers for extinguishing incipient stage fires involving equipment and ordinary combustibles.
- L. Flammable liquids shall not be dispensed into containers unless the nozzle and container are electrically interconnected by way of grounding / bonding.

#### 4.0 EMPLOYEE RESPONSIBILITIES

- A. Employees are to get familiar with the staging area assigned to their work location.
- B. Employees shall use the following protocols during a drill:
  - Stop work activities
  - Shut down equipment

- Leave work area, WALK do not run
  - Look for wind direction; be careful not to walk into a stream or vapor cloud
  - Report to staging area
  - Wait for instructions
- C. Employees must be aware of the location of the fire extinguishers.
- D. Emergency reporting methods:
- Immediately notify affected persons
  - Notify Supervisor
  - Notify Customer Representative (if applicable)
  - Call area emergency response team
- E. Employees shall ensure that paper, rags and other combustibles are not allowed to accumulate in any respective work area in the shop.
- F. Oily rags are to be placed in a marked container immediately after use.
- G. Employees are to control overflows of chemicals in order to avoid spills, and all spills are to be cleaned up following prescribed procedures as soon as possible.
- H. Employees shall not use electrical equipment which displays bare, cut, spliced, or frayed wiring.
- I. During "Hot Work", employees shall ensure that the area is free of oil, grease, and other flammables and combustibles. Additionally, employees shall attempt to control sparks and hot slag.

## 5.0 TRAINING REQUIREMENTS

- A. The Company will provide portable fire extinguishers in the workplace and shall provide an educational program to familiarize employees with the general principles of fire extinguisher use and the hazards involved in incipient stage fire fighting. Training will be conducted prior to initial assignment and at least annually thereafter.
- B. Basic elements of Fire:
- Fuel – Paper, wood, rags, oil, grease
  - Oxygen – Air, ventilation, stored oxygen
  - Heat – Ignition sources, hot surfaces, sparks, open flames, electrical arcs.

## **FIRST AID & MEDICAL TREATMENT**

### **PURPOSE**

The purpose of this program is to establish the Company's Medical Treatment Plan for all work-related employee injuries including onsite first-aids, professional medical treatment cases and emergencies.

### **1.0 GENERAL**

- A. The Company will fund on an annual and recurrent basis all costs associated with the accredited training of Company personnel.
- B. The HSE Manager will be responsible for arranging and/or providing accredited first aid training delivered to Company employees and ensuring First-Aid supplies are easily accessible when required.
- C. The HSE Manager will work together with the Company Management Team to manage occupational injuries and illnesses and conduct investigations into their causes and preventions.
- D. In the absence of an infirmary, clinic, hospital, or physician, the Company shall ensure that someone with a valid certificate in first-aid shall be available at the worksite to render first aid within reasonably time and distance to injured employees. A valid certificate in first-aid training must be obtained from the U.S. Bureau of Mines, the American Red Cross, Medic First-Aid or equivalent training that can be verified by documentary evidence.

### **2.0 CLASSIFICATION OF INJURIES**

- A. Lost Workday Case (LWC) – Any work-related injury or illness, which prevents the employee from reporting to work on any subsequent scheduled workday.
- B. Restricted Workday Case (RWC) – Any work-related injury or illness, which prohibits the employee from performing one or more parts of those functions essential to his/her position, for any subsequent shift.
- C. Medical Treatment Case (MTC) – Any work-related injury or illness, which requires treatment by a physician or by a registered professional under the standing orders of a physician.

- D. The Company reserves the right to withhold immediate classification of reported injuries whereas information obtained during an investigation and supported by the physician's medical opinion raises issues regarding the alleged injury. However, the Company will not refuse medical treatment to any employee who requests it.

### 3.0 FIRST AID

- A. The role of Company first aid providers includes, but may not be limited to, the following:

1. Provide assistance for the emergency treatment of injuries or illness to a level that is consistent with training and competence;
2. Assist in the referral of casualties to medical aid as required;
3. Monitor and consult with the HSE Manager regarding the usage of the first aid supplies;
4. Ensure adequate first-aid supplies are available & easily accessible when needed and consist of appropriate items which will be adequate for the environment in which they are used. First-Aid providers shall periodically reassess the demand for supplies and adjust their inventories. For construction operations, first aid kits shall be checked before being sent out to each job and at least weekly; and
5. Appropriately dispose of waste materials and assist with the completion of injury reports.

- B. The Company will provide first aid kits on all temporary job site locations in each Company vehicle and/or trailer. Its use should be limited to the treatment of "first aid" cases. First aid kits shall consist of appropriate items which will be adequate for the environment in which they are used. For construction operations, items shall be stored in a weather proof container with individual sealed packages of each type of item. At a minimum, first aid kits shall consist of the following items and stored in a weatherproof container with individual sealed packages:

- Sterile gauze pads (both 2"x2" and 4"x4")
- Sterile first aid bandages
- Sterile butterfly bandages
- Sterile eye wash solution
- Sterile burn solution
- Sterile elastic bandage
- Sterile knuckle bandages

- Pain reliever
  - Sterile swabs
  - Sterile wound cleanser
  - Disposable latex gloves
  - Disposable face shield
  - Adhesive tape
  - Scissors
  - Antibiotic ointment
- C. First aid kit contents are to be checked periodically by either the job supervisor or last person to use it, to report items, which need to be replaced. At a minimum, first aid kit contents are to be checked at least once monthly. First aid kits in Company vehicles will be inspected and documented at a minimum during monthly vehicle inspections by person assigned to vehicle. Shop first aid kits will be inspected and documented on shop monthly inspection forms by the shop foreman. First aid boxes shall be located so that they are easily accessible to any employee who wishes to access it. Such will be to ensure that at a minimum:
1. Emergency names and contact telephone numbers are provided on or near the boxes;
  2. The name and telephone number of the nearest medical treatment facility is on or near the boxes;
  3. Instructions for emergency treatment of injuries are supplied in the boxes;
  4. Located near running water (preferably hot and cold);
  5. They are located in a dust and moisture proof environment; and
  6. First aid boxes shall remain unlocked, but shall remain fully closed at all times.
- D. The Company will provide at least one employee who has been trained in Standard First Aid to each temporary job site (preferably job supervisor). Such employee will be required to provide assistance only within the limits of his/her instruction and knowledge.

## 4.0 GENERAL EMPLOYEE INJURIES & TREATMENT

### A. EYE INJURIES

1. Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities shall be provided within the work area. For chemical burns to the eyes, immediately go to the eye wash station, or in the absence thereof, to a source of clean running water (furnished on the job site). Flush the eyes (affected side facing down) with running water for at least fifteen minutes. The supervisor or other nearby employee should assist with this procedure. When flush is complete, it is important to bandage both eyes in order to control eye movement. If no source of running water is easily accessible, the employee should take a full-unopened bottle of eye wash solution from the first aid kit and use the entire bottle, flushing from the nose outward. Once open, the eye solution will lose its sterility, so it is not necessary for the employee to attempt to save any of the solution. In addition, employees should avoid using and replace any eye wash solution bottles observed in the first aid to have been previously opened and not entirely used.
2. Objects embedded in the eye should remain intact. No attempt should be made to remove the object by the injured employee or the responder. Bandage both eyes while bandaging around the object.

### B. CHEMICAL BURNS TO SKIN

Immediately go to the emergency shower and remove all affected clothing. Rinse for at least fifteen (15) minutes. Avoid rough touching or rubbing of the affected area(s).

## 5.0 EMERGENCY MEDICAL TRANSPORTATION

- A. While on location, the Company's Onsite Supervisor shall work with the On-Site Representative to ensure proper equipment is available for prompt transportation of an injured person to a physician or hospital or a communication system is established for contacting an ambulance service. The Company's Onsite Supervisor shall:
  1. Ensure that the injured employee is not allowed to operate a motorized vehicle;
  2. Remain with the injured employee until such a time as a prognosis has been rendered and/or a determination has been made regarding the release or subsequent admittance of the employee; and

3. Report immediately to the HSE Manager the circumstances surrounding the incident as well as a written medical opinion regarding the status of the employee.
- B. In areas where 911 is not available, an "Emergency Contacts Listing" and "Emergency Incident Forms" shall be maintained in the job folder on the temporary job site by the site supervisor, and shall remain easily accessible to all employees (i.e., posting, handout, etc.) should this information have to be accessed in the absence of the supervisor. In addition, the information contained therein shall be communicated to all employees prior to the job start-up so as to ensure familiarity with emergency contacts in advance of an incident occurring which requires the use of this information.
- C. The HSE Manager will be responsible for the following:
  1. Performing a risk assessment to determine the number of first aid trained personnel and first aid boxes needed in the workplace;
  2. Determining the appropriate level of training required meeting the risks associated with related job duties performed by Company employees;
  3. Maintaining a first aid register;
  4. Ensuring that up to date records and certificates associated with first aid training and retraining are available;
  5. Advising upper management on any matters that influence the effectiveness of the management of this policy and associated procedures;
  6. Providing to supervisory personnel an updated listing of names of employees who hold current certification; and
  7. The training of new employees who may replace already trained employees on the temporary job site.

## 6.0 EMPLOYEE TRAINING

A. Supervisory personnel will be trained in areas including, but not limited to:

1. First Aid/CPR.
2. How to conduct safety meetings.
3. How to perform Job Safety Analysis.
4. How to implement safety policies in the field.
5. How to conduct workplace and/or area inspections.
6. How to conduct accident investigations and priority injuries.
7. How to monitor employee work performance and behavior

B. Other Company employees will be trained at least annually in the following:

1. First Aid/CPR
2. Proper injury reporting.
3. Administering first aid as the initial responder.
4. Compliance to the philosophy of "Universal Precautions" when addressing injuries which involve blood or unknown bodily fluids.



## **FIT-FOR-DUTY PROGRAM**

### **PURPOSE**

The purpose of this program is to ensure that those persons placed in the work environment are physically fit to safely perform their assigned duties without excessive risk or harm to themselves or others. Criteria will be based on job evaluation of required physical abilities, subsequent objective testing of those abilities through the use of realistic job simulation, Company experience and recommendations from the medical consultant.

### **1.0 APPLICABLE JOB POSITIONS**

The Company will conduct "Pre-employment Physicals" and/or "Post Offer Assessments" for employees transferring into certain job functions and/or different work environments. The positions listed below are covered by this policy. Additionally, other positions may be added over time as situations warrant:

- Field Personnel
- Shop Personnel
- Company Drivers

### **2.0 POST HIRES**

Human Resources will inform each new-hire who has accepted a job offer that final employment status is contingent on satisfactory completion of medical and post hire assessments, in addition to other standard requirements such as drug and alcohol testing to include pre-employment, post-accident, and random screenings.

### **3.0 MEDICAL EVALUATIONS**

Medical evaluation will be conducted by a Company approved medical physician who is authorized to perform the evaluation. All authorized physicians will be provided with a copy of the post hire requirements for the essential job functions. Once the individual requiring the evaluation has contacted Human Resources, he/she will be advised of the place and timing of the evaluation.

#### 4.0 POST OFFER ASSESSMENTS & FUNCTIONAL CAPACITY EVALUATIONS

All post offer assessments and functional capacity evaluation testing will be conducted based on the medical evaluation outcome. The appointment for testing will be arranged for the individual by the HR department. Releases from the employee's treating physician as well as from the Company approved physician will be provided prior to the scheduled assessment date. In return-to-duty and for-cause situations, a Company physician will provide the testing facility with more detailed information regarding the history and/or the specific nature of concerns for special emphasis.

#### 5.0 RETURN TO DUTY

Individuals who have been absent from the job due to injury or illness (work related or non-work related) for 30+ days will be informed that a functional capacity evaluation as well as a medical evaluation by a Company approved Occupational Medicine physician will be required to ascertain their fitness to return to the work environment. This will also apply for those employees who have been out of work for less than 30 days upon advice and counsel from a medical consultant or Occupational Therapist.

#### 6.0 EVALUATION OUTCOME

Upon completion of both the medical and post offer assessment or functional capacity evaluation testing, the results will be reviewed and a final recommendation generated by the Company's HR Department. This communication will not result in disclosure of any confidential medical information resulting from either the medical or post offer assessment or functional capacity evaluation testing.

#### 7.0 TEST FAILURE

If a new-hire fails a post hire assessment (PHA) test, they cannot work as a Company or contract employee in the same position, nor in a position requiring similar physical abilities. If the individual fails a subsequent retest, he/she cannot work as a contract employee or on a client vessel in the same position nor in a position requiring similar physical abilities. Transfer employees must successfully pass the agility test before being awarded the new job position.

## 8.0 TEST FUNDING

Medical and post offer assessment or functional capacity evaluation testing are paid by the Company for employees and new hires. Company management, at its discretion, may agree to fund some components of personal rehabilitation plans for Company employees. This may include participation in a physical rehabilitation, physical conditioning or work hardening program. In those cases where ongoing rehabilitation is required due to recent injury or illness, treatment will be funded via regular health care benefits.

## 9.0 EMPLOYEE MEDICATION & MONITORING

Employees must report all medications they are taking prior to a Pre-Employment physical or reporting to any job assignment. Over-the-counter medications such as allergy or cold and flu medications could also impair one's ability to perform their job task safely and must also be reported to their supervisor. The onsite Supervisor will be responsible for monitoring employee activities and behaviors as well as determining whether an employee should be removed from the work site. Employees must be responsible for ensuring they are physically and mentally fit to perform their job functions safely. Employees shall take responsibility for their own safety as well as not reporting to work in a condition that would endanger the safety of their fellow workers.

## 10.0 JOB TRANSFERS

Persons, who are current Company employees and have accepted a job transfer will be advised by the hiring manager that the transfer may be contingent on the satisfactory completion of a post offer medical assessment if the job is considered to be more labor intensive than their current position. The decision regarding more labor-intensive work will be made by the HR Department. The medical evaluation may or may not be required depending on the nature of the job duties and whether or not a recent Company medical evaluation is available.

## 11.0 EMPLOYEE TRAINING

All applicable Employees will receive training specific to their job task assignments. Training will include, but not limited to, Offshore Water Survival, Fatigue Management and Safe Work Practices (i.e., Safe work Permits, Lockout & Tagout, Process Safety Management, Electrical Safety, Personal Protective Equipment, Fall Hazard Assessments, Rigging Safety, Forklift Safety, H2S, etc.)

## **FORKLIFTS & COMPANY OWNED EQUIPMENT**

"29 CFR 1910.178"

### **PURPOSE**

The purpose of this program is to establish the Company's safe operational procedures regarding the use of forklifts and powered industrial lift trucks.

### **1.0 GENERAL INFORMATION & INSTRUCTIONS**

- A. Only those employees who have been trained and authorized to operate forklifts and other material hoists will do so. The Company will certify all authorized employees regarding competency on each specific type of lifting equipment.
- B. Prior to starting the forklift (daily or at the beginning of each shift), the operator must perform an inspection of the operational components of the equipment. Defects when found shall be immediately reported and corrected. Your inspection might include, but not be limited to:
  - 1. Inspecting the mast for broken or cracked weld-points and any other obvious damage.
  - 2. Make sure roller tracks are greased and that chain is free to travel.
  - 3. Check hydraulic fluid levels. Low fluid levels could result in unstable load retention and difficulty with controls.
  - 4. Check each hydraulic line and fitting for excessive wear or crimping.
  - 5. Look at lift and tilt cylinders to see if there is any damage or fluid leaking. Beginning fluid loss may not be immediately detectable by casual observance.
  - 6. Inspect mounting hardware on the cylinders and make sure everything is secure.
  - 7. Check tires for excessive wear, splitting or missing tire material. Severely worn tires on one side can cause the forklift to topple over while, handling loads or when loading or unloading from equipment trailers.
  - 8. If you're operating on pneumatic tires, check them for the proper pressure indicated on the tire.
  - 9. Check to ensure seat belt is operable and in good condition.

- C. Forklifts are powered either by battery, propane or diesel. If you detect a problem, report it to your department supervisor. Never attempt to repair it yourself.
- D. The Company will use only those forklifts which meet ANSI approval to include a rated capacity established by the forklift manufacturer.
- E. Forklifts require routine maintenance and proper care if they are to continue to operate safely. The Company will rely on an outside manufacturer authorized repair and service representative.

## 2.0 PRE-STARTUP CHECKLIST

As you prepare to start the forklift, some steps to follow in order to assist with the detection of problems prior to usage, might include:

1. Applying your foot to the break to ensure that adequate resistance is achieved and that no "spongy" feel is detected.
2. Ensure that the parking brake is engaged, place control in neutral, and start it by turning the key.
3. Check all gauges and indicators upon start-up and continue to do so during forklift operation. Problems could develop while an activity is ongoing.
4. Check the horn, visual signals and other safety features.

## 3.0 RATINGS & MANUFACTURER REQUIREMENTS

- A. Forklifts display a manufacturer's identification plate, which lists the load limitations for the forklift in question. These load limits are based on using the equipment under normal operating conditions with or without applicable attachments.
- B. If the load you are to lift is unknown or is not listed on the material, a simple test can provide a reasonable approximation with regard to whether a load is too heavy or falls within applicable restraints. First, lift the load an inch or so. The forklift should feel stable and the rear wheels should remain in firm contact with the floor or ground. Second, attempt to move a short distance with the load to ensure that the forklift does not develop instability by becoming mobile. Uneven floor or ground surface, improperly inflated tires or other variables could render the forklift unstable even though the stationary test proved successful.

## 4.0 HANDLING & MOVING LOADS

A. The following constitutes basic forklift operating procedures when handling or moving loads is necessary:

1. Square up on the center of the load and approach it straight on with forks lowered (in the traveling position).
2. Stop when the tips of your forks are approximately a foot away from the material to be lifted.
3. Level forks and slowly drive forward until the load is resting against the backrest on the forks.
4. Lift the load high enough to clear whatever is under it.
5. Look over both shoulders to ensure that your path is clear then move backward approximately a foot or so.
6. Smoothly tilt the mast back to stabilize the load.
7. Operate at speeds designated within the facility for forklift traffic.
8. When you arrive to your destination, slow down, square up and stop approximately one foot or so from where you will rest the load.
9. Slowly and carefully move into the unloading area and gently lower or raise the material to its final destination.
10. Look over both shoulders and back up slowly after releasing your load. Use audible and visual alarms when backing up.

B. Stacking materials:

1. Lifting materials from atop a stack of materials is very similar to taking a load from the floor. You should move slowly, forks leveled, and gently raise the load before attempting to retreat. Remember to always look over both shoulders before backing up with a forklift.
2. To place more material on a stack which already exists, approach the stack slowly, stop about a foot or so in front of the stack and ensure that you have enough clearance to move the load over the upper most pallet prior to moving forward.

## 5.0 GENERAL SAFETY REQUIREMENTS

- A. Never lift a load while the forklift is moving. Always wait until the forklift is completely immobile before you attempt to raise the load.
- B. When stacking loads, be sure that the last load you placed sits squarely on the rest of the stack or it could topple over.
- C. Always travel with a load slightly tilted backward for better stability.
- D. Travel with the load at the proper height. A stable clearance height is 4 to 6 inches at the tips and 2 inches at the heels to clear most uneven surfaces and avoid debris.
- E. If you can't see over the load, drive in reverse. Never try to look around the load while driving forward.
- F. When turning a forklift, remember that the turning wheels are in the rear of the forklift. Be careful to avoid swinging the forklift around violently. Many forklift accidents occur because the operator often forgets that the turning wheels are at the rear of the forklift.
- G. When turning into aisles, stay wide. This will allow your load to clear the sides and give the operator a chance to square up with destination.
- H. When you back out of an aisle, remember to allow enough room for forks to clear the sides before starting the turn.
- I. Before loading or unloading trailers, the operator shall verify that trailer chocks and/or dock plates are securely positioned.
- J. If you leave the forklift unattended for any reason, always lower the mast completely, turn off the engine and set the brake.

## 6.0 COMPANY OWNED EQUIPMENT

- A. Only authorized employees shall be allowed to operate Company owned equipment including mobile machinery. Authorization to operate mobile machinery & equipment will be issued to employees qualifying under appropriate training and proficiency testing.
- B. At the beginning of each shift, the competent/qualified operator shall inspect and check the assigned equipment and shall report immediately to his/her supervisor any malfunction of the clutch (if applicable), braking system, steering, lighting, or control system and shall lockout & tagout the equipment if necessary.
- C. Unauthorized personnel shall not be permitted to ride on equipment unless it is equipped to accommodate passengers safely.
- D. The operator shall make sure the warning signal is operating when the equipment is backing up.
- E. No operator shall operate mobile machinery without the protection of an enclosed cab or approved eye protection.
- F. Before starting the engine, the driver shall fasten his/her seat belt(s) and adjust them for a proper fit.
- G. The operator shall not use, or attempt to use any vehicle in any manner or for any purpose other than for which it is designated.
- H. The operator shall not load the vehicle/equipment beyond its established load limit and shall not move a load that has not been centered and secured for safe transportation. Always take into consideration the length, width, and height of the load.
- I. The operator of a gasoline or diesel vehicle shall shut off the engine before filling the fuel tank and shall ensure that the nozzle of the filling hose makes contact with the filling neck of the tank. No one shall be on the vehicle during fueling operations except as specifically required by design. There shall be no smoking or open flames in the immediate area during fueling operation.



## 7.0 MECHANICAL EQUIPMENT OPERATIONS NEAR ENERGIZED LINES

- A. Applied loads: Mechanical equipment used to lift or move lines or other material shall be used within its maximum load rating and other design limitations for the conditions under which the work is being performed.
- B. The critical safety components of mechanical elevating and rotating equipment shall receive a thorough visual inspection before use on each shift. Critical safety components of mechanical elevating and rotating equipment are components whose failure would result in a free fall or free rotation of the boom.
- C. No vehicular equipment having an obstructed view to the rear may be operated on off-highway jobsites where any employee is exposed to the hazards created by the moving vehicle, unless:
  - The vehicle has a reverse signal alarm audible above the surrounding noise level, or
  - The vehicle is backed up only when a designated employee signals that it is safe to do so.
- D. Mechanical equipment shall be operated by a qualified employee so that a 10' minimum approach distance is maintained from exposed energized lines and equipment.
- E. A designated employee other than the equipment operator shall observe the approach distance to exposed lines and equipment and give timely warnings before the 10' minimum approach distance is reached.
- F. The energized lines exposed to contact shall be covered with insulating protective material that will withstand the type of contact that might be made during the operation.
- G. Each employee shall be protected from hazards that might arise from equipment contact with the energized lines. The measures used shall ensure that employees will not be exposed to hazardous differences in potential.

## 8.0 EMPLOYEE TRAINING

- A. All Company employees who will operate forklifts, mobile machinery and/or Company owned equipment will undergo classroom and hands-on practical instruction regarding safe operations. Each employee must be instructed in the recognition and avoidance of unsafe conditions and the regulations applicable to his/her work environment with an objective of controlling and/or eliminating any hazards or other exposure to injury or illness.

B. In addition, employees who have successfully passed forklift "certification" training will incur an additional 30-day review for workplace compliance, followed-up by periodic monitoring, for the duration of forklift operation authorization. Initial classroom instruction shall include, at a minimum:

1. Operating instructions, warnings, and precautions including:

- Diesel powered: Forklift usage is normally outdoors, on even terrain, and in a controlled environment.
- LP-Liquefied petroleum: Forklift usage is normally indoors (well ventilated), on even terrain and in a controlled environment.

2. Additional training will include, at a minimum, the following:

- Vehicle stability;
- Vehicle capacity;
- Operating Radius;
- Steering and maneuvering;
- Operating limitations including load capacities;
- Visibility (including restrictions due to loading);
- Load manipulation, stacking, and un-stacking;
- Composition of loads to be carried and load stability;
- Surface conditions where the vehicle will be operated;
- Refueling and/or charging and recharging of batteries;
- Operating instructions, warnings, and precautions for the types of truck the operator will be authorized to operate;
- Differences between the truck and the automobile;
- Truck controls and instrumentation; where they are located, what they do, and how they work;
- Any vehicle inspection and maintenance that the operator will be required to perform;
- Any of the operating instructions, warnings, or precautions listed in the operator's manual for the types of vehicle that the employee is being trained to operate;
- Pedestrian traffic in areas where the vehicle will be operated, as well as the posted maximum speed;
- Ramps and other sloped surfaces that could affect the vehicle's stability;
- Closed environments and other area where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust;
- Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation.

3. Mandatory refresher training will include, but may not necessarily be limited to, the following:

- Every 3 Years;
- When the operator is assigned to drive a different type of truck; or
- When the operator has been observed to operate the vehicle in an unsafe manner;
- When the operator has been involved in an accident or near-miss incident while operating the forklift;
- When the operator has received an evaluation that reveals that the operator is not operating the truck safely;
- A condition in the workplace changes in a manner that could affect safe operation of the truck.

C. During practical training, employees will be observed accomplishing at a minimum:

1. Forklift inspection;
2. Pre-startup checks;
3. Knowledge of controls;
4. Proper fork positioning;
5. Moving around obstructions;
6. Handling loads above head level;
7. Proper travel forward and backing up;
8. Traveling up and down inclines (if applicable);
9. Safety when turning corners or entering blind areas;
10. Moving loads while traveling both forward and backward;

D. Forklift training will be conducted by a qualified third party who has the necessary knowledge and competency to teach Company employees in accordance with the requirements of 29 CFR 1910.178.

E. Forklift training will be documented and maintained in the respective employee's training file. Certifications shall include operator name, training date, evaluation date, and trainer/evaluator name.

## **GAS HAZARDS**

### **PURPOSE**

The purpose of this program is to inform employees of the safety hazards associated with operations that may involve flammable gases and vapors.

#### **1.0 TYPES OF GAS HAZARDS**

- A. Flammable: Risk of Fire and/or Explosion (i.e., Methane, Butane, Propane)



- B. Toxic: Risk of Poisoning (i.e., Carbon Monoxide, Hydrogen, Carbon Dioxide & Chlorine)



- C. Asphyxiant: Risk of Suffocation (i.e., Oxygen can be displaced by another gas)



#### **2.0 FLAMMABLE GAS HAZARDS**

- A. Combustion is a fairly simple chemical reaction in which Oxygen is combined rapidly with another substance resulting in the release of energy. This energy appears mainly as heat – sometimes in the form of flames. The igniting substance is normally, but not always, a Hydrocarbon compound and can be solid, liquid, vapor or gas. However, only gases and vapors are considered in this publication.

- B. The process of combustion can be represented by the well known fire triangle.



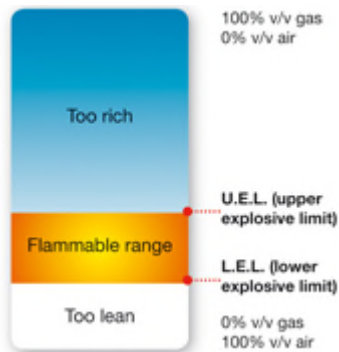
- C. Three factors are always needed to cause combustion:

- Oxygen
- Fuel (Gas or Vapor)
- An Ignition Source

- D. In any fire protection system, therefore, the aim is to always remove at least one of these three potentially hazardous items.

### 3.0 FLAMMABLE LIMIT

- A. There is only a limited band of gas/air concentration which will produce a combustible mixture. This band is specific for each gas and vapor and is bounded by an upper level, known as the Upper Explosive Limit (or the UEL) and a lower level, called the Lower Explosive Limit (LEL).



- B. At levels below the LEL, there is insufficient gas to produce an explosion (i.e. the mixture is too 'lean') or the mixture has insufficient Oxygen (i.e. the mixture is too 'rich'). The flammable range therefore falls between the limits of the LEL and UEL for each individual gas or mixture of gases. Outside these limits, the mixture is not capable of combustion.

#### 4.0 FLAMMABLE GAS PROPERTIES

- A. Ignition Temperature: Flammable gases also have a temperature where ignition will take place, even without an external ignition source such as a spark or flame. This temperature is called the Ignition Temperature.
- B. Flash Point: The flash point of a flammable liquid is the lowest temperature at which the surface of the liquid emits sufficient vapor to be ignited by an ignition source.

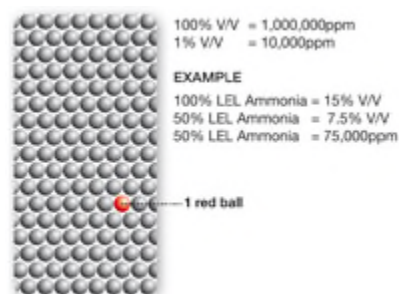
#### 5.0 VAPOR DENSITY (Air = 1.0)

- A. If Vapor Density is  $< 1.0$ , The Gas Will Rise
- B. If Vapor Density is  $> 1.0$ , The Gas Will Fall

Gas / Vapour	Vapor density
Methane	0.55
Carbon Monoxide	0.97
Hydrogen Sulphide	1.19
Petrol Vapour	3.0 approx

#### 6.0 TOXIC GAS HAZARDS

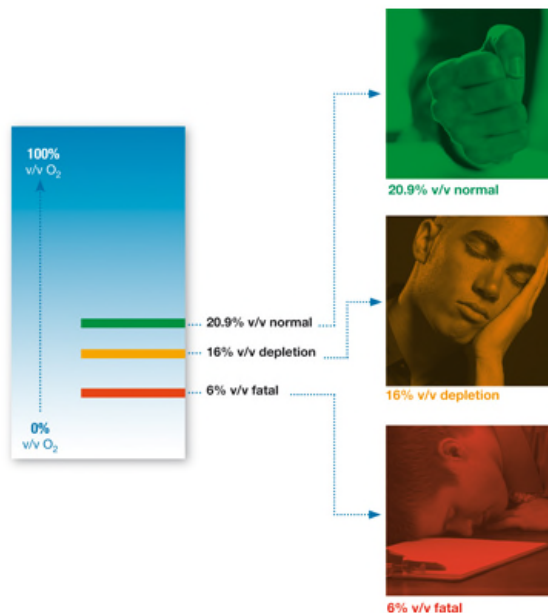
- A. Some gases are poisonous and can be dangerous to life at very low concentrations. Some toxic gases have strong smells like the distinctive 'rotten eggs' smell of  $H_2S$ . The measurements most often used for the concentration of toxic gases are parts per million (ppm). For example, 1ppm would be equivalent to a room filled with a total of 1 million balls and 1 of those balls being red. The red ball would represent 1ppm.



- B. More people die from toxic gas exposure than from explosions caused by the ignition of flammable gas. It should be noted that there is a large group of gases which are both combustible and toxic, so that even detectors of toxic gases sometimes have to carry hazardous area approval. The main reason for treating flammable and toxic gases separately is that the hazards and regulations involved and the types of sensor required are different.
- C. With toxic substances, (apart from the obvious environmental problems) the main concern is the effect on workers of exposure to even very low concentrations, which could be inhaled, ingested, or absorbed through the skin. Since adverse effects can often result from additive, long-term exposure, it is important not only to measure the concentration of gas, but also the total time of exposure.

## 7.0 ASPHYXIAANT HAZARD (OXYGEN DEFICIENCY)

- A. We all need to breathe the Oxygen ( $O_2$ ) in air to live. Air is made up of several different gases including Oxygen. Normal ambient air contains an Oxygen concentration of 20.9%. When the Oxygen level dips below 19.5%, the air is considered Oxygen-deficient. Oxygen concentrations below 16% are considered unsafe for humans.
- B. Oxygen depletion can be caused by displacement, combustion, oxidation, Or a chemical reaction.



## 8.0 OXYGEN ENRICHMENT

It is often forgotten that Oxygen enrichment can also cause a risk. At increased O<sub>2</sub> levels the flammability of materials and gases increases. At levels of 24%, items such as clothing can spontaneously combust.

## 9.0 MONITORING

The Company shall ensure that each employee utilizes a portable gas detector as required in all high gas hazard areas. All gas monitors shall be calibrated per manufacturer's recommendations and contain a current calibration sticker on the monitor providing the date of calibration. Additionally, "Bump Test" shall be completed at the beginning of each day to ensure the monitor is functioning correctly.

## 10.0 EMPLOYEE TRAINING

A. Gas hazard awareness training shall be provided to each employee before initial assignment and annually thereafter. Employees shall be made aware of the Client's contingency plan provisions including evacuation routes and alarms. Employees shall participate in emergency evacuation drills and practice rescue procedures. Additionally, "Gas Hazard Awareness" training shall include at a minimum:

- Gas Alarms,
- Locations of Alarm Stations,
- Gas Monitoring Equipment (Portable and Fixed Detection),
- Gas Hazards - Characteristics of gases, to include oxygen deficiency, oxygen or nitrogen enrichment, carbon monoxide and hydrogen sulfide at a minimum (Note: Hazard training must also include specific gases of concern as well as signs and symptoms of overexposure)
- Personnel Rescue Procedures
- Use and Care of Self-Contained Breathing Apparatus (SCBA), including Donning & Emergency Procedures
- Evacuation Procedures
- Staging Areas (Primary & Secondary)

B. Gas Hazard Awareness training shall be documented and available for review by Clients and/or government agencies.



## HAND & PORTABLE POWER TOOLS

"29 CFR 1926.300 & 29 CFR 1910.242"

### PURPOSE

The purpose of this program is to educate and inform employees on basic safety procedures and safeguards associated with hand and portable power tools.

### 1.0 GENERAL

- A. When using hand and power tools, the Company shall provide PPE necessary to protect employees from the hazards of falls, flying debris, abrasive materials, chemical splashes, harmful dust, fumes, mists, vapors and gases
- B. Tools shall be kept in an orderly fashion in the tool cage or in the gang box, so that they may be easily found when needed. All tools must be cleaned after use.
- C. All tools and equipment shall be inspected regularly and maintained in a safe condition. Defective and unsafe tools or equipment must be reported promptly to the supervisor, and either replaced or repaired to a safe working condition. Any tool which is not in compliance with any applicable requirement of this part is prohibited and shall be identified as unsafe by tagging or locking the controls to render them inoperable.
- D. Hand Guards shall be in place and operable at all times while the tool is in use. The guard may not be manipulated in such way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1. Never subject a hand or power tool to strain obviously beyond its capacity.
- E. Tools must not be left lying on moving machinery.
- F. Tools or loose material not bolted, tied or secured in an approved manner must be removed from elevations.
- G. When operating driving tools, use a tool holder for the chisel, bar, or other tools being struck. **Note: Always wear proper eye protection.**
- H. When several people are using hammers, shovels, or similar equipment, they shall maintain a safe distance from each other.

- I. Faces of sledges, hammers, and mauls should be slightly tempered. Heads of cutters and other anvil tools should not be tempered.
- J. Cutting tools are safer and more efficient when kept sharp. Avoid using dull cutting tools.
- K. Nails or sharp edges around the tops of kegs, barrels, boxes, cans and other containers must be eliminated immediately.
- L. Boards should not be thrown or left around with nail points protruding. The nails must be removed or bent down.

## 2.0 ABRASIVE WHEEL GRINDERS

- A. Safety washers must be used on all abrasive wheels. Abrasive wheels must have a protective shield and a tool rest that is adjustable to maintain a clearance no greater than one-eighth inch. The operator must wear cup-type goggles and should wear a face shield and stand to one side of the plane of rotation whenever possible.
- B. Never plug in a wheel grinder to a power source without ascertaining that the grinders switch is in the "off" position.
- C. The spindle speed of the machine must not exceed the maximum operating speed marked on the wheel.
- D. Before a wheel is mounted, it shall be closely inspected to make sure it has not been damaged. This inspection should include the "Ring Test". Tap lightly with a nonmetallic instrument. If the wheel sounds dead or does not ring, it is cracked or defective and must not be used.
- E. Grinding wheels shall always be redressed immediately after they are used on brass and aluminum material. Worn or uneven grinding wheels need to be redressed before they are used.

## 3.0 TOOL HANDLES

- A. Remove the handle from a jack when it is not in use. Use the correct jack.
- B. Handles of all sledges, hammers, mauls, mattocks, and other striking tools must be properly wedged into the heads.
- C. Files shall not be used without handles.

- D. Non-conductive materials, such as wood or fiberglass, must be used for handles on shovels and posthole diggers to protect from electrical shock.
- E. Cracked or split handles must be replaced as soon as possible. Never paint wooden handles, and never tape cracked or split handles.

#### 4.0 POWER MOWERS & TRIMMERS

- A. Do not refuel in a closed area.
- B. Before beginning work, carefully inspect the area and remove all wire, rocks, glass, and other objects that could become a missile if struck by the blade. The mower discharge chute and rear mower housing must be equipped with a deflector shield.
- C. Before starting the mower, inspect it for loose parts and defective or loose guards. Disconnect the spark plug wire before attempting an inspection or repair of the mower blade.
- D. Do not add fuel to the engine gas tank while it is running or while it is hot.
- E. Do not allow anyone to loiter in the immediate vicinity of operations.
- F. The operator must wear safety goggles or safety glasses with side shields, as appropriate, when mowing, edging or trimming. Steel toe shoes are strongly recommended.
- G. Fuel for power mowers must be carried and stored in approved containers (safety cans).
- H. Never leave power equipment unattended while it is running.

#### 5.0 POWER TOOLS

- A. Before repairing, servicing or changing components on any power tool, the power source must be disconnected. If a gasoline engine drives the tool, the ignition wire must be disconnected from the spark plug, or other precautions must be taken to prevent the accidental firing of the engine.
- B. When there is danger of explosion or fire, air-operated tools must be used. Electrical tools must not be used on tanks or lines until the tanks, lines and surrounding area are free of combustible gas. Combustible gas must not be used to operate air-operated tools. Persons using air-operated tools must be sure that the source of air supply cannot exceed the working pressure of the tool.

- C. The frames of portable electric tools and equipment, except Underwriters Laboratories (UL) approved double insulated tools, must be grounded either through a third wire in the cable containing the circuit conductors or through a separate wire grounded at the source of the current. Outlets supplying power to portable electric tools that are either outside or in wet locations must have approved ground-fault circuit protection, or other means of grounding the circuit.
- D. Hand-held power tools must be equipped with a switch that is manually held in the "on" position.
- E. Electric power tools and equipment showing worn, deteriorated, or inadequate insulation must be removed from service until repaired.

## 6.0 SCREWDRIVERS

- A. Avoid the careless, improper use of screwdrivers. Never attempt to use a screwdriver as a pry tool, drift, or chisel.
- B. Screwdrivers should be held in such a way that if they slip, they will not stab you or anyone else.

## 7.0 HAND WRENCHES

- A. The wrench must fit the nut.
- B. Wrenches should not be used directly over the head. Instead, work at an angle.
- C. Never use a wrench to secure leverage by placing its jaws into the jaw or on the handle of another wrench.
- D. Adjustable pipe wrenches and crescent-type wrenches should be adjusted to take a full but snug grip on a pipe or nut. The pull should be made toward the jaw of the wrench so that the grip is tightened and undue strain on the tool is avoided. Avoid the use of a crescent type wrench when a box-end wrench or open-end wrench can be used.
- E. Never step on wrenches or tongs when additional force is needed.
- F. When connections are known to be quick breaking, causing a sudden release, a hammer wrench shall be used instead of a wrench that requires body force.

- G. Extensions, or "cheaters", shall not be used on wrench handles until efforts to break or make up the connection with the largest wrench available have failed. If a cheater is used, place it on the largest wrench available. The cheater must extend the full length of the handle so that it will not damage the wrench or slip off the handle. Never use a cheater on a crescent-type or aluminum wrench. Fiberglass and aluminum cheaters shall not be used.

## 8.0 MISCELLANEOUS

- A. Mops or other potentially flammable items must not be placed near engine exhausts or other hot surfaces for drying.
- B. An air hose must **not** be used to blow particles off clothing, hair or skin. If air pressure is being used to clean an area, the user must wear protective goggles and the air hose must be equipped with a pressure regulator to reduce the air pressure to less than 30 psi.

## **HAZARD COMMUNICATION PROGRAM**

Global Harmonized System

"29 CFR 1910.1200"

### **PURPOSE**

The purpose of this program is to communicate to employees and visitors the occupational exposures and safeguards of hazardous chemicals in the workplace.

### **1.0 GENERAL INFORMATION**

- A. The Company will rely on the evaluation performed by chemical manufacturers and importers regarding specific chemical identity and the hazards associated with that chemical.
- B. The Company will consider a chemical or solid, a physical hazard, based upon scientific study, if it is a combustible liquid, a compressed gas, explosive, flammable, organic peroxide, oxidizer, pyrophoric, unstable, or water reactive.


### **2.0 CHEMICAL INVENTORY**

- A. The Company shall maintain an inventory of all hazardous chemicals being used including a corresponding Safety Data Sheet (SDS). The Company will keep this inventory current with regard to purchases and storage of chemicals and will make such listing available and accessible to employees and others who wish to resource it.
- B. Any sub-contractor used by the Company will be required to supply Safety Data Sheets for respective chemicals brought to the job site by their employees. The Company will add such chemicals to its own listing prior to presenting it to the customer representative.
- C. The Company will add newly acquired chemicals to its existing inventory list while deleting those no longer in use by the Company.
- D. The chemical inventory listing will be evaluated at least annually.

### 3.0 CONTAINER LABELING

- A. Company personnel will ensure that each shipment of chemicals delivered displays proper labeling, or it will not be accepted. Labeling shall be in English, and in such instances as an employee of the Company does not speak or understand the English language; efforts will be made by the Company to have such applicable documents communicated to the employee in the language of his origin. When the employee is that of the customer or other contractor, the Company shall reasonably expect such customer or contractor to assist in providing such accommodations.
- B. All chemicals employees will use, except for small amounts placed in other containers(s) for immediate use, will be labeled. No unmarked container of any size will be left in the work area unattended. Chemicals designated for immediate use should be returned to the original container when the employee is finished with its use. Chemicals that will remain in the container for subsequent work periods will result in the container being labeled for that particular chemical, and then only that chemical will be placed into that container until it is properly disposed of.
- C. The Company will rely on manufacturer applied labels whenever possible, and will ensure that these labels are maintained. Containers where the contents are known and which display no label, or on which the manufacturer's label has been removed, will be re-labeled either by writing directly onto the container with a weather-resistant marker or applying an adhesive label for proper identification.
- D. Employees are strictly prohibited from dispensing chemicals from an unknown container into another container for immediate use. Additionally, the Company will require all contractors to restrict its employee from exercising the same practice while on customer property.
- E. In accordance with OSHA requirements, the Company will require that each container of hazardous chemicals or other hazardous substances in the workplace, be marked, tagged, or labeled with the following:
  - Product identifier; signal word; hazard statement(s); pictogram(s); precautionary statement(s); and name, address, and telephone number of the chemical manufacturer, importer or other responsible party.

- Sample Label:

SAMPLE LABEL	
<p><b>PRODUCT IDENTIFIER</b></p> <p>CODE _____</p> <p>Product Name _____</p> <p><b>SUPPLIER IDENTIFICATION</b></p> <p>Company Name _____</p> <p>Street Address _____</p> <p>City _____ State _____</p> <p>Postal Code _____ Country _____</p> <p>Emergency Phone Number _____</p> <p><b>PRECAUTIONARY STATEMENTS</b></p> <p>Keep container tightly closed. Store in cool, well ventilated place that is locked.</p> <p>Keep away from heat/sparks/open flame. No smoking.</p> <p>Only use non-sparking tools.</p> <p>Use explosion-proof electrical equipment.</p> <p>Take precautionary measure against static discharge.</p> <p>Ground and bond container and receiving equipment.</p> <p>Do not breathe vapors.</p> <p>Wear Protective gloves.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Wash hands thoroughly after handling.</p> <p>Dispose of in accordance with local, regional, national, international regulations as specified.</p> <p><b>In Case of Fire:</b> use dry chemical (BC) or Carbon dioxide (CO<sub>2</sub>) fire extinguisher to extinguish.</p> <p><b>First Aid</b></p> <p>If exposed call Poison Center.</p> <p>If on skin (on hair): Take off immediately any contaminated clothing. Rinse skin with water.</p>	<p><b>HAZARD PICTOGRAMS</b></p>  <p><b>SIGNAL WORD</b></p> <p><b>Danger</b></p> <p><b>HAZARD STATEMENT</b></p> <p><b>Highly flammable liquid and vapor.</b></p> <p><b>May cause liver and kidney damage.</b></p> <p><b>SUPPLEMENTAL INFORMATION</b></p> <p><b>Directions for use</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Fill weight: _____ Lot Number _____</p> <p>Gross weight: _____ Fill Date: _____</p> <p>Expiration Date: _____</p>

- F. Containers found in the workplace which does not display appropriate hazard warnings or labels, will be marked "Do Not Use until Properly Labeled", by the employee. Such container will then be isolated to prevent the inadvertent use of its contents by an unsuspecting employee.
- G. When shipping any container or piece of equipment, the person who signs the shipping papers is responsible for ensuring that the container is properly labeled and clearly marked.



H. The HSE Manager will conduct periodic inspections to ensure that the use & care of labels and other forms of warnings are not defaced or removed. The information on labels may differ from manufacturer to manufacturer, but all labels should provide the following information, at a minimum, prior to acceptance into the warehouse or on a temporary job site:

1. Chemical Name;
2. Health Hazards;
3. Physical hazard;
4. Reactivity;

#### 4.0 SAFETY DATA SHEETS (SDS)

A. Chemical manufacturers are responsible for developing SDSs. The Company shall maintain a SDS for each chemical used. Should a container arrive to the Company or a temporary job site without the SDS, the Purchasing Agent will contact the respective manufacturer or distributor to request appropriate Safety Data Sheets.

B. SDSs can be maintained at the primary work site, but shall also be readily accessible in each work area in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives, the Assistant Secretary & the Director.

C. The Company will consider an SDS acceptable when it contains the following information, at a minimum:

1. The chemical and common name(s) of all ingredients, which make up the chemical or other hazardous substance.
2. Physical and chemical characteristics of the hazardous chemical (such as vapor pressure and flashpoint).
3. The physical hazards of the hazardous chemical including the potential for fire, explosion and reactivity.
4. The health hazards of the hazardous chemical including signs and symptoms of exposure, and any medical condition which is generally recognized as being aggravated by exposure to the chemical.
5. The primary routes of exposure.
6. The OSHA permissible exposure limit.
7. Whether the chemical or substance is a potential carcinogen.

8. Applicable precautions for safe handling and use, as known by the chemical manufacturer, importer, employer or chemist who mixed the solution and what to do if chemical is spilled.
9. Control measures for safe use, such as appropriate safe work practices, engineering controls, and personal protective equipment.
10. Emergency and first aid procedures.
11. The date of preparation of the Safety Data Sheet, or the last change made to it.
12. The name, address and telephone number of the chemical manufacturer or importer.

## 5.0 EMERGENCY ACTIONS

- A. Employees, who witness or are involved in an overexposure incident or exposure to any hazardous substance in the workplace, should notify the following:
  1. The HSE Manager,
  2. The Customer Representative, and
  3. The local emergency response telephone number
- B. When an employee experiences a chemical contact to their eyes, he/she must be taken to an eye wash station immediately and should rinse both eyes with clean running water for at least 15 minutes.
- C. An employee who has skin exposure should flush the affected area with clean running water for at least 15 minutes.
- D. Employees who are conscious and have been exposed to a chemical or other hazardous substance should be taken immediately to a source of clean fresh air/water.
- E. Administering personnel should make every attempt to keep an unconscious employee's airway open, and "Rescue Breathing" should be started for the employee until normal respiration begins or trained medical personnel arrive.
- F. Supervisory personnel should always have assembly areas designated so as to take head count of all individuals in the work crew, in the event of an emergency.

## 6.0 COMMUNICATION OF HAZARDS

- A. During pre-job Safety Meetings & Job Safety Analysis, the Company will communicate to employees the hazards of non-routine tasks being performed on Company property and/or on temporary job sites that might expose employees to chemical hazards contained in unlabeled containers, vessels or piping.
- B. Consult with process operators when on temporary job sites, in order to obtain specific information concerning process hazards. Such information may be related to:
  - 1. Applicable Lockout/Tagout provisions (29 CFR 1910.147),
  - 2. Operating temperatures on equipment and surrounding piping systems (29 CFR 1910.119),
  - 3. Facility emergency actions and alarms (29 CFR 1910.38),
  - 4. Required personal protective equipment for the area (29 CFR 1910.132), and
  - 5. Valves, switches and other controls, which are "off limits" to outside personnel (29 CFR 1910.119).

## 7.0 MANAGEMENT RESPONSIBILITIES

- A. The SEMS Coordinator & Program Administrator will have the responsibility of revising, implementing and maintained a written Hazard Communication program at each workplace that describes how labels & other forms of warning, safety data sheets, & employee information will be met.
- B. Additionally, the Company will provide Client Representatives & 3<sup>rd</sup> Party personnel with information concerning hazardous chemicals at job sites including Safety Data Sheets, precautionary measures to be taken & information on labeling systems. When employees travel between multi job sites, the Company's written program shall be kept at a primary job site. If there is no primary, then the program should be sent with employees.
- C. The Company also will have the additional responsibility to ensure that the program is current and that all information is communicated to employees on a consistent basis.
- D. The Company will ensure that employees have the appropriate personal protective equipment required to protect the employee from known hazards, supplied at no cost to the employee.

## 8.0 EMPLOYEE RESPONSIBILITIES

- A. Employees have the responsibility to learn and understand the provisions of the Company's "Hazard Communication Program".
- B. Employees should understand how to access the resource materials safety data sheets (SDS), and should know how to seek help for clarification when necessary.
- C. Employees should understand the Company's labeling requirements as well as its policy concerning the use and storage of chemicals.
- D. Employees are responsible for evaluating their respective work areas and obtaining a real familiarity with the location of fixed obstructions, which can be potential lower leg, and above head hazards.
- E. Supervisory personnel are to complete a Job Safety Analysis Report (JSA) prior to the start of each and every temporary job site activity. For the purpose of this policy, the Company will consider the JSA as the primary hazard communication instrument the supervisor can use while on the job site. JSA's are to be submitted immediately upon job completion.
- F. Employees are responsible for conducting themselves professionally, and in a manner indicative of someone who has concern for the safety not only of themselves, but also of others. Behavior detrimental to the overall safe completion of any Company-authorized activity will result in the individual's immediate removal from the job site, and subsequent disciplinary action.
- G. New employees have the responsibility for maintaining a close and inquisitive relationship with supervisory personnel and other more experienced employees. The first few days of an employee's employment will be critical to the overall safety efforts of the Company and to the employee's acclimatization to prescribed work procedures.
- H. All employees are responsible for reviewing Station Bills on offshore rigs/crew boats, and becoming familiar with their respective roles and assignments in emergency situations. Employees are to be orientated to the elements of the respective customer's Safety Manual, prior to deployment. A signed acknowledgement shall be filed on each employee who has received this orientation.

## 9.0 EMPLOYEE TRAINING

- A. The Company shall ensure employees are provided with effective information and training on hazardous chemicals in their work area at the time of their initial assignment, and whenever a new physical or health hazard the employees have not previously been trained about is introduced into their work area. Chemical-specific information must always be available through labels and safety data sheets.
- B. The following topics will be covered, at a minimum:
1. An explanation of the requirements contained in the Hazard Communication Standard (29 CFR 1910.1200);
  2. Operational training specific to their work area where hazardous chemicals are present;
  3. Location and availability of the Company's written program;
  4. Physical and health effects of hazardous chemicals;
  5. Information and training shall be designed to cover the following categories of hazards:
    - Explosives,
    - Gases,
    - Flammable Liquids,
    - Flammable Solids,
    - Oxidizers,
    - Organic Peroxides,
    - Poisons,
    - Corrosives
    - Miscellaneous
  6. Specific chemical information including labels and safety data sheets shall be available for the following:
    - WD40 Aerosol,
    - CITGO No. 2 Diesel Fuel, Low Sulfur,
    - NAPA® Premium HD SAE 30 Motor Oil, &
    - Industrial Purple Cleaner & Degreaser Concentrate

7. Use of engineering controls, appropriate work practices and protective measures to be utilized to prevent exposure;
8. How to address exposure incidents and emergencies;
9. Location and availability of SDS, and how to read and understand SDSs;
10. Details of the hazard communication program including the use, handling and storage of Hazardous Materials;
11. Danger of confined and enclosed spaces;
12. Proper PPE to be used; and
13. Explanation of the labeling system.

#### 10.0 RECORDKEEPING

The Company will maintain all records pertaining to this program including:

1. Employee Training Records: Duration of employment plus three (3) years;
2. Job Safety Analysis Reports (JSA's): Not less than three (3) years;
3. Safety Meeting Records: Not less than three (3) years;
4. Safety Data Sheets (SDS) for current chemicals in use; and
5. Injury Reports: Not less than fifteen (15) years.

## **HAZARDOUS WASTE OPERATIONS & EMERGENCY RESPONSE**

### **PURPOSE**

The purpose of this program is to ensure the proper handling of hazardous wastes on location in order to reduce and/or eliminate health risks to employees or damage to the environment.

### **1.0 ORGANIZATIONAL STRUCTURE**

- A. The Onsite Customer Representative shall have the responsibility and authority to direct all hazardous waste operations. Employees shall follow a chain of command including immediate directives from the Company's Onsite Supervisor up to the Onsite Customer Representative.
- B. The Company's Onsite Supervisor along with the Onsite Customer Representative shall have the responsibility to develop and implement an Emergency Response Plan to identify and control site specific health hazards as well as provide for emergency response.
- C. The Onsite Customer Representative and/or the most senior official onsite shall be responsible for controlling operations at the site.

### **2.0 EMERGENCY RESPONSE PLAN**

- A. An Emergency Response Plan shall be developed & implemented to handle anticipated emergencies prior to the commencement of any operation. The plan shall be in writing & available for inspection by employees, their representatives & OSHA. The plan shall identify the hazards for each phase of the operation and is kept on the work site. The plan shall also address requirements and procedures for employee protection.
- B. The Emergency Response Plan shall address the following at a minimum:
  - Pre-emergency planning & coordination with outside parties;
  - Personnel roles, lines of authority, training & communications;
  - Personal protective equipment and emergency equipment;
  - Emergency recognition & prevention;
  - Emergency alerting and response procedures;
  - Safe distances & places of refuge;
  - Evacuation routes and procedures;
  - Decontamination; and
  - Emergency medical treatment

### 3.0 EMERGENCY RESPONSE

- A. Prior to the commencement of emergency response operations, an Emergency Response Plan will be developed as part of the Site Safety Plan.
- B. First Responder awareness level employees who are likely to witness or discover a hazardous substance release shall be trained to initiate an emergency response sequence by notifying the proper authorities of the release.
- C. Emergency response employees who exhibit signs or symptoms, which may have resulted from exposure to hazardous substances during the course of an emergency, shall be provided with medical consultation.

### 4.0 DECONTAMINATION

- A. A decontamination procedure shall be developed, communicated to employees and implemented before any employees or equipment may enter areas on site where the potential for exposure to hazardous substances exists.
- B. All employees leaving a contaminated area shall be appropriately decontaminated. All contaminated clothing and equipment leaving a contaminated area shall be appropriately disposed of or decontaminated.
- C. Decontamination procedures shall be monitored by the site safety and health supervisor to determine their effectiveness. When such procedures are found to be ineffective, appropriate steps shall be taken to correct any deficiencies.
- D. Decontamination shall be performed in geographical areas that will minimize the exposure of uncontaminated employees or equipment to contaminated employees or equipment.
- E. PPE and equipment shall be decontaminated, cleaned, laundered, maintained or replaced as needed to maintain their effectiveness. Employees whose non-impermeable clothing becomes wetted with hazardous substances shall immediately remove the clothing.
- F. Unauthorized employees shall not enter controlled areas. Unauthorized employees shall not remove protective clothing or equipment from change rooms.
- G. Where the decontamination procedure indicates a need for regular showers and change rooms outside of a contaminated area, they shall be provided and meet the requirements of 29 CFR 1910.141.



H. The Company's Decontamination plan, as part of our site-specific safety plan, allows us to effectively:

- Determine the layout and location of decontamination stations;
- Determine decontamination equipment that is needed;
- Determine appropriate decontamination methods;
- Establish procedures to prevent contamination of clean areas;
- Establish methods to minimize worker contact with contaminants during removal of PPE;
- Establish methods for disposal of clothing and equipment that cannot be decontaminated;
- Keep unauthorized individuals from entering decontamination areas;
- Inform commercial laundry facilities of potential contaminants and their health effects;
- Provide for showers and change rooms in accordance with 29 CFR 1910.141;
- Properly dispose of all solvents and equipment used for decontamination.

I. Our plan is revised whenever the type of PPE and equipment changes, the site conditions change, or the site hazards are reassessed based on new information.

## 5.0 ENGINEERING CONTROLS, AIR MONITORING & MEDICAL SURVEILLANCE

- A. Engineering controls, work practices and PPE shall be used to reduce and maintain exposure limits. Feasible engineering controls include the use of pressurized cabs or control booths on equipment, and/or the use of remotely operated material handling equipment.
- B. Air monitoring shall be used to identify and quantify airborne levels of hazardous substances. The monitoring should address initial entry, periodic monitoring, possible IDLH conditions and wherever exposure may be a possibility.
- C. Any employee who may be exposed to hazardous substances or health hazards at or above the established permissible exposure limit, above the published exposure level for a given substance, without regard for use of a respirator, for 30 days or more a year shall be provided medical surveillance. This shall be provided at no cost to the employee.

## 6.0 EMPLOYEE TRAINING

- A. All Company employees including equipment operators, field personnel, supervisors and management shall be trained prior to being allowed to participate in or supervise any field activity.

- B. Training ensures that employees are aware of the potential hazards that they may encounter and provides the necessary knowledge and skills to perform their work with minimal risk to their safety and health. Management, supervisors and workers shall be trained to:
- Recognition of hazards;
  - Use of personal protective equipment;
  - Use safe work practices to minimize hazardous risks;
  - Safe use of engineering controls and equipment;
  - Use proper decontamination procedures;
  - Understand the Emergency Response Plan, medical surveillance requirements, confined space entry procedures, spill containment program, and any appropriate work practices.
- D. Workers also must know the names of personnel and their alternatives responsible for site safety and health. The amount of instruction differs with the nature of the work operations. Employees must not perform any hazardous waste or emergency response operations unless they have been trained to the level required by their job function and responsibility, and have been certified by their instructor as having completed the necessary training.
- E. The Company's training program shall consist of formal classroom instruction and hands on activities. In order to demonstrate competency, 3<sup>rd</sup> Party Training Instructors shall possess academic credentials and instructional experience. The training program is designed to exceed the minimal requirements specified under the HAZWOPER regulations detailed in 29 CFR 1910.120.
- F. Employees are trained prior to assignment to job duties. Training shall be based on specific employee duties and functions. Employees who are trained in accordance with the Company's Emergency Response Plan shall receive annual refresher training.
- G. Upon completion of training, certificates and wallet cards documenting training are provided to all participants. A record of methods used for training and copies of certificates shall be kept in Employee's training file at the Company's corporate office, and are accessible to all employees, their representatives, the Secretary of Labor, or designee.
- H. Employees at all hazardous waste sites shall be trained to the level required by their job function and responsibility prior to performing any hazardous waste operation.

## HEAT & COLD ILLNESS PREVENTION

### PURPOSE

The purpose of this program is raise employee awareness regarding heat illness symptoms, ways to prevent illness, and what to do if symptoms occur.

### 1.0 HEAT ILLNESS

- A. Heat illness is a serious medical condition resulting from the body's inability to cope with a particular heat load, which can include heat cramps, heat exhaustion, and heat stroke. Supervisor must ensure that physical and personal factors that contribute to heat related illness are taken into consideration before performing a work task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, and prior heat-related illness.
- B. Supervisors must also ensure environmental factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

### 2.0 HEAT CRAMPS

- A. Heat cramps are muscle spasms which usually affect the arms, legs, or stomach. Frequently they don't occur until sometime later after work, at night, or when relaxing. Heat cramps are caused by heavy sweating, especially when water is replaced, but not salt or potassium.
- B. Although heat cramps can be quite painful, they usually don't result in permanent damage. To prevent them, drink electrolyte solutions such as Gatorade during the day and try eating more fruits like bananas.

### 3.0 HEAT EXHAUSTION

- A. Heat exhaustion is more serious than heat cramps. In heat exhaustion, the surface blood vessels and capillaries, which originally enlarged to cool the blood, collapse from loss of body fluids and necessary minerals. This happens when you don't drink enough fluids to replace what you're sweating away.

- B. The symptoms of heat exhaustion include: headache, heavy sweating, intense thirst, dizziness, fatigue, loss of coordination, nausea, impaired judgment, loss of appetite, hyperventilation, tingling in hands or feet, anxiety, cool moist skin, weak and rapid pulse (120-200), and low to normal blood pressure.
- C. Somebody suffering these symptoms should be moved to a cool location such as a shaded area or air-conditioned building. Have them lie down with their feet slightly elevated. Loosen their clothing, apply cool, wet cloths or fan them. Have them drink water or electrolyte fluids.

#### 4.0 HEAT STROKE

- A. Heat stroke is a life-threatening illness with a high death rate. It occurs when the body has depleted its supply of water and salt, and the victim's body temperature rises to deadly levels. A heat stroke victim may first suffer heat cramps and/or the heat exhaustion before progressing into the heat stroke stage, but this is not always the case. It should be noted that, on the job, heat stroke is sometimes mistaken for heart attack. It is therefore very important to be able to recognize the signs and symptoms of heat stroke and to check for them anytime an employee collapses while working in a hot environment.
- B. The early symptoms of heat stroke include a high body temperature (103 degrees F); a distinct absence of sweating (usually); hot red or flushed dry skin; rapid pulse; difficulty breathing; constricted pupils; any/all the signs or symptoms of heat exhaustion such as dizziness, headache, nausea, vomiting, or confusion, but more severe; bizarre behavior; and high blood pressure. Advanced symptoms may be seizure or convulsions, collapse, loss of consciousness, and a body temperature of over 108 degrees F.
- C. It is vital to lower a heat stroke victim's body temperature. Seconds count. Pour water on them, fan them, or apply cold packs. Seek emergency medical attention as soon as possible.

#### 5.0 COLD RELATED ILLNESSES

- A. Hypothermia is a lowering of temperature of the body's inner core, and can occur when outside temperatures are as high as 45 degrees Fahrenheit. When the core temperature falls, bodily functions begin to shut down.
- B. Most hypothermia victims are elderly persons who, for a variety of reasons, are unable to keep sufficiently warm in the winter. An elderly person's core temperature can drop without them being aware of it, and an aging body is less capable of reversing a fall in temperature. Risk factors for hypothermia include:
  - Disorders that reduce production of body heat
  - Impaired mental function
  - Reduced mobility
  - Use of drugs such as tranquilizers

Symptoms of hypothermia may include:

- Shivering
- Dizziness
- Numbness
- Weakness
- Drowsiness
- Impaired Vision
- Impaired Judgment

- C. If hypothermia is suspected, get the victim professional medical care immediately, and follow these methods to maintain warmth:
- Get victim out of the wind and rain.
  - Remove wet clothing and replace it with dry or wool clothing.
  - Use body heat to warm the victim. Get inside a sleeping bag with the victim or wrap yourself in a blanket with them. If several people are with you, have everyone huddle around the victim.
  - If the victim is conscious, have them drink warm fluids such as sweetened tea, broth or juice, and have them eat quick-energy foods such as candy.
  - Do not allow victim to drink alcoholic beverages in any circumstance.
- D. When outside for prolonged periods of time in cold weather, use the following precautions:
- Dress warmly in layers of clothing and wear fabric that remains warm even when wet, such as wool.
  - Wear wind- and weather-proof clothing, including a warm hat and gloves.
  - Take shelter if you get wet or cold.
  - Don't not drink alcohol while in the cold - it causes the body to lose heat faster.

## 6.0 MANAGEMENT & SUPERVISOR RESPONSIBILITIES

- A. The Company shall provide Employees with access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, the Company shall be provided bottled water in sufficient quantities throughout the work shift.
- B. The Company shall provide access to an area with shade that is either open to the air or provided with ventilation for any Employee suffering from heat illness or believes that they need a recovery period. Such access to shade will be permitted at all times.
- C. If hypothermia is suspected, the Company will provide the employee with professional medical care immediately, and will follow these methods to maintain warmth:
- Remove the employee from any wind or rain.
  - Remove wet clothing and replace it with dry or wool clothing.
  - Have the employee drink warm fluids such as sweetened tea and have them eat quick-energy foods such as candy.

## 7.0 TRAINING

The Company shall ensure that Supervisors receive training in the prevention of heat & cold related illnesses prior to supervising employees working in heat or cold related environments. Supervisors shall also be trained in the Company's "Heat & Cold Illness Prevention" procedures as well as procedures to follow when an employee exhibits a symptom consistent with possible heat or hypothermia illness, including emergency response procedures.

## HOUSEKEEPING POLICY

"29 CFR 1926.25"

**S.W.A.P.** strives to provide a comfortable working environment and encourage all employees to enjoy and make use of the common areas provided. Employees' contribution to help maintain their personal work area will ensure an attractive and safe work environment. Employees are expected to treat common areas with respect and ensure that they are left in an appropriate state.

This policy applies to all employees and guests at **S.W.A.P.**.

All materials, products and equipment have a place for orderly storage. Employees are to return items to their proper place after use to ensure they are easier to find and easier to inspect for damage and wear.

Employees are expected to tidy their workstation throughout the day to ensure their space is safe for use, to aid others in locating materials, and to maintain a professional image. Employees are collectively responsible for maintaining the cleanliness of common work areas. When using any common space, all employees are expected to clean anything that they use, put their garbage in the garbage receptacles, and leave all items in the condition in which they were found. Should anything need repair or replacement, the employee should notify their immediately Supervisor.

Employees are to follow the direction of all signage posted in common areas to ensure compliance with the fire code, room capacities, and health and safety regulations to guarantee a safe and enjoyable experience for all.

It is everyone's responsibility to pick up and clean up. Here are a few guidelines:

1. Keep work areas and storage facilities clean, neat and orderly;
2. Keep all aisles, stairways, traffic areas, and exits free from obstructions at all times;
3. Clean up any spills immediately;
4. All combustible scrap and debris shall be removed at regular intervals during the course of the operation;
5. Do not let materials or supplies that are no longer needed accumulate;
6. All employees are responsible for reporting items that are missing or misused.
7. All common areas are to be treated with respect. Please ensure you tidy up any debris.

Violations of this policy will be subject to appropriate disciplinary action.

## **HYDROGEN SULFIDE SAFETY PROGRAM**

"30 CFR 250.490 & ANZI 390.1"

### **PURPOSE**

The purpose of this program is to assure that all Company employees are protected while performing job tasks in which a potential Hydrogen Sulfide exposure could occur.

### **1.0 HAZARD DETERMINATION**

A. The Company has determined that employee exposure to hydrogen sulfide gas on the temporary job site, may include, but not be limited to the following:

1. Exposure to accidental release of hydrogen sulfide gas coincidental to work being performed on piping, on mud lines, in mud pits, shell shakers, or any part of the mud handling system.
2. While performing service activities where work is being conducted on vessel connections, wellheads, stacks, riser or other tower/vessel components.
3. While conducting work activities in areas where the natural occurrence of hydrogen sulfide gas could be expected.
4. While performing any work-related activity on a site where hydrogen sulfide gas is likely to be released. Areas where H<sub>2</sub>S might be found, includes, but may not be limited to:
  - Oil and gas exploration
  - Oil and gas production
  - Oil and gas processing
  - Petroleum refineries
  - Chemical plants

B. The Company realizes that employees may incur an additional risk of exposure to hydrogen sulfide as a result of accidental releases, or the accumulation of harmful concentrations of hydrogen sulfide above the permissible exposure limit from sources such as, but not limited to:

- Storage Tanks
- Field Maintenance
- Drilling Operations
- Water from Sour Crude Wells
- Tank Batteries and Wells, etc.



C. Hydrogen sulfide goes by many different names on the temporary job site. You should familiarize yourself with them all. No matter what name, hydrogen sulfide is a very deadly gas. Some of the most common names appear below:

- H<sub>2</sub>S
- Sewer Gas
- Sour Crude
- Stink Damp
- Swamp Gas
- Rotten Egg Gas

## 2.0 PROPERTIES AND TOXICITY INFORMATION

### A. GENERAL

1. Employees should consider any release of hydrogen sulfide into the atmosphere as reason to take immediate action to protect themselves. Hydrogen sulfide is an extremely toxic gas, and can affect you depending upon these four factors:

- Duration: The length of time you are exposed to hydrogen sulfide gas (without regard to respiratory equipment) will greatly increase your susceptibility.
- Frequency: Employees who work in areas where hydrogen sulfide gas is present can increase susceptibility to the effects of this deadly gas when it is necessary to perform job related activities in the area on a concurrent basis. On the job site, employees can shorten actual work hours or increase break times, for instance, to control the frequency of exposure.
- Intensity (Concentration): Localized levels of hydrogen sulfide are easily detected with a properly calibrated direct-reading instrument.
- Individual Susceptibility: Since it is difficult to always be certain that every employee is in excellent physical condition, it would unreasonable to assume that an employee could withstand unprotected exposure to hydrogen sulfide. It is because of this uncertainty that The Company recommends the use of the appropriate respiratory protection.

2. Some existing health conditions can also make you more susceptible to the effects of hydrogen sulfide, and must be taken seriously. These include, but may not be limited to:

- Anemia
- Diabetes
- Emphysema
- Eye Infections

- Hepatitis B Virus
  - Grand Mal Epilepsy
  - Perforated Ear Drum
  - Human Immunodeficiency Syndrome (HIV)
3. Hydrogen sulfide can paralyze your breathing system, causing your lungs to shut down. Even in small amounts it is dangerous to your health, and may smell like rotten eggs. However, employees should never trust smell to detect hydrogen sulfide, as it quickly deadens the sense of smell.
  4. NIOSH establishes a threshold limit of 10 ppm for exposure to hydrogen sulfide, without regard to respiratory or other protective equipment, based on an 8-hour time-weighted average (TWA).
  5. The level which is considered IDLH, (immediately dangerous to life and health) is 100 ppm.
  6. For the purpose of this program, employees will consider the below chart, indicative of the health effects associated with exposure to hydrogen sulfide, and at what levels signs and symptoms develop:
    - 0.13 ppm: Minimal perceptible odor
    - 4.60 ppm: Easily detectable, moderate odor
    - 10 ppm: Beginning eye irritation
    - 27.0 ppm: Strong, unpleasant odor, but not intolerable
    - 100 ppm: Coughing, eye irritation, and loss of sense of smell after 2-15 minutes
    - 200-300 ppm: Marked conjunctivitis (eye inflammation) and respiratory tract irritation after one hour of exposure
    - 500-700 ppm: Loss of consciousness and possible death in 30 minutes to one hour
    - 700-1000 ppm: Rapid unconsciousness, effects nerve centers of the brain which control breathing, and death
    - 1000-2000 ppm: Unconsciousness at once, with early cessation of breathing and death in a few minutes. Death may occur even if the employee is removed to fresh air at once.

## B. PROPERTIES OF HYDROGEN SULFIDE

1. Hydrogen sulfide is toxic, colorless gas with an offensive odor (rotten eggs) at low concentrations.

2. Hydrogen sulfide has other characteristics, which make it difficult to work in. These include, but may not be limited to:

- Heavier than air, so it tends to settle in low-lying and non-well-ventilated areas. Even when using mechanical ventilation, employees should ensure that gas is not being directed to an area where it can settle on the platform or to other lower lying areas on the job site, where other individuals will be working. Additionally, because hydrogen sulfide is heavier than ambient air (approximately 19%), it can travel along the ground. In sufficient enough concentrations, it may find an ignition source before wind currents can break it up.
- Soluble in liquids and therefore mixes easily with drilling mud and other drilling fluids. On still foggy days, hydrogen sulfide can accumulate at dangerous levels.
- Causes corrosion, deformation and/or fracturing of certain metals (stress cracking) in pressurized lines, and especially at electrical contacts.
- Extremely flammable, in a range of 4.0% to 44% (NIOSH), by volume in air. If we were to interpret this, we could say with all assurances that hydrogen sulfide presents a serious danger of explosive or fire, if any percentages between 4.0% and 44% are detected in your work area. Employees, for the purpose of this policy, will not work in any hydrogen sulfide contaminated location where detectable levels, measured by a direct reading calibrated instrument, reveals levels in excess of .04% or less (preferably 0%).
- When ignited, hydrogen sulfide produces a toxic by product called Sulfur Dioxide SO<sub>2</sub> (NIOSH threshold limit of 2 ppm). Remember, sulfur dioxide is created when hydrogen sulfide is ignited. If work practices are adjusted to where no spark creating tools or procedures are adhered to, and employees avoid working in areas where hydrogen sulfide levels are within the flammable range, such a catastrophic event can be avoided.

### 3.0 PERSONAL PROTECTIVE EQUIPMENT

- A. Air-purifying respirators (APR): Employees are restricted from wearing air-purifying respirators while performing job related activities in an area where hydrogen sulfide exists above The Company imposed level (5 ppm). Once the 5-ppm level is reached, employees should remain clear of the area until levels have been restored to 0 ppm. Since air-purifying respirators do not protect you from accidental releases of hydrogen sulfide above the permissible exposure limit (20 ppm), they would be useless in the event of a substantial release.

- B. Supplied-Air Respirators (SAR): When employees will perform job related duties where hydrogen sulfide is known to exist or are expected to be above the permissible exposure limit, NIOSH certified self-contained breathing apparatus or air-supplied respirators, connected to a remote breathing air supply, in positive pressure mode will be used. The Company will provide for respiratory protection for its' employees, at no cost to employee, under these conditions:
1. The Company will occasionally rely upon the customer to provide Grade D or better breathable air from a supply provided by the customer. When such is the case, employees shall seek out the customer's safety representative and obtain orientation regarding the correct connections for air-lines as well as proper use of the equipment.
  2. The Company may utilize the services of a third-party supplier to both provide breathing air cylinders and masks while supplementing the company's respirator training and performing a fit test in accordance with 29 CFR1910.134 Amended CFR Part 84.
  3. Self-Contained Breathing Apparatus (SCBA): It is the Company's policy that any employee who works on a job site where breathing air stations are set up for emergency use during a hydrogen sulfide expulsion, receive orientation regarding the proper operation of the customer's SCBA soon after arrival to the job site.

#### 4.0 OTHER PERSONAL PROTECTIVE EQUIPMENT

- A. Eye Protection: The full-face piece mask featured on the air-line supplied respirator and SCBA should provide adequate eye protection.
- B. Skin Protection: Employees may wear "slicker suits" made of polyvinyl chloride (PVC), styrebutadiene or butyl rubber, and neoprene safety-toe boots to provide total skin protection. However, employees should continually monitor heat exposure to readily detect heat-related fatigue. When skin protection is not a priority factor, then "Tyvek" attire may be worn.
- C. Hands: Employees should wear durable "impervious" gloves made of rubber as mentioned above.
- D. Ears: Employees should wear "form-fitting" ear plugs and place the slicker suit hood over the head, securing with the draw string.

## 5.0 SITE SPECIFIC PROCEDURES

### A. Land Jobs:

- Observe condition signs and posting.
- Look for audio/visual alarm locations.
- Observe other personnel and their activity.
- Seek out the customer safety representative.
- Note where the roadways enter and exit the area.
- Take note of areas of higher elevation than the work area.
- Observe and note the wind direction (wind socks or streamers are visual wind direction indicators).

### B. Offshore Jobs:

- Observe signs and posting.
- Look for audio/visual alarms.
- Check wind-socks and/or streamers.
- Seek out the customer safety representative.
- Look for and identify the location of emergency use SCBA station.
- Observe the number of levels to the platform, therefore when your work area has been identified, you will be able to approximate your distance from breathing air stations and stairs, which lead to upper levels.
- Note the activity of other platform personnel (make a closer assessment prior to job start).

### C. All Site Locations:

- Upon sounding of an H2S alarm, employees must evacuate the area and don either an SCBA or airline respirator. Do not return to work area until clearance is given for re-entry.

### D. Pre-Startup

1. Take the instrumentation provided by the company or the customer's safety representative to perform atmospheric testing in the area where you will be working. Always take current readings without regard to previous measurements taken by another person. If work area meets criteria of a confined space, employees must comply with the requirements set forth per 29 CFR 1910.146 and customer permitting requirements.
2. If detected levels exceed 5 ppm, use engineering controls to reduce the concentration to 0 ppm.

3. If detected levels are below 5 ppm, but not quite at zero, call the office for instructions. If there is no potential of additional exposure, it may be alright to start work under these conditions. Remember, however, that the lower explosive limit of hydrogen sulfide is 4.0%, so you want to ensure that no additional work practice controls need to be implemented in the event of a release.
4. Start work under continual atmospheric testing protocol.

#### E. H<sub>2</sub>S Emergencies

1. Individuals suffer through significant psychological changes during an emergency. Most often than not, it is due to poor preparation. By taking all of the appropriate steps, company employees provide themselves with a better chance of survival during a hydrogen sulfide emergency.
2. Company employees shall be made aware and are required to follow the customer's site-specific instructions for emergency action and evacuation/abandonment where applicable.
3. Some key points to remember in a hydrogen sulfide emergency are listed below. Employees should remember them in order of importance in an effort to develop repetitive emergency behavior to be used in the event of an actual emergency:
  - Do not panic: Not easy in the face of a disaster. But with proper pre-planning, once the "mild panic" subsides, you will be challenged mentally to derive at your next course of action. By going over procedures in your mind repetitiously these are the things you are likely to think of doing when the time arises.
  - Go immediately to a location where breathing equipment is available. Make all attempts to hold your breath until you get to an area free from the hazard and can put the breathing equipment on.
  - Put on the breathing apparatus as quickly as you can.
  - Sound an alarm and alert facility management personnel (if not already done).
  - Rescue victim(s) from the contaminated area (take to fresh air if possible).
  - NOTE: Rescue should only begin after you have donned your respiratory equipment and you have been trained to do so. Employees should adhere in all instances to the principle of SELF-RESCUE.
  - Revive victim(s) if necessary; if no one else has started to do so (see First Aid).
  - Get medical attention for affected individuals in the work crew.

## F. Offshore Emergencies

1. The recommended safe guideline for abandonment of a platform is when the hydrogen sulfide level in a "safe area" has exceeded 20 ppm as a general rule. However, the site personnel will order abandonment when such is necessary.
2. If an abandonment order is given, employees shall follow the emergency procedures discussed during site safety orientation.
3. An H<sub>2</sub>S "Red" emergency occurs when there is an abrupt hydrogen sulfide discharge, this level of contamination would be reached quickly, and there would be no question about the need for area evacuation or total abandonment. Because of the location of the toxic gas expulsion or weather conditions, the entire facility could likely have been enveloped by hydrogen sulfide. Fire might even be present or at least pose an additional threat.
4. An H<sub>2</sub>S "Blue" emergency occurs when a significant expulsion of hydrogen sulfide has occurred, but conditions have limited involvement to only specific areas or sectors of the platform. The levels of hydrogen sulfide exceed safe breathing levels and require the use of breathing air systems only in the affected sectors. Working only under mask is required, but at upwind areas of the facility away from the area of involvement.
5. An H<sub>2</sub>S "Yellow" alert means that there is a limited expulsion of hydrogen sulfide, and the level (20 ppm) does not exceed conditions that require the use of breathing system. Evacuation or abandonment of uncontaminated areas is not immediately necessary, but all personnel and support operations should be alerted of the potential danger and be ready to go to a condition blue.
6. An H<sub>2</sub>S "Green" alert means that no hydrogen sulfide is present in the atmosphere, or it is being successfully dispersed through a downwind flare. There is still a potential of a hydrogen sulfide expulsion, and periodic monitoring should continue.

## 6.0 FIRST AID

The recommended first aid measure for an individual who is exposed to hydrogen sulfide is to remove the victim to a source of fresh air at once. If trained to do so, follow standard First-Aid/CPR procedures for victim not breathing and/or no pulse.

## 7.0 MONITORING

- A. Company employees are to use properly calibrated direct-reading instrumentation to detect and monitor for the presence of hydrogen sulfide which feature an alarm to alert the user when concentrations are 10 ppm, but less than 50 ppm.
- B. Test instrumentation shall meet the following requirements:
- Is reliable within 10%,
  - Is accurate within 20%,
  - Is capable of triggering alarms,
  - Has an operating range of up to 100 ppm,
  - Warrants an over estimate bias less than 5%,
  - Has an auxiliary power supply in fixed locations,
  - Has a warm-up time of no more than 5 minutes,
  - Has zero drift less than 5% of full scale in 24 hours,
  - Has a response time of no more than 20 seconds at 50 ppm or more, &
  - Both the device and the alarm must be intrinsically safe (non-sparking) in hazardous environments
- C. In areas where H<sub>2</sub>S may be present monitors shall be used. Monitors must be bump tested at a minimum as required by manufacturer. If monitor fails a bump test, a full calibration is required. Monitors must be calibrated according to the manufacturer's recommendations. Personal alarm monitors must be set to alarm initially at 10ppm H<sub>2</sub>S, and each contractor should wear an H<sub>2</sub>S personal alarm monitor when working in all potential H<sub>2</sub>S areas.



## 8.0 EMPLOYEE TRAINING

- A. The Company will train employees in hydrogen sulfide safety at the least annually.
- B. Training topics will include, but not be limited to:
- Hazard recognition,
  - Properties, toxicity and characteristics of hydrogen sulfide,
  - Emergency procedures,
  - First aid,
  - Engineering controls,
  - Respiratory protection,
  - General hydrogen sulfide safety awareness,
  - Sources of hydrogen sulfide,
  - Detection methods,
  - Medical surveillance,
  - Signs and symptoms of exposure, &
  - Acute and chronic health effects associated with exposure

Note: Company personnel are prohibited from working inside tanks, vessels and confined spaces.

## INCIDENT INVESTIGATION & REPORTING

### PURPOSE

The purpose of this program is to establish procedures and assign responsibilities for reporting and investigating work related accidents and incidents.

### 1.0 GENERAL INFORMATION

- A. All Company related incidents will be investigated to the appropriate level with regards to incident severity. The Company's "Root Cause Analysis" (RCA) process shall be used for all injuries requiring medical treatment, high risk near miss incidents, fires, property damage, spills and workplace violence occurrences. All Supervisory personnel shall be trained in incident investigation & reporting procedures prior to occurrence of an incident.
- B. Near Miss incidents shall be ranked using the following severities:
  - **High Risk:** Potential to cause bodily injury resulting in medical treatment, property damage and/or environmental damage above \$1,000.
  - **Low Risk:** Potential to cause bodily injury resulting in first-aid treatment, property damage and/or environmental damage less than \$1,000. *Note: A Near Miss Report or Behavioral Observation Card shall be completed for all low risk near miss incidents.*
- C. Reporting of the incident shall occur using the following sequence:
  - 1. For Emergencies, Call 911;
  - 2. Notify the Onsite Supervisor;
  - 3. Contact the Operations Manager;
  - 4. Contact the Company's HSE Manager;
  - 5. The following shall be verbally reported to OSHA within 8-Hours: work-related fatalities, work-related inpatient hospitalization of one or more employees, work-related amputations and work-related losses of an eye
  - 6. Report all relative incidents to the Owner/Client within 24-Hours, including, but not limited to, injuries, spills, property damage, fires, explosions and vehicle damage

*Note: The above reporting sequence shall be posted at all facilities.*
- D. All reported accidents and injuries shall be investigated and documented. Prompt and immediate care of the individual(s) affected and the remediation of a condition which could facilitate other injuries shall take precedence over the investigation process.

- E. In the event of a serious injury, multiple injuries or a fatality, the area where the incident occurred must be secured from inadvertent tampering by an unsuspecting employee or person. It is important that all things remain as they are, except for the necessity to shut off power. Initial identification of evidence immediately following the incident might include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise and ventilation, and physical factors such as fatigue, age, and medical conditions.
- F. All work in the affected area will cease until such a time as it has been determined it is safe to resume activities.
- G. All preventative measures shall be taken in order to avoid a recurrence and to prevent any other injuries in the respective area.
- H. Employees shall report any Near Miss incident, which could have resulted in an injury or property damage, but did not.
- I. Supervisors shall complete the appropriate accident report form(s) to report occupational injuries, and/or illnesses.
- J. Any witnesses (employee or not) will be requested to write a statement in order to testify to the facts of an incident when it happens. This information will be taken into consideration while performing the root cause investigation.
- K. As required, a Federal or State First Report of Occupational Injury or Illness form will be completed within (2) two working days.

## 2.0 THE ACCIDENT INVESTIGATION

- A. The purpose of an investigation is to identify the real cause of the incident and recommend changes to prevent future incidents.
- B. All investigations are to be fact finding not fault finding. However, individuals involved in job related accidents or who has sustained a job-related injury due to negligence, will not be relieved of his individual responsibility for causation.
- C. All investigations will be conducted at the closest possible instant after the respective incident has occurred.
- D. All investigations will be documented with findings clearly definable.
- E. Drawings, points of reference and/or measurements shall be incorporated into the investigative report for clarity when practical.

- F. An investigation shall **not** be hurried, but shall take no more time than is necessary to obtain all facts relevant to the incident. All written incident reports shall be prepared and include an incident report form and a detailed narrative statement concerning the events. The format of the narrative report shall include an introduction, methodology, summary of the incident, the investigation member names, narrative of the event, findings and recommendations. Photographs and witness statements shall also be included.
- G. The incident investigation shall result in corrective actions. Personnel shall be assigned responsibilities relative to the corrective actions and these actions shall be tracked to closure to ensure hazards will be corrected in a timely manner. Lessons learned shall be reviewed and communicated and changes to any process must be placed into effect to prevent reoccurrence or similar events. The overall incident investigation, implementation of corrective actions and communication of the incident shall be completed within 7 days or less.

### 3.0 INVESTIGATION PROCEDURES

- A. Identify the area in which the incident occurred.
- B. Isolate the hazard or the area if possible.
- C. Identify the agent, equipment, person(s), or act, which most likely caused the incident to occur.
- D. Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations and use of trained interviewers shall be detailed. The need for follow-up interviews shall also be addressed.
- E. Make notes of time, weather conditions, noticeable hazards, etc. Never trust important details to memory. Evidence such as people, positions of equipment, parts, and papers must be preserved, secured, and collected through notes, photographs, witness statements, flagging and impoundment of documents and equipment.
- F. The information gathered shall be accurate, factual, completed and recorded.
- G. Obtain a statement from the injured employee unless the injury requires immediate medical attention, then obtain the statement when the opportunity presents itself. A statement from all persons directly involved with the incident is important to attain.
- H. Determine the facts relevant to the incident by answering the questions who, what, when, why and how.

- I. Warn others to stay clear by the use of signs, barriers or by use of an employee who has been assigned to secure the area.
- J. Notify management and/or customer representative immediately if the condition continues to exist and/or remediation thereof is difficult to accomplish.
- K. Determine how the incident could have occurred based upon the circumstances, as they presently exist.

#### 4.0 TRAINING

- A. All Company Supervisors shall be trained annually in their responsibilities regarding awareness, First Responder roles and incident investigation techniques. In addition, all Supervisors will be trained in "Medic First-Aid / CPR" to control the degree of loss during the immediate post-incident phase. The Company shall ensure that proper equipment will be available to assist in conducting an investigation, including pens, paper, tape measures, cameras, PPE and caution tape. All incident reports shall be submitted within two (2) working days outlining the occurrence (fatalities require written reports be submitted within twenty-four (24) hours).
- B. After immediate rescue of injured personnel, actions to prevent further loss shall occur. Maintenance personnel shall be summoned to assess the integrity of Company owned facilities and/or equipment issues. A 3<sup>rd</sup> Party agency shall be used to evaluate all other special response requirements such as safe rendering of hazardous materials.
- C. Secure a means for post-accident drug testing within twenty-four (24) hours of incident.

## **INDUSTRIAL HYGIENE PROGRAM**

### **PURPOSE**

The Purpose of this program is to provide guidance for implementing the essential elements of the Company's Industrial Hygiene (IH) Program.

#### **1.0 DEFINITION**

The science of anticipating, recognizing, evaluating and controlling workplace conditions that may cause injury or illness to employees.

#### **2.0 RECOGNITION & HAZARD CONTROL**

- A. Engineering Controls minimize employee exposure by either reducing or removing the hazard at the source or isolating the worker from the hazards.
- B. Work Practices alter the manner in which a task is performed. Some fundamental and easily implemented work practice controls include (1) following proper procedures that minimize exposures while operating equipment; (2) inspecting and maintaining equipment on a regular basis; (3) implementing good house-keeping procedures; (4) providing good supervision and (5) mandating that eating, drinking, smoking, chewing tobacco or gum, and applying cosmetics in regulated areas be prohibited.
- C. Administrative Controls include controlling employees' exposure by scheduling job tasks in ways that minimize exposure levels.
- D. Personal Protective Equipment: When effective work practices and/or engineering controls are not feasible to achieve the permissible exposure limit, appropriate respiratory equipment must be used. In addition, personal protective equipment such as gloves, safety goggles, helmets, safety shoes, and protective clothing may also be required. To be effective, personal protective equipment must be individually selected, properly fitted, properly worn, regularly maintained and replaced as necessary.

### 3.0 JOB SPECIFIC HAZARDS

- A. Air Contaminants: The Company will rely on employee issued NIOSH approved respirators for any welding and/or cutting operations. In addition, employees will be annually trained in the proper use of respiratory protection equipment.
- B. Workplace Chemicals: All employees will be provided with information concerning hazardous chemicals in the workplace. The Health & Safety Manager will be responsible for fulfilling the various Hazard Communications requirements, including: chemical labeling, material safety data sheets and employee training.
- C. Physical Conditions: Workplace noise is a potential hazard or irritation. A "Noise Survey" shall be conducted as a means identifying and reducing sound levels and exposures.

### 4.0 ROLES & RESPONSIBILITIES

- A. The Industrial Hygiene Program Manager shall:
  - Perform or oversee industrial hygiene surveys,
  - Recommend engineering or administrative controls to prevent personnel exposure to chemical and physical hazards,
  - Recommend warning signs where appropriate,
  - Maintain industrial hygiene survey records,
  - Provide or coordinate hazard-specific training for personnel who work with hazardous materials, and
  - Review plans for new operations and significant changes to ongoing operations that involve hazardous materials or carcinogens
- B. Manager & Supervisor shall:
  - Review proposed processes involving chemical and physical hazards with the industrial hygiene program manager before installing new equipment,
  - Ensure all chemicals containers display manufacturer's warning labels, and
  - Choose less-hazardous or non-carcinogenic materials whenever possible

C. Employees shall:

- Use personal protective equipment provided,
- Complete required training in hazardous materials prior to usage,
- Refrain from consuming food or beverages (including chewing gum) in any industrial area where chemicals are used, and
- Report unusual odors or suspected exposures to supervisors and the industrial hygiene program manager



## **INJURY & ILLNESS RECORDKEEPING**

"29 CFR 1904"

### **PURPOSE**

The purpose of this program is to establish the Company's written program for evaluating, documenting and maintaining records that meet one or more of the general recording criteria including new cases of "Occupational Injuries, Illnesses, & Fatalities" in accordance with OSHA, 29 CFR 1904.

### **1.0 CLASSIFYING INJURIES**

The company will rely on OSHA, 29 CFR 1904 as well as State guidelines for classifying injuries and illnesses as follows:

1. Medical Treatment Case (MTC) – Any work-related injury or illness, which requires treatment by a physician or by a registered professional under the standing orders of a physician.
2. Restricted Workday Case (RWC) – Any work-related injury or illness, which prevents the employee from doing one or more parts of his regularly scheduled job on any shift.
3. Loss Workday Cases (LWC) – Any work-related injury or illness, which prevents the employee from reporting to work on any subsequently scheduled workday.

### **2.0 FIRST AID CASES**

Any work-related injury, which does not require professional medical treatment. When another trained employee, may treat the injury from supplies, which are contained in the company's first aid kits, it shall be considered a First Aid Case. First Aid cases may be treated by a medical professional, if preferred.

### 3.0 RECORDABLE INJURIES

For the purpose of this policy, the below represents a sampling of the occupational injury or illness in the respective category in which the injury or illness may apply:

#### A. Medical Treatment Case

- All diagnosed occupational illnesses.
- All treatment that does not fall into first aid.
- Using wound closing devices such as surgical glue, sutures, staples, etc.
- Loss of consciousness due to any injury or exposure in the work environment.
- Using prescription medications or use of a non-prescription drug at prescription strength.
- Using any devices with rigid stays or other systems designed to immobilize parts of the body.

#### B. Restricted Workday Case

- Any work-related injury or illness which prevents the employee from performing some of his primary job functions, inclusive of modifying his job functions to light duty tasks. For the purpose of this policy, light duty shall be considered as those, which require minimal standing, lifting, climbing, walking, stooping, etc...

#### C. Loss Workday Case

- Any work-related injury or illness, which prevents the employee from performing any of his primary job functions. Any employee who is scheduled to work a pre-determined amount of days and sustains an occupational injury or illness on the last scheduled workday, and is not scheduled to work the following day, may not be considered as a lost workday case, but may fall into another category.

### 4.0 RECORDKEEPING

- A. The Company shall enter each recordable injury or illness on an OSHA 300 and 300A Logs as well as any State reporting form (i.e., LDOL-WC-1017A) within seven (7) calendar days of receiving information that a recordable injury or illness is work-related, a new case, and/or meets one or more of the general recording criteria.

- B. A Company executive shall certify that he or she has examined the OSHA 300 & 300A Logs and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.
- C. The Company shall post a copy of the annual summary (OSHA 300A Log) in each establishment in a conspicuous place or places where notices to employees are customarily posted. The annual summary must be posted no later than February 1st of the year following the year covered by the records and the posting kept in place until April 30<sup>th</sup>. The HSE Manager shall ensure that the posted annual summary is not altered, defaced or covered by other material.
- D. The Company shall save the OSHA 300 & 300A (Annual Summary) Logs and all Company Incident Report forms for five (5) years following the end of the calendar year that these records cover.

## **JOB SAFETY & ENVIRONMENTAL ANALYSIS**

### **"JSEA"**

#### **PURPOSE**

The purpose of the Hazard Analysis is to provide a method for an individual and/or group to inspect a given worksite, identify potential hazards related to the operation, and arrive at a Safe Work Plan for completing the job tasks safely.

#### **1.0 PROCEDURES**

- A. Once the client/owner work permit has been issued, the assigned crew shall conduct a thorough Hazard Analysis at the job site, which includes, but is not limited to:
  - Walking the job and reviewing all elements of the job task. The Onsite Supervisor shall identify all equipment to be worked on;
  - Identifying existing and/or potential hazards and take appropriate action to eliminate or minimize identified hazards;
  - Reach agreement(s) on the safest plan to complete the assigned task. Each person on the crew must thoroughly understand their role in the upcoming tasks;
  - Evaluating PPE requirements as well as any potential upgrades that may be needed to provide the maximum level of employee protection;
  - Ensuring that all workers know and are properly trained for their assignment(s);
  - Posting of any required work permits in a conspicuous place in the work area. If posting is not practical, permits shall be kept readily available at the job site so as to protect them from weather damage.
- B. Whenever a Supervisor is not available, a competent person shall be assigned to lead the session. As soon as practical, the Supervisor shall review and sign-off on the "JSEA".

#### **2.0 GENERAL INSTRUCTIONS**

- A. Print and "Hand-Write" to ensure the "JSEA" is legible/readable. The only place you do not print required information are areas requiring signatures.
- B. The completed Hazard Analysis shall be reviewed for proper completion and signed by the designated Supervisor/Competent Person **before** work begins.
- C. When the "JSEA" is completed, it must be posted and/or readily available at the job site.

### 3.0 MINIMUM "JSEA" CONTENT

The Job Safety Analysis shall contain, at a minimum, the following:

- Date: Enter the date the work will be performed.
- Location: Enter the name of the facility where the work will be performed.
- Customer: Enter the name of the Customer Representative at the job location.
- Ultimate Work Authority: The Onsite Supervisor must print the name of the individual who has Ultimate Work Authority.
- Person-In-Charge (PIC): A Client Representative must sign the JSEA form authorizing the work activity.
- Work Activity: The first step of hazard analysis is to accurately describe the work to be performed. This will provide the basis for the rest of the process. At the top of the form, provide a brief, but specific description of the work to be performed.
- Job Task Supervisor & Crew-Members: Signatures of all personnel that will be performing and/or affected by the work activity. This may include Non-Company employees, such as other contractors or client personnel.
- Short Service Employees & Mentors: List all SSEs involved in the operation as well as their assigned mentor. The Site Supervisor has the responsibility to ensure that all SSEs are assigned a mentor prior to the start of any operation. The mentor can be a Site Supervisor or a selected crewmember.
- Environmental Concerns: List any environmental hazards related to the operation. All crewmembers involved in the operation have the responsibility of proactively identifying and addressing environmental concerns.
- Personal Protective Equipment: List all Personal Protective Equipment that will be needed to safely perform the work activity.
- Safe Work Practices: List all Safety Systems that will be used to control and or eliminate all identified hazards associated with work activity (i.e., [Stop Work Authority](#), Working at Heights, GFCIs, etc.).
- Permit Systems: List all Work Permits that must be completed and authorized prior to the start of the work activity (i.e., Lockout & Tagout, Permit to Work, etc.).
- Energy Hazard Checklist: List all Energy Hazards that could potentially injury personnel during the operation.
- Step-by-Step Procedures: Briefly outline or list the steps necessary to safely complete the job from start to finish.
- [Potential Hazards: List and analyze all identified and/or potential safety and health hazards associated with each step-by-step procedure.](#)
- [Recommendations to Eliminate or Control Hazards: List and analyze all recommended actions to ensure appropriate countermeasures are effective in eliminating and/or reducing identified hazards.](#)
- Initials: Assign a Team Member(s) that will be responsible for eliminating and/or reducing each identified hazard and have them acknowledge their responsibility by initialing each assigned step on the JSEA form.

## **LADDERS & SCAFFOLDING SAFETY POLICY**

"29 CFR 1926.451 & 29 CFR 1910.23"

### **PURPOSE**

The purpose of this program is to establish practical measures to prevent employees from being injured by falls from scaffolds and ladders. The Company will take all necessary steps to eliminate, prevent, and control fall hazards.

### **1.0 SCAFFOLDING SAFETY**

Supervisors of all employees who will work from scaffolds will ensure the following procedures are taken:

1. Comply with the current and proposed OSHA regulations for working with scaffolds. Scaffolds and their components must be capable of supporting without failure, at least four (4) times the maximum intended load. Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less. Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports;
2. A Competent Person shall inspect all scaffolds, scaffold components, and personal fall protection equipment before each use, and periodically during use. Only qualified and competent personnel are allowed to erect, move or dismantle scaffolding systems.
3. Supported scaffolds with a height to base width (including outrigger supports, if used) ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means. Supported scaffold poles, legs, posts, frames, and uprights shall bear on base plates and mud sills or other adequate firm foundation. Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement. Unstable objects shall not be used to support scaffolds or platform units;
4. When scaffold platforms are more than 2 feet above or below a point of access, portable ladders, hook-on ladders, attachable ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface shall be used. Cross-braces shall not be used as a means of access

5. Each platform and/or walkway must be at least 18 inches wide. Scaffold planks must be cleated and must extend over their end supports more than 14".
6. Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than as follows: Less than 50KV - 10 feet, More than 50KV - 10 feet plus 0.4 inches for each 1KV over 50KV.
7. Each employee on a scaffold working at 10' or above a lower level shall be protected from falling to that lower level by the use of personal fall arrest systems or guardrail systems. Guardrail systems shall be installed along all open sides and ends of platforms. Scaffolds shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toe-boards.
8. Employees shall be prohibited from working on scaffolds covered with snow, ice, or other slippery material except as necessary for removal of such materials. Work on or from scaffolds is prohibited during storms or high winds;
9. Equipment found to be defective and/or incapable of safely supporting scaffold users shall be tagged by a Competent Person with the appropriate warning and shall be adhered to by all personnel. Such tag or labeling shall coincide with the following:

**"DANGER"**  
**DO NOT USE**  
**SEE SUPERVISOR OR**  
**SAFETY MANAGER**  
**FOR DETAILS**

## 2.0 LADDER SAFETY

Supervisors of all employees who will work from ladders will ensure that the following safe work procedures are taken:

1. All ladder rungs shall be uniformly spaced to meet OSHA & ANSI specifications.
2. Ladder shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use. Any defective such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, and shall be withdrawn from service until repaired.

3. Ladder rungs, cleats, and steps shall be parallel and level when the ladder is in position for use.
4. The ladder base should remain on a firm, secure and level surface, with both legs equally supported. Boxes, bricks, barrels, etc., should not be used as a means of support or to gain height.
5. When ladders are used for access to upper levels, the top of the ladder must extend above the point of support at the platform. This will provide a hand-hold while stepping from the ladder to the platform. Extension ladders shall be extended approximately three (3) feet beyond the landing, using an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (4:1 ratio). When ladders are not able to be extended, then the ladder shall be secured at its top to a rigid support that will not deflect
6. Ladders shall not be loaded beyond the maximum intended load for which they were built or beyond the manufacturer's rated capacity.
7. Ladders must not be used as a brace, lever, platform, scaffold board, walkway, material hoist, or any other use for which it is not designed.
8. Always carry small tools or other work material in a tool belt to prevent injury in the event of a fall as well as face the ladder when ascending or descending ladders. Keep your hands free to hold onto the ladder. Keep both feet on the same rung when working from the ladder.
9. When using stepladders, ensure that ladder fixed supports are fully opened and locked into place before ascending. Never stand above two (2) rungs from the top.
10. Ladders should always be tied to a firm structure to secure them for normal use. Tying off near the top is required and doing so near the bottom is advisable as well. Another individual shall support ladder until tie is secured.
11. Use only wooden or fiberglass ladders around electrical applications.
12. Only one person may climb a ladder at a time. Employees should wear shoes, which have a "well-defined" heel before ascending a ladder. An employee who is working from a ladder must ensure that he/she does not lean far enough to either side of the ladder to prevent the ladder from toppling over.
13. Always face a ladder when ascending or descending.



### 3.0 EMPLOYEE TRAINING

Employees, although not allowed to erect scaffolding, will undergo training in order to recognize hazards involving the use of scaffolds. Training is to be conducted by a "Competent Person" who has knowledge of scaffold use and erection (Note: Training will be facilitated a qualified 3<sup>rd</sup> Party Training Organization). Such training might include, but not be limited to:

1. Fall hazards;
2. Falling objects and the use of toe boards;
3. Use of tools and equipment while working on scaffolds and/or ladders;
4. Electrical hazards involving energized parts coming into contact with scaffold support systems and/or ladders;
5. Adjusting work practices to coincide with changes in scaffold and/or ladder use conditions, including load capacities;
6. Inspections of ladders and/or scaffolding including support structures and tagging;
7. Re-training shall be conducted when changes at the worksite present a hazard; or where changes in the types of ladders, scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained; or where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not been proficiently trained.
8. Records pertaining to ladders safety and scaffold user training will be maintained by the Company in the appropriate training file, by the HSE Manager.

## **LOCKOUT / TAGOUT**

"29 CFR 1910.147"

### PURPOSE

The purpose of this program is to prevent accidental injury or death of employees or others involved in the routine maintenance, servicing, and testing of equipment and/or machinery do to the unexpected start-up or release of pressure.

### 1.0 GENERAL INFORMATION

- A. The Company has developed this program to apply to all operations conducted at this facility and on customer property whereas an authorized employee performs routine maintenance, servicing, or testing on equipment covered by the standard.
- B. Authorized employees are instructed to adhere to the lockout / tagout requirements of customers for whom work is performed at temporary job site locations, specifically in instances where equipment is being tested or serviced at the site.
- C. It shall be the policy of the Company that in situations where work is being done on Customer property and the lockout/tagout provisions apply, that Company employees follow the **Customer's** Lockout & Tagout Procedures.
- D. It shall become the responsibility of the Onsite Supervisor to; (1) perform a worksite inspection to prevent any unexpected energizing start up or release of stored energy that could occur & cause injury (2) ensure compliance with the lockout/tagout provision in all instances where such is applicable, and (3) provide equipment listing and surveys to all affected employees.
- E. Employees who apply the Lockout/Tagout procedure in accordance with Company or customer Energy Control Program must make all efforts to first identify all power sources (may have more than one energy source) affecting the equipment, machinery or pipeline system (e.g., pneumatic, hydraulic, electrical, steam, gas, tension, gravity or other). Employees must coordinate all lockout/tagout activities with the customer representative while on temporary job site locations.

## 2.0 TERMS & DEFINITIONS

- A. Affected employee: An employee who performs the duties of his/her job in an area in which the energy control procedure is implemented and servicing or maintenance operations are performed. An affected employee does not perform servicing or maintenance under normal conditions.
- B. Authorized employee: An employee who performs servicing and maintenance on machinery or equipment. The authorized employee should ascertain the exposure status of individual group members.

## 3.0 ENERGY CONTROL PROCEDURES

- A. The Company has developed this procedure in efforts to provide for its employees, a safe and effective method of protection from exposure to hazardous energy sources. Employees should remain aware that simply pushing a button to "stop" or turning "off" pieces of equipment, DOES NOT de-energize the system. The Company requires the use of both locks and tags when complying with this policy. Lockout/Tagout devices must include name of individual placing device.
- B. Lockout: Refers to the act of blocking the flow of energy from the power source to the equipment. Such a device must be substantial enough to hold the energy isolating device in an immovable position. A lockout device is usually a key lock arrangement that secures a valve or lever in the "off" position. Company employees shall use "Master Locks" in accordance with this program.
- C. Tagout: Refers to the practice of placing a tag on the energy isolating device to warn others that equipment is not to be engaged due to the presence of another employee in the danger area. Company employees shall use laminated tags (weather & chemical resistant) standardized in size, color, with wording of hazardous energy "Do Not Start", "Do Not Open", "Do Not Close", "Do Not Energize", or "Do Not Operate".
  - 1. Tags should never be bypassed or ignored (even if it appears without a lock).
  - 2. A tag is sometimes used alone when it is not possible to lock out the energy source, or when it has been demonstrated that a tag alone will effectively prevent accidental start-up by representing a visible means of communicating the hazard to affected personnel.

3. Whenever a tag is used in the place of a lock, the tag should be treated by employees as it were a lock, and should be removed only by the individual who placed it there. The tag attachment shall be fastened at the same point at which the lock would have been attached. If the tag cannot be affixed directly to the energy isolating device, the tag shall be located in a safe position that will be immediately noticeable to anyone attempting to operate the device.

D. The following is a list of common energy sources and control procedures:

1. **Pneumatic:** Must close block valves upstream and downstream of section to be isolated. Systems under pneumatic pressure should have stored pressure slowly "bled" from the system until the system will no longer function under air power (zero energy state). Use chains, energy isolation air valves, shut off valves, padlocks and lockouts to lockout energy source(s). Disconnecting the line is the preferred means of isolation. Coordinate this activity with the customer where applicable.
2. **Hydraulic:** Isolate the system and release pressure to reach zero energy state. Even after pressure has been released, hydraulic systems can present a hazard to employees when equipment is not in the "rest" position, (e.g., a hydraulically operated press, left in the raised position may be interacted upon by gravity and therefore will need to be held in position by another object such as a wood or metal block, chain, etc.). Use lockout valves, padlocks and/or lockouts to lock energy source(s).
3. **Electrical:** Ensure that all power sources are locked and tagged out. Electrical systems will retain residual energy even when the power is turned off. Employees should engage on/off switches and depress on/off buttons to test for stored energy prior to performing a servicing activity. An electrical qualified person shall use test equipment to ensure that all circuits are dead.
4. **Steam / Thermal:** Employees shall ensure system isolation and that pressurized steam is released from the system prior to performing a service or maintenance activity. Steam powered systems present an additional hazard in that the potential for burns is prevalent. Piping, joints, lines, and connections may be extremely hot to the touch. Additional personal protective equipment may be required, coordinate this activity with the customer where applicable.

5. **Fluids and Gases:** Isolate all inlet and outlet piping so that all sources of hazardous energy are controlled. Some means of isolation include blinding or blanking, use of a line valve(s), depressurizing and disconnecting lines, misaligning pipes and capping or blinding ends, or double block and bleed. If the isolation method selected requires the opening of any flange or line connection, that flange or line connection point must first be isolated and depressurized and those isolation points subject to lockout/Tagout. Natural or pressurized gas systems present an additional hazard of potentially explosive/flammable characteristics when interacted upon by sparks open flames, and/or other ignition sources. Gas under pressure in pipelines must be reduced to minimal operating pressure and/or zero energy state and monitored during the entire service or maintenance process.
6. **Mechanical:** Employees shall ensure that all stored mechanical energy has been released and/or the energy has been blocked. Be aware of gravity, springs, tension, and other sources of energy that are not always obvious. Use blocks, pins, or chains to restrain energy when equipment cannot be brought to a zero-potential energy state. Padlocks, lockouts, and tags shall be used to Lockout and Tagout mechanical energy.
7. **Other energy sources** (i.e., chemical, solar, hydrostatic, etc.) shall be thoroughly assessed to determine to what extent it affects other identified energy sources. When practical, employee should contact their supervisor and the customer representative when doubts concerning the isolation of non-routine energy sources are an issue.

#### 4.0 PROCEDURES FOR DISABLING EQUIPMENT/MACHINERY

- A. General: This section contains the minimal acceptable procedure for disabling machinery or equipment. The standard does allow for some exceptions to the rule, but most involve the use of "plug connected" equipment. Employees are encouraged to abide by those lockout/tagout and permitting provisions of the customer in all areas of employee safety where it exceeds our own policy.
- B. Application of Controls: Authorized employees shall follow this sequence as a general guidance for implementing the lockout procedure:
  1. Prepare for shutdown. Notify all affected personnel that the lockout will take effect. The area immediately affected by the procedure should be isolated from all non-involved personnel. Ensure that the customer's Site Supervisor or Safety Representative receives notification to alert his own personnel, should they become affected by the lockout procedure.

2. The authorized employee shall have knowledge of the type and magnitude of the energy hazards of the equipment to be controlled, and the methods or means to control the energy.
3. When shutting down machinery or equipment, ensure that all power sources have been isolated and secured from accidental start-up. The machine or equipment shall be turned off or shutdown using the procedures established for the machine or equipment. All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located & operated in such a manner as to isolate the machine or equipment from the energy source. An orderly shutdown must be utilized to avoid any additional or increased hazard(s) to employees as a result of the equipment stoppage.
4. Apply a lock and tag, issued by the Company or customer, using the following steps; 1) Lockout or tagout devices shall be affixed to each energy isolating device by an authorized employees, 2) Lockout devices, where used, shall be affixed in a manner that will hold the energy isolating devices in a safe or off position, 3) Tagout devices, where used, shall be affixed in such a manner as will clearly indicate that the operation or movement of energy isolating devices from the safe or off position, 4) Where tagout devices are used with energy isolating devices designed with the capability of being locked, the tag attachment shall be fastened at the same point at which the lock would have been attached. The tag should include the employee's name, and the date the lock/tag was placed, 5) Where a tag cannot be affixed directly to the energy isolating device, the tag shall be located as close as safely as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.
5. Render safe, all stored or *residual* energy. 1) Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained & otherwise rendered safe. 2) If there is a possibility of re-accumulation of stored energy level, verification of isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.
6. Verify the isolation and de-energization of the machinery or equipment. Prior to starting work on machines or equipment that have been locked or tagged out; the authorized employee shall verify that isolation & de-energization of the machine or equipment have been accomplished. After verification, ensure all buttons are in the off position and any applicable lines have been disconnected or blocked.

C. Removal of Controls: When canceling the lockout procedure, follow these steps:

1. Inspect the work area to ensure that non-essential items have been removed and that machine or equipment components are intact and capable of operating properly.
2. Check the area around the machine or equipment to ensure that all employees have been safely positioned or removed from harm's way.
3. Make sure that locks or tags are removed only by those employees who attached them. Supervisory personnel may make other arrangements due to the absence of the employee who attached the device.
4. Notify all affected employees after removing locks and tags and before starting equipment or machinery (when applicable).
5. The supervisor or other available management person (to include the customer's safety rep) will verify the return to operation decision prior to equipment re-startup.

D. Temporary Removal of Lockout & Tagout Devices: When temporarily removing Lockout & Tagout devices, the following procedures shall apply;

1. Clear away tools,
2. Remove employees from hazard area,
3. Remove the LO/TO device,
4. Energize & proceed with testing, and
5. Re-energize & reapply control measures.

Note: Removal procedure shall be documented.

E. The On-site Supervisor will monitor and control the use of lockout/tagout devices in all instances whereby the Customer does not perform the procedure. Company employees are authorized to participate in Group Lockout & Tagout circumstances that involve Company owned equipment only. The Company's On-site Supervisor shall be responsible for enforcing this policy, thereby, affording all onsite personnel a level of protection equal to that provided by a personal Lockout/Tagout device. Additionally, the Onsite Supervisor shall ascertain the exposure status of individual group members. Each employee shall attach a personal Lockout/Tagout device to the group's device while he/she is working & then removes it when finished.

During shift change or personnel changes, there should be specific procedures to ensure the continuity of Lockout/Tagout procedures. The Lockout/Tagout Permit shall specify and document these procedures.

## 5.0 INSPECTIONS

- A. Site supervisory personnel shall check the integrity of all energy isolating devices placed on equipment that Company employees would work on.
- B. Employees who apply vessel isolating devices are responsible for inspecting seals, bolts, gaskets and other connections before and after the application of controls. However, in all cases unless otherwise specified, the customer shall be responsible for vessel isolation procedures.
- C. When inspections are concluded, the employee performing the inspection (shop foreman) must submit a written "certification" confirming that the applicable components of the plan have been adhered to. Such certification shall include the following information, at a minimum:
  - 1. The name of the inspector;
  - 2. The date the inspection was performed;
  - 3. The department or location affected by the inspection;
  - 4. The name or other description of the equipment/machinery being locked and/or tagged out;
  - 5. The reason that the Lockout/Tagout was affected;
  - 6. The date and time of anticipated removal;
  - 7. The location of each Lockout or Tagout device in use;
  - 8. The name of the individual who approved the procedure; and
  - 9. Signature certifying the accuracy of the information contained in the inspection report.
- D. The Company will maintain records of periodic inspections carried out in accordance with this program. The Company's HSE Manager shall conduct & documented annually an inspection of the Company's Lockout / Tagout Program to ensure procedures & requirements are being followed.



A certified review of the inspection shall include, but not limited to, date of inspection, equipment being locked and/or tagged out, names of "Authorized" & "Affected" employees and the name & signature of the person performing the inspection.

## 6.0 EMPLOYEE TRAINING

- A. The Company will provide initial training to "Authorized Employees" who are charged with the responsibility for implementing the energy control procedures and who perform servicing and/or maintenance on machinery or equipment.

Such training will include:

1. Recognizing applicable hazardous energy sources;
  2. Types and severity of energy related sources existent at certain work locations;
  3. The method required isolating and controlling energy sources;
  4. Interpreting the lockout/tagout standard;
  5. Methods of communicating machine hazards;
  6. Location and use of lockout devices;
  7. Tagout systems including the limitations of a tag (tags are warning devices & do not provide physical restraint)
- B. Training for affected employees and/or other employee whose work operations are, or may be in an area where energy control procedures may be utilized, will include, but not be limited to:
1. Instructions, purpose & use of the energy control procedure and the importance of not attempting to start-up or use equipment or machinery when locks or tags are displayed.
  2. The training shall also include the limitations of a tag (tags are warning devices & do not provide physical restraint) and that a tag is not to be removed without authorization, ignored or defeated in any way.
- C. Retraining is required when there is a change in job assignments, in machines, a change in the energy control procedures, or a new hazard is introduced. All training and/or retraining must be documented, signed & certified.

## MANAGEMENT OF CHANGE

### PURPOSE

The direct and underlying cause of many accidents and injuries is the failure to properly recognize, identify and/or manage change. The Company has established a systematic process to identify and control hazards associated with change as well as maintain the accuracy of safety information. On occasion, temporary repairs to equipment or changes in personnel may be made out of operating necessity. Any onsite changes to "Standard Operating Procedures" can introduce new hazards or compromise Company safety standards. Although some changes may be minor with little likelihood of compromising safety or environmental protection, all changes may have the potential to cause harm to personnel or damage to the environment.

### 1.0 APPLICABILITY

The "MOC" program applies to all safety sensitive functions conducted by Company personnel including changes in mechanical equipment and Supervisory personnel.

### 2.0 "MOC" PROCESS

The following "MOC" procedures shall be used during any job scope changes and/or changes in Supervisory personnel:

1. Defined Proposed Change: Screen each change to make sure it is desirable and justified. If the change does not meet this criteria, it MUST be canceled or denied.
2. Evaluate Proposed Change: If the "MOC" meets the defined criteria, then revisions must be made for the purpose of clarity and completeness of the request. Seek clarifications on ambiguous or vague words that seem doubtful as to the intended change. The reviewers should:
  - Be knowledgeable in the particular field or area.
  - Include a representative from Operations management as well as the Company safety department.
  - Ensure that the proposed change consist of written procedures for safety and environmental considerations.
  - Ensure that the proposed change consist of written procedures to be used when revising operating procedures, safe work practices and/or training program.

3. Authorize Proposed Change(s): Once the form has been submitted for change and it has been determined that all HSE concerns have been met, then the document is sent in for approval. The approval must be agreed upon by the Operations Manager and the Company Safety Manager.
4. Implement & Communicate the Proposed Change(s): The authorized "MOC" Form will then be submitted back to the originator of the form, who MUST communicate the revised proposed change(s) with his/her crew and all appropriate personnel. The revised proposed change(s) is now authorized for "**Start-Up**". The authorized "MOC" must be monitored and immediately canceled if found not suitable. Notification of a canceled "MOC" must be made to the reviewers.
5. Closure of Change: Once the work activity is completed, then the "MOC" document will be kept in the job file. In addition, a copy of the completed "MOC" will be kept on file at the Safety Manager's office.

### 3.0 EMPLOYEE TRAINING

The Company shall provide "Management of Change" training to inform all employees, including onsite Contractors whose job tasks may be affected by a change in operations prior to startup.

## MANUAL LIFTING

### PURPOSE

The purpose of this program is to provide employees with information on proper care of their back to help reduce the potential for back injuries in the workplace.

### 1.0 GENERAL

- A. Employees should never attempt to lift materials or objects alone without assistance under any of the circumstances listed below:
  - The weight of the material or object is too heavy for the single employee to lift with ease.
  - The bulk of the material or object is expansive to the point that the employee cannot comfortably get both arms around the material.
  - The material or object is unstable and will topple or fall once lifted.
  - The material or object is slippery or hard to grasp.
  - The material or object is too tall for the employee to see over.
  - The material or object is so heavy that the employee will need to drop it as opposed to lowering it to the ground by using proper bending techniques.
- B. Employees should regularly exercise, especially the back, stomach and leg muscles. Employees have an obligation to their own health and safety to maintain good physical conditioning when carrying, moving, pushing, lifting, or otherwise handling heavy materials.
- C. Managers and Supervisor must periodically evaluate work areas as well as employees' work techniques to assess the potential for workplace hazards and prevention of injuries. New operations should be evaluated to engineer out hazards before work processes are implemented.
- D. When lifting objects, never turn at the waist or shift your body to one side. Objects properly centered to body mass will subject the employee's torso to less strain.
- E. When carrying objects, never turn at the waist or hold objects extended away from the body. Turn the whole body as a unit, all movements should be coordinated.

F. Before manual lifting is performed, a hazard assessment must be completed. The assessment must consider:

- The size, bulk and overall weight of the object,
- Whether the weight of the material or object is too heavy for the single employee to lift with ease or if a two-man lift is required,
- If mechanical lifting equipment is required,
- Whether vision is obscured while carrying and if the walking surface and path where the object is to be carried.

G. Listed below are the basic rules established by the Company whenever an employee is involved in lifting objects or materials:

- Get a firm footing with your feet apart for a stable stance,
- Stand close to the load,
- Squat, don't bend from the waist,
- Take a deep breath and tighten the stomach muscles to help support your back while under the stress of a load,
- Lift with your legs (they are a lot stronger than your back), bringing your back to the vertical (straight up) position,
- Hold the load close to your body,
- If you must turn, turn with your feet, not by twisting your back,
- Set the load down again, by squatting, not by bending your back, and
- Keep your fingers from pinch points

H. Manual lifting equipment such as dollies, hand trucks, lift-assist devices, jacks, carts, hoists must be provided for employees. Other engineering controls such as conveyors, lift tables, and work station design should be considered. Use of provided equipment by employees shall be enforced by Company Supervisors. Where use of lifting equipment is impractical or not possible, two-man lifts must be used.

## 2.0 GENERAL SAFETY GUIDELINES

- A. When walking, stand erect, and push off with the balls of the feet while landing heel to toe.
- B. When sitting, keep feet flat on the floor, in a straight line from the knees. Sit forward slightly, so the lower or (lumbar region) of our back comes into contact with the back of the chair.
- C. When sleeping, place a pillow under the bend of the knees so that they are slightly elevated. This positions the spine in a more natural curve and may eliminate the backaches and discomfort some individual's feel after waking.

- D. When working, avoid attempting to catch objects or materials that fall or slip. This sudden motion on your part will subject the back to the responsibility of supporting weight it was not prepared to accept.
- E. When working, take an opportunity throughout the workday to perform back assisting exercises from the standing position. Examples of some exercises employees may perform include:
  - Standing with feet spread slightly apart, but in line with the shoulders. Place hands on both hips and turn to full radius from left to right.
  - Standing with hands and arms extended horizontally to each side, and twisting at the hips right to left.
  - Standing with hands and arms extended horizontally and simultaneously raising both arms over the head. Lean as far as you can without over-exerting, from side to side.
  - Employees may place hand on hips, stand on the balls of the feet, then lift and lower himself/herself repetitively. This exercise will help strengthen the calf and leg muscles. Strong legs are also important to safe lifting.

### 3.0 BACK INJURY MANAGEMENT

- A. Employees who experience back injuries usually do so due to improper lifting, carrying, pulling, pushing, lack of or improper training, the use of poor judgment, or a combination of these factors. Musculoskeletal injuries caused by improper lifting must be investigated and documented. Investigation findings must be incorporated into work procedures in order to prevent future injuries.
- B. Following prescribed work practices and using good common sense will eliminate the need for a back-management program. However, employees are prone to suffer back-related injuries from time to time, despite the company's best efforts. With this in mind, the company considers the below procedure mandatory for the reporting of back related injuries:
  - Stop work immediately. Even at the sign of the slightest twinge. You may prevent a back injury from occurring by recognizing the signs.
  - Report to a supervisor or other management person.
  - Provide the necessary information required to complete the Employer's First Report of Injury.
  - If necessary, request transportation to a medical facility for treatment.
  - Provide a specimen for post accident drug testing under the company's written substance abuse program provision.
  - **Note: Injuries must be recorded and reported as required by 29 CFR 1904.**

#### 4.0 EMPLOYEE TRAINING

- A. The company will annually schedule employees to complete specific training related to safe lifting practices and procedures.
- B. Training will include at a minimum:
  - General principles of ergonomics,
  - Recognition of hazards and injuries,
  - Manual lifting techniques & back injury prevention,
  - Procedures for reporting hazardous conditions, and
  - Methods and procedures for early reporting of injuries

## **NOISE EXPOSURE / HEARING CONSERVATION PROGRAM**

"29 CFR 1910.95"

### **PURPOSE**

The purpose of this program is to protect employees from prolonged exposure to intermittent bursts or continual high noise levels associated with occupational noise hazards.

### **1.0 INITIAL DETERMINATION**

- A. The Company will utilize the services of a third-party tester, with expertise in noise measurement to determine the level of noise in the various work area. A continuing effective hearing conservation program shall be administered when employees are exposed to sound levels greater than 85 dBA on an 8-hour time-weighted average basis.
- B. The Company will use information obtained through testing, to establish operational procedures and issue noise attenuators suitable for the detected noise levels, when applicable.
- C. The Company will consider the input of supervisory personnel when making a determination to implement this program in areas where any of the below applies:
  - 1. Employee exposure measurements taken indicate noise levels at or above 85 decibels.
  - 2. An employee complains of working conditions, which may be attributable to exposure to noise.
  - 3. A change in production, equipment, controls or personnel results in the exposure to noise levels which were not evident before.



## 2.0 MONITORING & EMPLOYEE NOTIFICATION

- A. When information indicates that employee exposure may equal/exceed the 8 hr time-weighted avg. of 85 decibels, the Company shall implement a monitoring program to identify employees to be included in the hearing conservation program.
- B. When monitoring, the Company will consider employee work areas with intermittent noise fluctuations of 80 decibels to 120 decibels.
- C. The Company will conspicuously post notices throughout the work place, notifying employees of the need to wear hearing protection in a specific area.

## 3.0 HEARING PROTECTORS

- A. The Company will provide and replace hearing protection to all employees exposed to an 8-hr. time-weighted average of 85 decibels at no cost to the employee. Employees shall be properly trained in the use, care & fitting of protectors.
- B. The Company shall evaluate hearing protection for the specific noise environments in which the protector will be used.
- C. Supervisors will be responsible for:
  - 1. Ensuring that affected employees properly select and insert earplugs.
  - 2. Monitoring employee compliance to the program.

## 4.0 AUDIOMETRIC TESTING

- A. The Company has established & will maintain an audiometric testing program by making audiometric testing available to all employees whose exposures equal or exceed an 8-hr. time-weighted avg. of 85 decibels.
- B. Within 6 months of an employee's first exposure at or above the action level, a valid baseline audiogram shall be established against which future audiograms can be compared. When a mobile van is used, the baseline shall be established within 1 yr. Such testing will represent a "baseline" audiogram, for the purpose of determining present hearing range capability. Testing to establish a baseline audiogram shall be preceded by at least 14 hours without exposure to workplace noise. Hearing protection may be used to meet the requirement. Employees shall also be notified to avoid high levels of noise.

- C. At least annually after obtaining the baseline audiogram, the Company shall obtain a new audiogram for each employee exposed at or above an 8-hour time-weighted average of 85 decibels. Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.
- D. Audiometric testing, when performed, will be conducted by a licensed or certified audiologist, physician or other technician who is certified by the Council of Accreditation in Occupational Hearing Conservation, or another individual who has demonstrated competency in administering audiometric examinations, obtaining valid audiograms and properly using, maintaining and checking calibration and proper functioning of the audiometers being used.
- E. The Company will provide for re-testing of any employee who complains of hearing loss at any time within ten (10) days of notification. Employees should report any suspected hearing loss to the respective supervisor immediately.

## 5.0 MEDICAL SURVEILLANCE

- A. The Company will rely on expert assessment of the compared audiograms to determine if an employee has experienced a threshold shift of 10 decibels or greater. If a threshold shift has occurred, use of hearing protection shall be re-evaluated and/or refitted and if necessary a medical evaluation may be required.
- B. The Company will rely on the authorized medical professional to provide medical evaluation and surveillance to its employees in accordance with the requirements of this program.
- C. The Company will provide information concerning the respective employee's job functions in an effort to assist the medical professional with this evaluation.
- D. The Company will rely upon the advice of the treating physician regarding hearing protection for employees whose ears are chronically draining or those who have active ear pathology. Such individuals may be removed from the exposed position at the recommendation of the Company's designated physician.

## 6.0 RECORDKEEPING

The Company will maintain accurate record of all employee exposure measurements as required by the regulation, including the results of the most recent noise exposure assessment, in a confidential file for the duration of employment and no less than thirty (30) years from the date of the testing.

## 7.0 EMPLOYEE TRAINING

A. The Company's training program shall be provided for all employees who are exposed to action level noise. The training shall be repeated annually for each employee. Training shall be updated consistent to changes in PPE and work processes. The Company shall make available to affected employees copies of the noise exposure procedures and shall also post a copy in the workplace. The employer shall also allow the Assistant Secretary and the Director access to records.

B. Training will include at a minimum:

1. Identifying noise,
2. Anatomy of the ear,
3. Personal protective equipment,
4. Work practice and engineering controls, and
5. Proper use and fit of hearing protectors

S.W.A.P. INC.

## **N.O.R.M.**

"NATURALLY OCCURRING RADIOACTIVE MATERIAL"

### PURPOSE

The purpose of developing this program is to train all employees in the recognition of NORM and avoid the possibilities of contact while they are performing job tasks at the Company facility as well as Customer sites.

#### 1.0 GENERAL

- A. NORM is an acronym for Naturally Occurring Radioactive Material. It is found in just about everything we come in contact with.
- B. In our industry, we are concerned with the type of NORM found in the formation material brought to the surface in the production of oil and gas. Exposures may be encountered more often in equipment that has been used to pump materials from offshore sites. Residual materials in these pumps may contain NORM. NORM material may also be contained in any equipment that has been offshore and that may have been in contact with drilling mud or other recyclable items.
- C. Examples of where Company employees could potentially come in contact with NORM while working on an offshore facility or land production location include the following:
  - Separators
  - Well-Bay Area
  - Wellhead Equipment
  - Produced Wastewater
  - Inside valves (i.e., during assembly)
- D. In addition, there may be different types of radionuclide that may be present in these items which is known as Technology Enhanced Naturally Occurring Radioactive Material, "TENORM". Another acronym used for this substance is "TENR". In the Oil Field, TENORM is most often found in "produced waters" and contamination of oil field equipment.

#### 2.0 ORGANIZATIONAL STRUCTURE

- A. The NORM Program Administrator is the Company HSE Manager and will have the responsibility of the implementation and training programs.

- B. Operations Managers and Supervisors have control of the job site safety to ensure that the men are informed and trained to react in normal duties and emergency situations

### 3.0 TEST LEVELS

- A. Company employees will not test for NORM levels at temporary job site locations. The Operating Company's Safety Department Representative is responsible for the testing of NORM levels. The host facility is responsible for advising Company employees of the seriousness of the situation and the required precautions necessary to prevent exposure to NORM. Employees may not work on any equipment unless it has been tagged as decontaminated and free from harmful levels of NORM. The Supervisor is responsible for verifying with the customer that all equipment has been tested and is free of harmful levels of contamination.
- B. The Company shall not accept equipment which produces a NORM or TENORM meter reading of 5 millirem in one hour or more.
- C. All used equipment must be tested by Company employees prior to acceptance. Upon receiving used equipment, the following steps must be taken:
  - Perform source function test on meter (UNSCEAR)
  - Leaving the meter on, approach the equipment to be tested;
  - Test equipment;
  - Perform a post inspection function test;
  - Document all findings.

### 4.0 PROTECTION METHODS

Protection from NORM radiation includes:

- Time;
- Distance;
- Shielding;
- Personal Hygiene; and
- Personal Protective Equipment

## 5.0 EMPLOYEE TRAINING

A. All employees subject to NORM exposure shall receive training in:

- Origin;
- NORM Hazards;
- Hazard Identification;
- Protective Measures;
- Safe Work Practices;
- PPE (HEPA Filters)
- Properties & Characteristics;
- Decontamination;
- Consequences of Exposure; and
- First Aid

B. All employees subject to exposure to NORM from inhalation or contact shall also be trained in respiratory protection and be medically evaluated to be able to use respirators.

C. The training should be conducted annually and before exposures occur in either normal or emergency situations.

COMPANY NAME

## N.O.R.M. SURVEY REPORT

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

Time: \_\_\_\_\_

Meter Model #: \_\_\_\_\_

Meter Serial #: \_\_\_\_\_

Survey Performed by: \_\_\_\_\_

	Pre-Job Source Check	Post-Job Source Check
Source Used		
Background Reading		
Battery Check		
Audio Check		
Response Check		
Source Check		

Customer: \_\_\_\_\_

Lease Location: \_\_\_\_\_

Brief Description of Equipment: \_\_\_\_\_

Items Surveyed	Exposure Reading ( $\mu$ R/HR)	Background Reading ( $\mu$ R/HR)

*Any item reading twice the background is considered Contaminated Non-Hazardous Oilfield Waste or NOW. Any item reading 50  $\mu$ R/HR is considered NORM.*

Surveyor's Signature: \_\_\_\_\_

## **PERMIT-TO-WORK**

### **PURPOSE**

The purpose of the Permit to Work (PTW) system is to ensure that due consideration is given to the hazards associated with a particular job task, and that the risks are minimized prior to the start of the work by the implementation of appropriate control measures.

### **1.0 KEY PRACTICES**

The "Permit to Work" form authorizes personnel to carry out specific work within certain time and operational constraints. Additionally, it determines which controls are required to complete the job/task safely.

### **2.0 VALIDATION**

The Permit-to-Work is valid:

- For a specific site;
- Until the scope of work changes;
- Until an unforeseen hazard arises (i.e. weather, injury, etc.); and
- For a maximum of twelve (12) hours, after which time it must be revalidated.

### **3.0 PERMIT-TO-WORK CONTROLS**

Typical tasks that should be controlled by the PTW system include:

- Hot Work: welding, burning, grinding and dealing with explosives etc. (i.e. all work that can lead to a spark).
- Lockout/Tagout: isolating electrical or mechanical machinery to permit maintenance or repair.
- Working at Heights: 6' feet or greater without protected by guardrails.
- Confined Spaces Entries: Any atmosphere that is suspect to a hazardous condition.



#### 4.0 PERMIT TYPES

The "Permit to Work System" is comprised of permits required by other Codes of Federal Regulations and industry best practices including but not limited to:

- Hot Work;
- Lockout & Tagout;
- Working at Heights;
- Confined Space Entry

#### 5.0 PROCEDURES

The following steps should be followed and/or considered during the completion of a Permit-to-Work:

- The Onsite Supervisor and Person in Charge initiates the PTW,
- Attach a copy of the "Job Safety & Environmental Analysis",
- Ensure that the site is safe and suitable for the work being proposed,
- Ensure no conflict with other work being done.
- Review any applicable "Lockout & Tagout" protocols and attach permit if required,
- Review any applicable "Hot Work" requirements and attach permit if required,
- Review any applicable "Working at Heights" protocols and attach permit if required,
- Review any applicable "Confined Space Entry" protocols and attach permit if required,
- Ensure all affected personnel are equipped with proper Personal Protective Equipment,
- Onsite Supervisor and Person in Charge must sign all the required forms and permits,
- Display all the permits with attachments in areas designated Onsite Supervisor and Person in Charge,
- The designated Person in Charge will communicate that work can commence, &
- Following the completion of the operation, the designated Person in Charge will gather all forms & permits for proper filing

#### 6.0 EMPLOYEE TRAINING

Upon hire, and at least annually thereafter, the Company shall inform and train all employees on its Permit-to-Work system.

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

"29 CFR 1910.132"

### **PURPOSE**

The purpose of this program is to identify areas where PPE is required and the types of PPE recommended for use in those areas.

### **1.0 GENERAL**

- A. Company employees will be trained regarding the proper use, fitting, donning, doffing, cleaning and maintenance of Personal Protective Equipment. Records of such training kept for a period of not less than 1 year from the effective date.
- B. When issued, required PPE will be used at all times as deemed necessary by supervisory personnel, Customer, and whenever the individual employee recognizes actual or potential hazards where the use of same, might prevent an occupational injury due to inhalation, absorption or physical contact.
- C. All PPE shall be used in accordance with the manufacturer's recommendations. At no time shall PPE be altered or in any manner degraded to the point where it will not accomplish its intended purpose. Defective, inoperative or damaged PPE shall not be used. The minimum required personal protective equipment for all non-office personnel consists of wearing:
  - 1. Safety glasses with a side shield (ANSI Z87.1);
  - 2. Use of hearing protectors in environments where noise levels exceed 85dBA;
  - 3. Safety shoes must be steel-toe and must meet ASTM-2413-2005 specifications or equivalent; and
  - 4. A hard hat in areas where required (ANSI Z89.1).
  - 5. Fire Resistant / Fire Retardant Clothing (FRC) shall meet 29 CFR 1910.132 (a) and NFPA 2112, 2113 & NFPA 70E for all applicable employees. Prior to use, Flame Retardant Clothing is to be visually inspected for signs of damage, deterioration and areas where sections of the body may not be adequately covered. FRC should be laundered and used in accordance with manufacturer requirements.
- D. Other protective equipment that may be required, but not be limited to:
  - 1. Safety goggles which meet ANSI Z87.1 specifications or equivalent. For use by employee in every instance where industrial soap or chemical is incorporated.

2. Respiratory protection to be worn in areas where the ambient atmosphere contains or is suspected to contain harmful or toxic dust, fumes, mists, gases or vapors. The type of respirator used is dependent upon the kind of hazard the employee will need to be protected against.
3. Full body safety harness with lanyard should be used by those employees who will work at elevated surfaces which are six (6) feet or higher.
4. Face-shields are to be worn by employees who will be involved in pressure washing, grinding, chipping, or other activities where airborne projectile are present and eye/face injury hazard. Employees may, depending upon the hazard of the operation, need to wear both safety goggles and face-shield when performing some activities.
5. Hearing protection such as ear plugs or ear muffs are to be worn by employees whenever they are exposed to noise levels in excess of 85dBA, or if two employees who are standing three feet or less apart must yell in order to be understood.
6. Gloves, which are suitable to provide the degree of protection the employee requires in order to protect his/her hands from hazard exposure.
7. PPE shall be turned in to the HSE Manager whenever:
  - It fails to provide the level of protection required,
  - It is visibly damaged (i.e., cut, frayed straps, dry rotted, etc.),
  - It does not provide a comfortable fit, and/or
  - The change schedule or wear date has expired or is no longer applicable.

## 2.0 TYPES & USES OF EQUIPMENT

- E. Fall Protection Devices - During all work activities where an employee works above ground more than six (6) feet, a full body harness will be worn by all employees. It will be the responsibility of the individual employee to make the determination as to when such PPE is required, with such decision being confirmed and approved by the on-site supervisor and/or customer representative. Rigging should be routinely inspected and taken out of service when frayed, cut, worn, or dry rotted (See Fall Protection Program for more detailed information).
- F. Ventilation Devices - It is mandatory that all confined or enclosed spaces, or areas where contaminants may accumulate, maintain adequate mechanical ventilation during entry operations. The methods of mechanical ventilation used by the Company include, but may not be limited to:
  1. Natural Ventilation – When oxygen levels remain constant between 20.0% - 20.9%.

2. Pneumatic Blowers – When a maximum exchange of air capacity is required for large or oddly configured spaces. These blowers must be powered by air with the usual source being a compressor.
  3. Air Horn (siphon type) – Suitable for use in smaller openings where controlled discharge is required.
  4. Flexible Ducting – When ventilation from an area cannot be achieved through direct discharge of vapors or gases into the atmosphere.
- G. Ground Fault Circuit Interrupters – When electrical cords must run across metal grating or wet surfaces, the use of a ground fault circuit interrupter should be a main priority.
- H. Level C Attire – When employees will don a Tyvek suit to avoid direct skin contact with known contaminants. Ankles and wrists are to be taped over the outside of boots and gloves.

### 3.0 PPE ASSESSMENTS, SELECTION & MAINTENANCE

- A. The HSE Manager shall have the responsibility of conducting, documenting an annual PPE Hazard Assessment Certification. The hazard assessment will indicate a determination if hazards are present or are likely to be present, which necessitate the use of PPE. The PPE Hazard Assessment shall include the certifier's name, signature, date & document identification.
- B. Employees will be provided the opportunity to select the personal protection at no cost to them, which offers a comfortable fit, without compromising the safety factor associated with the equipment when known or potential hazards exist. PPE selection and reasons for selection shall be given to the employee. Under no circumstances are employees to provide his/her own safety equipment without consultation and approval from the HSE Manager. The purpose of this is to ensure that all PPE meet applicable ANSI, ASTM and NIOSH requirements as well as assurances of its adequacy, maintenance & sanitation.
- C. Additionally, protective equipment, including personal protective equipment for eyes, face, head, and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

#### 4.0 EMPLOYEE TRAINING

- A. Each employee who may need to wear PPE shall be properly trained and/or retrained. Employee training will include, but may not necessarily be limited to:
  - 1. When PPE is necessary;
  - 2. How to properly don, doff, adjust & wear PPE;
  - 3. Appropriate ANSI & ASTM standards regarding such PPE;
  - 4. Situations, which require reassessment of PPE use;
  - 5. Manufacturer's limitations of PPE including the proper care, maintenance, useful life & disposal of PPE;
  - 6. How to determine when and what type of PPE is necessary for existing and changing hazardous environments.
  - 7. Levels of PPE adequate to protect the employee from the identified exposure hazard, with consideration to permeation, degradation, puncture worthiness and penetration.
- B. Retraining of the employee is required when:
  - 1. The type of PPE Changes;
  - 2. The workplace changes, making the earlier training obsolete;
  - 3. The employee demonstrates lack of use, improper use, or insufficient skill or understanding
- C. Certifications must include the employee name, the dates of training, and the certification subject.

## **POST INJURY MANAGEMENT PROCEDURES**

### **PURPOSE**

The purpose of this program is to establish written procedures to ensure that employees receive quality medical care and are able to return to full gainful employment in the earliest possible time following a work-related injury.

### **1.0 GENERAL**

- A. This procedure shall be implemented in full compliance with all applicable laws including, but not limited to, privacy and workers' compensation (or the equivalent) laws and regulations.
- B. All personnel are required to be fit to work in accordance with the Company's "Fit-for-Duty" program. Functional job descriptions that outline essential job functions are necessary to ensure that medical assessments are tailored to the individual and the physical demands of the job. This also includes management of non-work-related incidents that may temporarily affect an individual's work performance or ability to react in an emergency situation.
- C. Any employee experiencing an injury or experiencing signs and/or symptoms of illness shall immediately notify their Supervisor.
- D. Supervisors shall be directly involved in providing information to the HSE Manager when completing an Incident Report.
- E. Employees are entitled to choose their treating physician; however, the Company may also assign another approved Occupational Physician and arrange an examination which the employee must attend for compliance with relevant workers' compensation legislation and to obtain "Work Status" release. *Note: In any life-threatening situation, an employee shall be transported to the nearest Emergency Room.*
- F. Any Employee who receives medical attention due to an occupational injury shall be given a "Post Accident Drug / Alcohol Screening".

## 2.0 SPECIFIC "POST INJURY" PROCEDURES

### A. Things to Do:

- Arranged transportation for the injured Employee to be examined by a Company Physician;
- An injured employee must be accompanied to the hospital or clinic by his/her Supervisor or a member of Management;
- Ensure the injured employee receives proper medical attention;
- Ensure the injured employee takes a "Post Accident" drug screen; and
- Start the Incident Report while information is still fresh.

### B. Things NOT to Do:

- Don't let the injured employee go to the hospital or clinic alone;
- Under no circumstance will the employee pay for his/her medical treatment; and
- Don't assume the hospital has conducted a post accident drug screen.

## 3.0 RESTRICTED / MODIFIED DUTY CASES

The Company shall offer modified work, wherever possible, to employees who are unable to return to their regular duties following a workplace injury or illness. The benefits of offering modified duty include, but are not limited to, reduced Workers Compensation costs, improved employee retention, enhanced employee morale, reduction in lost time days, and a strengthening of the company's relationship with its employees. Modified work is considered to be meaningful to the employee and the Company, and consistent with work restrictions outlined by the treatment provider.

Employees shall be informed of the Company's restricted / modified duty policy via new hire orientations, safety meetings, toolbox talks and/or posting the policy in a conspicuous location.

## 4.0 RESTRICTED DUTY ACCOMMODATIONS

All Department Managers shall, whenever possible, accommodate all restrictions placed on an injured employee when ever feasibly possible. A list of jobs available to be performed for employees on modified duty should be maintained. All jobs should be assessed to determine which jobs can be performed by persons working under specific restrictions. The Company shall prepare a Physical Demands Analysis (PDA) for each of these jobs to ensure workers are placed accordingly.

The Company shall ensure that restricted / modified work being offered is consistent with the medical restrictions listed by the health care provider. Workers must ensure that changes in the scope of the modified work must adhere to the medical restrictions. Supervisors shall be made aware of the restrictions to ensure the modified work meets the physician's orders. Restricted / modified work is temporary and shall be managed with a goal to return the individual to full time work as soon as deemed medically fit.

## 5.0 TREATMENT FACILITIES

The Company shall ensure that local health care providers are advised that the Company provides restricted / modified work to injured employees, whenever practicable. The "SEMS" Coordinator shall proactively accomplish this by making arrangements with clinics who specialize in Occupational Health, and recommend that the injured employees seek treatment there. When this is not practicable, a standard letter should be drafted that outlines the Company's modified work opportunities. All injured employees shall take this letter with them when they visit their health care provider.

Note: The Company currently utilizes "AHS Walk-In Clinic", an Occupational Medicine Clinic located in Lafayette, LA.

## 6.0 FULL DUTY RELEASE

An injured employee will not be allowed to perform regular work duties until the treating physician has issued a "Full Duty Release" or "Return to Work Certificate". Once an employee is returned to regular duty, then he/she shall be placed in the regular work schedule at the time of release. Once the treating physician has given a release, the employee shall turn it into the HSE Manager before the start of their regular duties.

## 7.0 RECORDS

The Company shall maintain written records of incident details including incident investigations and root cause analysis. This will help the Company recall information about the circumstances of the incident at a later time, and will demonstrate due diligence. Records shall be kept of communications with the injured employee regarding restricted / modified work. Workers Compensation and medical records, where applicable, should also be maintained. Medical records shall be kept by the Company strictly on a need-to-know basis. The records shall be kept in a locked file.



## **PROCESS SAFETY MANAGEMENT PROCEDURES**

"29 CFR 1910.119"

### **PURPOSE**

The purpose of the program is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals at various locations including refineries, offshore platforms and land base operations.

### **1.0 GENERAL**

- A. The Company is in compliance with 29 CFR 1910.119, and has established written programs to address exposure to known and potential process hazards. Inclusive of these programs is the Lockout/Tagout Energy Control Program, Hazard Communication Program, Hazard Identification & Risk Assessment, Electrical Safety, and other postings which provide information to employees for protection against those hazards specific to normal job functions on a routine and non-routine basis.
- B. The Company will rely on its Customers to provide specific process safety hazard information to our employees during a site-specific orientation, or other instructions provided in compliance to the standard.
- C. The Company's Onsite Supervisor shall assure that each employee follows the safety rules of the facility including the safe work practices.
- D. When Company employees may become exposed to hazardous chemicals on temporary job sites, coincidental to normal job activities, then the following shall apply:
  - 1. All employees will be informed as to the nature and extent of such exposure prior to deployment to job site.
  - 2. An Onsite Representative of the process system shall be summoned to provide hazard information specific to the process hazard in which the Company employee may be potentially exposed.
  - 3. When such is the case, employees are prohibited from seeking and/or repeating confidentiality trade secret information pertaining to the process or operation.
- E. The Onsite Supervisor will ensure that each employee is instructed in the known potential fire, explosion or toxic release hazards related to his/her job and the process and the applicable provisions of the emergency action plan.

- F. Material safety data sheets and product information data may be used by employees to assist in the evaluation of known and potential hazards. MSDSs must comply with those requirements as outlined in the "Hazard Communication Program", which is part of the Company safety programs.
- G. The Company will ensure that each employee is trained in the work practices necessary to perform his/her job. This requirement will apply in addition to any other specialized instruction the employee will need to perform safely on the job site.

## 2.0 SAFE WORK PRACTICES & OPERATING PROCEDURES

- A. The Company shall use a "Job Safety Analysis" process to inspect, identify, evaluate and review any potential hazards of the operation, be it facility wide or area specific. The process shall actively include all employees and/or sub-contractors involved in the operation as well as any additional employees of concern. The hazard identification process should be used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable. The "JSA" shall address:
  - A walk-through hazard analysis;
  - A Step-by-Step procedural process;
  - Address risk based on severity & probability;
  - Hazard classification & prioritize identified hazards;
  - Mitigate and/or implement controls for the identified hazards;
  - The proper selection and use of PPE based on the identified hazards;
  - Assigned responsibilities for eliminating or controlling identified hazards;
  - Appropriate documentation of completion related to identified hazards;
  - A review process to avoid creating new hazards derived from the corrective measures
- B. Employees involved in authorized work activities shall be trained in the Hazard Identification Process and will abide by the safe work practices established in procedures such as the Lockout/Tagout, Confined Space Entry, PPE, Respiratory Protection, opening process equipment or piping and controls over entrance to facility, and other applicable programs contained in the Company safety programs.
- C. Employees shall not perform hot work until a hot work permit is obtained from the onsite Customer Representative. The permit shall document that the fire prevention and protection requirements have been implemented prior to beginning the hot work operations.

- D. All accidents, injuries and near misses must be reported immediately. An investigation will be initiated within 48 hours of the occurrence, in accordance with the Company's "Incident Investigation Procedures". The investigation shall establish a system to promptly address and resolve the incident report findings and recommendations. Documentation (resolutions and corrective action) pertaining to these investigations will be maintained by the Company for a period of not less than five years.
- E. Management of Change: The procedures shall assure that the following considerations are addressed prior to any change:
- the technical basis for the proposed change,
  - impact of the change on safety and health,
  - modifications to operating procedures,
  - the necessary time period for the change, and
  - authorization requirements for the proposed change

Note: Employees involved in a process operation or maintenance whose job tasks will be affected by a change in the process shall be informed and trained in the change prior to start-up of the process or affected part of the process.

### 3.0 SAFETY INFORMATION

- A. The process safety information provided to Company employees will include information pertaining to the hazards of the highly hazardous chemicals used or produced by the process and information pertaining to the equipment in the process.
- B. Information pertaining to the hazards of the highly hazardous chemicals in the process shall consist of at least the following:
- Toxicity information;
  - Permissible exposure limits;
  - Physical data;
  - Reactivity data;
  - Corrosive data;
  - Thermal and chemical stability data; and
  - Hazardous effects of inadvertent mixing of different materials that could foreseeably occur.
- C. Information pertaining to the equipment in the process shall include:
- Materials of construction;
  - Piping and instrument diagrams;
  - Electrical classification;
  - Relief system design and design basis;
  - Ventilation system design; and
  - Safety systems (e.g., interlocks, detection or suppression systems).

D. The Onsite Supervisor will notify the customer immediately upon the detecting of unique hazards created by any work activities conducted by and/or uncovered by Company employees. Such notification might include, but not be limited to:

- Visible signs of leaks or imminent environmental contamination;
- Defective valves or valve connections;
- Improper gauge pressures;
- Pressurized systems;
- Changes in working conditions; and/or
- Any previously unrecognized hazard(s)

#### 4.0 EMPLOYEE TRAINING

- A. The Company will document and ensure that each employee has received & understood the required training in the work practices necessary to perform his/her job.
- B. In addition, the Company will prepare a record which contains the identity of each employee, the date of training & a written exam that verifies that the employee understood the training.

## **RESPIRATORY PROTECTION PROGRAM**

"29 CFR 1910.134"

### **PURPOSE**

The purpose of this program is to help reduce employee exposure to occupational air contaminants and oxygen deficient environments. The primary objective is to prevent excessive exposure to these contaminants.

### **1.0 GENERAL**

- A. When engineering control measures are not feasible or during emergency situations with high exposure, the Company will provide at no cost to the individual employee; respirators, training and medical evaluations which are suited for the protection level required for applicable use and which provides a comfortable face-to-face piece seal.
- B. The Company HSE Manager will be deemed the "Program Administrator" and shall be certified in the complexity of respiratory hazards and be able to competently conduct annual evaluations. Employee participation in this program is considered a condition of continued employment with the Company, and is so implemented for their health and protection. Employee input is appreciated and welcomed, as improvements to the existing program can be made by virtue of comments and suggestions.

### **2.0 RESPIRATORY HAZARD ASSESSMENTS**

- A. The Company recognizes that most respiratory exposure hazards are readily detectable by use of a properly calibrated direct-reading instrument. Some respiratory hazards, however, can become a resultant of the actual work activity. With this in mind, employees are required to assess and evaluate all areas immediately adjacent to the assigned work area prior to work startup for potential respirator use:
  - 1. When it is known or suspected that work activities will create a harmful breathing atmosphere;
  - 2. When it is known or suspected that other adjacent work activities will create a harmful breathing atmosphere; and
  - 3. Whenever in doubt as to whether the activities of other contract employees will create a respiratory hazard.

### 3.0 HAZARDOUS INFORMATION SOURCE

- A. The Company will rely on that data and other information provided by NIOSH (National Institute of Occupational Safety and Health), OSHA (Occupational Safety and Health Administration), testing laboratories or other recognized sources when making the determination that a contaminant will or will not present a hazard to its employees. The Company will consider the following a serious respiratory hazard:
1. Oxygen Deficient Atmosphere: When breathable atmosphere has oxygen content of less than 19.5% by volume.
  2. Presence of Vapors: In concentration levels at or above that established by the appropriate Threshold Limit Value (TLV) for the particular substance. Of concern to Company employees, is the presence of vapors originating from flammable remnants of oils, fuel and other petroleum-based products in tanks and other containment vessels.
  3. Presence of Dust: Created by work activities involving grinding, chipping, scaling, or other abrasive-oriented methodology. When dust concentration levels are significant enough to become visible in the breathable air, then respiratory protection should be considered.
  4. Presence of Fumes: Resulting from thermal decomposition associated with welding and other activities where heat is applied to metal or other substances. When on customer property, employees will receive information regarding site-specific hazards and the areas in which they exist. However, employees may become exposed to respiratory hazards created by fumes when working down wind of welding operations and/or while in areas of poor natural ventilation.
  5. Presence of Mist: Resulting from the use of industrial paints, solvents, and any liquid under pressure being enacted upon by a solid structure. Mist may be created by process operations on Company and/or customer property. Employees must be careful to protect the skin when using substances that are irritants or when working in the vicinity of where others are using them.

### 4.0 RESPIRATORY HAZARD CHARACTERISTICS

- A. The Company, as part of its evaluation, will consider respiratory hazards as any accumulation of toxic or harmful substances, either existing or created by a specific work activity. In addition, a condition or substance which:
1. Has the potential to render an individual ill, either for a short period of time (acute) or over a longer period of time (chronic).

2. Has the potential to render an individual unconscious or leave the individual incapacitated, (e.g., an IDLH atmosphere - Immediately Dangerous to Life and Health).
3. Have the characteristics, which classify it as a hydrocarbon, carcinogen or other "oxygen scavenger".
4. Has known or suspected levels of hydrogen sulfide gas present which exceeds the permissible exposure limits (10 ppm NIOSH/20 ppm OSHA).

## 5.0 WORKPLACE & USER FACTORS

- A. The Company shall identify respiratory hazards, select and provide respirators based on those hazards affecting performance or when engineering control measures are not feasible. Respirators shall be "NIOSH" certified and will be used in compliance with the conditions of the exposure hazards. The Company shall estimate exposures and contaminant information. If this is not done, then exposures must be addressed as Immediately Dangerous to Life & Health (IDLH). Employees are required to maintain respirators in usable and sanitary condition at all times during use.
- B. The Company has designated the below areas as those which require the routine use of respiratory protection as part of normal work activities:
  1. When working in areas where detectable levels of hydrogen sulfide gas is present and/or the potential for a release is imminent, Supplied Air Respirator (SAR) connected to remote breathing source which is monitored continuously by another employee or other authorized person. In addition, 5-minute escape bottles are to be worn whenever SARs are required.
  2. During an emergency release while on the job site and/or during job walk inspections. Self-Contained Breathing Apparatus (SCBA) shall feature a warning alarm when air supply reaches a level that is at least 25% less than capacity.
  3. When sweeping, chipping, or involved in other activities where dust and nuisance airborne particulates are present. Dust Mask shall be worn to protect employees from respiratory hazards associated with the inhalation of harmful particulate.
- C. When respirators are selected for use in IDLH atmospheres, the Company will ensure that it affords the employee the maximum degree of protection provided, and will be either:
  1. A full face-piece pressure demand SCBA certified by NIOSH, a minimum service life of thirty minutes, or

2. A combination full face-piece pressure demand supplied air respirator (SAR) with auxiliary self-contained air supply (5-minute escape bottle).

## 6.0 MEDICAL EVALUATION

- A. The Company will require individuals who will use a respirator to pass medical certification and pulmonary test with a Company physician, prior to fit testing in order to determine his/her fitness to use a respirator under pre-determined work conditions.
- B. Records of medical evaluations required by the policy must be retained and made available in accordance with 29 CFR 1910.1020. All medical records and respiratory program are maintained in the HSE Manager's office.

## 7.0 MEDICAL EVALUATION PROCEDURES

- A. The evaluation shall be confidential, during normal working hours, convenient and understandable. The employee shall be given the chance to discuss results with the physician or licensed health care professional (PLHCP).
- B. The follow-up medical examination will include any medical tests, consultations, or diagnostic procedures that the PLHCP deems necessary to make a final determination.

## 8.0 ADMINISTRATION OF THE MEDICAL QUESTIONNAIRE & EXAMINATIONS

- A. The medical questionnaire and examinations will be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee. The medical questionnaire will be administered in a manner that ensures that the employee understands its' contents.
- B. The Company will provide an opportunity for the employee to discuss the examination results with the PLHCP.

## 9.0 FIT TESTING

- A. The Company requires that all employees who will wear a respirator, Supplied Air Respirator or Self-Contained Breathing Apparatus be Qualitative fit tested annually with the same make, model, style, and size of respirator that will be used while working. The purpose of such testing will be to familiarize the wearer with what it takes to achieve a proper face piece seal and comfortable fit and wearing a respirator under working conditions.



- B. The Company will ensure that employees who use a tight-fitting face piece respirator pass an appropriate qualitative fit test (QLFT) or quantitative fit test (QNFT) as stated in the standard.

#### 10.0 FIT TESTING REQUIREMENTS

- A. The Company and/or PLHCP shall make visual observations and inform the employee of issues that could affect a proper respirator fit. These include, but are not limited to:

- Facial Hair;
- Facial Scarring;
- Dental Changes;
- Cosmetic surgery;
- Prescription Glasses

- B. The Company shall establish a record of the qualitative and/or quantitative fit tests administered to an employee including:

- The name or identification of the employee tested;
- Type of fit test performed;
- Specific make, model, style, and size of respirator tested;
- Date of test; and
- The pass/fail results for QLFT's

#### 11.0 NEGATIVE PRESSURE FIT TEST

The Company will perform a qualitative fit test on all negative pressure air-purifying respirators.

#### 12.0 POSITIVE PRESSURE FIT TEST

Fit testing of tight-fitting atmosphere-supplying respirators and tight-fitting powered air-purifying respirators will be accomplished by performing qualitative fit testing in the negative pressure mode, regardless of the mode of operation that is used for respiratory protection.

#### 13.0 MODIFICATION

Any modifications to the respirator face-piece for fit testing will be completely removed, and the face-piece restored to NIOSH-approved configuration, before that face-piece can be used in the workplace.

#### 14.0 USE OF RESPIRATORS

- A. Employees should never remove respirators while in a hazardous environment. If a problem with the mask is suspected, then the employee shall exit the contaminated area immediately, with mask in place, and perform an inspection of the respirator outside of the contaminated area.
- B. Only employees who have had medical clearance and respiratory protection training will be allowed to work in environments where respirators are required.

#### 15.0 RESPIRATOR EFFECTIVENESS

- A. The program administrator shall address appropriate surveillance regarding work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the Company will re-evaluate the continued effectiveness of the respirator.
- B. The Company will ensure that all employees leave the respirator use area:
  - 1. To wash their faces and respirator face pieces as necessary to prevent eye or skin irritation associated with respirator use; or
  - 2. If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the face-piece; or
  - 3. To replace the respirator or the filter, cartridge, or canister elements.

#### 16.0 PROCEDURES FOR IDLH ATMOSPHERES

- A. Whenever the Company is unable to identify or reasonably estimate employee exposure to contaminants, whether on Company or customer property, it shall consider the area to be IDLH until further assessment with a direct reading atmospheric test instrument is performed.
- B. For all IDLH atmospheres, the Company will ensure that:
  - 1. At least one employee is located outside the IDLH atmosphere;
  - 2. Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) outside the IDLH atmosphere;

3. The employee(s) and/or the designated representative located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue;
4. Employee(s) and/or the designated representative located outside the IDLH atmospheres are equipped with:
  - Pressure demand or other positive pressure SCBAs, or a pressure demand or other positive pressure supplied-air respirator with auxiliary SCBA; and either
  - Appropriate retrieval equipment for removing the employee(s) who enter these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the overall risk resulting from entry.

#### 17.0 BREATHING AIR QUALITY & USE LIMITATIONS

- A. The Company will ensure that compressed air & compressed oxygen when used for respiration accords with the following specification:
  1. Compressed and liquid oxygen shall meet the US Pharmacopoeia requirements for medical or breathing oxygen; and
  2. Compressed breathing air shall meet at least the requirements for Type I-Grade D breathing air described in ANSI/Compressed Gas Association Commodity Specification for Air, G-7.1-1989, to include:
    - Oxygen content of 19.5% to 23.5%;
    - Hydrocarbon (condensed) content of 10 ppm or less;
    - Carbon monoxide (CO) content of 10 ppm or less;
    - Carbon dioxide content of 1,000 ppm or less; and
    - Lack of noticeable odor.
  3. The Company will ensure that compressors used to supply breathing air to respirators are:
    - Located in a "clean" atmosphere;
    - Have suitable in-line air-purifying sorbent beds and filters to further ensure breathing air quality.
    - Equipped with a Carbon monoxide monitor in place & set to alarm at 10 PPM;
    - Equipped with fittings that are incompatible with outlets for non-breathable worksite air or other gas systems, and

- Have a tag containing the most recent change date and the signature of the person authorized by the Company to perform the change. The tag shall be maintained at the compressor.

## 18.0 CARTRIDGE REPLACEMENT

"End of Service Life" for cartridges shall be recognized whenever an employee smells a vapor or gas breakthrough or experiences changes in breathing resistance.

## 19.0 RESPIRATOR INSPECTION

### A. Respirators will be inspected as follows:

1. All respirators used in routine situations shall be inspected before each use and during cleaning;
2. All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use; and
3. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.

### B. A check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to;

- The face-piece;
- Head straps;
- Valves;
- Connecting tube; and
- Cartridge or filters

## 20.0 CLEANING & DISINFECTING RESPIRATORS

### A. The Company will ensure that Respirators are maintained in a clean and sanitary manner using procedures recommended by the manufacturer.

### B. Cleaning and disinfecting procedures, which are the responsibility of the wearer, are as follows:

1. Remove filters, and cartridges. Disassemble face-piece by removing speaking diaphragms, demand and pressure-demand valve assemblies, hoses, or any components recommended by the manufacturer. Discard or repair any defective parts.

2. Wash components in warm water with a mild detergent or with a cleaner recommended by the manufacturer. A stiff bristle (not wire) brush may be used to facilitate the removal of dirt.
3. Rinse components thoroughly in clean, warm, preferably running water. Drain.
4. Components should be hand-dried with a clean lint-free cloth or air-dried in non-contaminated area.
5. Re-assemble face-piece, replacing filters, cartridges, and canisters where necessary.
6. Test the respirator to ensure that all components work properly.

#### 21.0 RESPIRATOR STORAGE

- A. The Company will ensure that respirators used by employees are stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals. They shall be packed or stored to prevent deformation of the face-piece and exhalation valve.
- B. In addition to the requirements listed above, emergency respirators shall be:
  1. Kept accessible to the work area;
  2. Stored in compartments or in covers that are clearly marked as containing emergency respirators; and
  3. Stored in accordance with applicable manufacturer instructions.

#### 22.0 PROGRAM EVALUATION

- A. The Company shall conduct annual evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective.
- B. The Company shall regularly consult employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment shall be corrected. Factors to be assessed include, but are not limited to:
  1. Respirator fit (including the ability to use the respirator without interfering with effective workplace performance);

2. Appropriate respirator selection for the hazards to which the employee is exposed;
3. Proper respirator uses under the workplace conditions the employee encounters; and
4. Proper respirator maintenance.

## 23.0 EMPLOYEE TRAINING

The Company will provide initial training and retraining annually to its employees who use a respirator, which is comprehensive, understandable, and performed on an annual basis, and more often if necessary. Prior to using a respirator, the Company will ensure that each employee understands the general requirements of this program and can demonstrate knowledge of at least the following:

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

## **RIGGING & MATERIAL HANDLING**

"API RP 2D, 7<sup>th</sup> Edition / 29 CFR 1926.1404"

### **PURPOSE**

The purpose of this program is to utilize appropriate rigging gear suitable for overhead lifting within industry standards and manufacturer's recommendation and conduct regular inspection and maintenance of the rigging gear.

### **1.0 DEFINITIONS**

- A. Qualified Rigger – Person who attaches or detaches lifting equipment to loads or lifting devices, has formal training and experience and has successfully completed an approved rigger-training program. Rigging operations shall only be performed by a qualified rigger.
- B. Sling – An assembly that connects the load to the material handling equipment.
- C. Working Load Limit (WLL) – The maximum mass or force, which the product is authorized to support in a particular service.
- D. Proof Test – A nondestructive tension test applied to a product solely to determine injurious material or manufacturing defects.
- E. Hitch – A sling configuration whereby the sling is fastened to an object or load, either directly to it or around it.
- F. Basket Hitch – A sling configuration whereby the sling is passed under the load and has both ends, end attachment, eyes or handles on the hook or a single master link.
- G. Choker Hitch – A sling configuration with one end of the sling passing under the load and through an end attachment, handle or eye on the other end of the sling.
- H. Vertical Hitch – A method of supporting a load by a single, vertical part or leg of the sling.

## 2.0 SAFE OPERATING PRACTICES

- A. Only personnel with training and experience who have completed a rigger training program can attach or detach lifting equipment to loads or lifting loads. This includes crane operators and inspectors.
- B. All qualified riggers shall participate in the pre-lift meeting to review the scope of work and the execution plan.
- C. Qualified riggers shall conduct a pre-lift inspection and prepare a written JSA for all lifts. Rigging equipment & gear for material handling shall be inspected prior to use on each shift and as necessary during its use to ensure that it is safe. Defective equipment shall not be used and removed from service immediately.
- D. Evaluate lift operations to determine if additional qualified riggers are needed to assist in loading or off-loading operations.
- E. Ensure that a clear method of communication is established.
- F. Assess site conditions to ensure that the lift operation can be conducted safely (sea conditions, currents, wind speed and direction, size of vessel, position of cargo and adequate lighting).
- G. Review the lift path, the weight of the load, and the WLL (working load limit) of the slings, shackles and hooks to determine safe operations.
- H. Stop work and conduct another pre-lift meeting if site conditions or plans change.

## 3.0 ATTACHING THE LOAD

- A. Ensure that only qualified riggers and essential personnel are allowed in the work area during routine and non-routine lifting operations.
- B. Verify the load weights by the markings on the load.
- C. Select the proper rigging equipment and/or cargo container for the lift.
- D. Ensure rigging equipment is never loaded beyond its recommended safe working load. Load & certification tags shall be attached to the rigging. If the identification tag is missing, the sling must not be used.
- E. Inspect all pre-slung equipment ensuring a single-point hookup.
- F. Verify that multiple part lines are not twisted around each other.



- G. Verify and inspect all required tag lines. Tag lines shall be used unless their use creates an unsafe condition.
- H. Ensure that the crane's swing path is clear of obstructions and load is free to be lifted.
- I. Ensure that a designated signal person is identified and that the team agrees upon a communication method.
- J. Ensure that the hook is brought over the load to minimize swinging. Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the possibility of a hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.
- K. Verify that the rope is properly seated on the drums and in the sheaves.
- L. Ensure that all lifting equipment/hardware is free from side loading.

#### 4.0 DURING LIFTING OPERATIONS

- A. Assume responsibility for the safety of all personnel around the crane operating area, including the rigger's personal safety.
- B. Look for potentially unsafe situations and be prepared to warn the crane operator others in the crane operating area.
- C. Never stand between the load and another stationary object including boat railings. The rigger should be facing the crane at a safe distance and never stand directly beneath the load. All personnel shall be kept clear of suspended loads and loads about to be lifted.
- D. Wear proper work clothes and personal protective equipment in accordance with Company and/or customer PPE requirements.
- E. Stop any lift operation deemed as unsafe (exercise stop work authority).

#### 5.0 SLING USAGE

- A. Do not choke slings in the splice.
- B. Do not permit kinks or knots in slings.
- C. Secure the unused legs of a multi-leg bridle.

- D. Slings shall not be made using wire rope clips.
- E. Wire rope slings should not be field fabricated.
- F. Cut the eyes of any defective sling and discard the sling body.
- G. Do not place eye of sling over a hook that is larger than natural width of eye.
- H. Protection shall be provided between the sling and all sharp surfaces of load.

## 6.0 POST-OPERATION

A. All rigging equipment that is not being use shall be removed from the immediate work area so as to prevent any additional hazards to employees.

B. Properly store and maintain rigging equipment and tackle.

## 7.0 REMOVAL CRITERIA

- A. Broken Wires: Remove from service strand laid and single part slings if ten or more randomly distributed wires in one rope lay, or five broken wires in one rope strand in one rope lay.
- B. Wire Rope Distortion: Remove from service wire rope slings that have any damage resulting in distortion of the wire rope structure such as kinking, crushing, bird-caging, and strand displacement or core protrusion.

## 8.0 INSPECTION OF CHAIN SLINGS

- A. Inspection Frequency: Visually check chain at the pre-use and annual thereafter by a qualified source.
- B. Inspection Criteria (ANSI B30.9):
  - Wear
  - Nicks, Cracks, Breaks
  - Gouges, Stretch, Bends
  - Weld Splatter
  - Excessive Temperature
  - Throat Opening of Hook
- C. Chain Links: Remove sling from service if links are worn excessively (more than 10% or refer to manufacturer's information). Chain links and attachments should hinge freely to adjacent links.
- D. Identification: Chain slings shall have permanently affixed identification stating; size, grade, rated load, number of legs and manufacturer

## 9.0 INSPECTION OF SYNTHETIC SLINGS

- A. Inspection Frequency: Visually check synthetic slings at the pre-use and annual thereafter by a qualified source.
- B. Inspection Criteria (ANSI B30.9):
  - Acid or Caustic Burns
  - Melting or Charring
  - Holes, Cuts
  - Tears & Snags
  - Broken Stitches
  - Worn Stitches
  - Excessive Abrasion
  - Knots
- C. Identification: Web slings and round slings shall be permanently marked indicating; manufacturer's trademark or stock number and rated loads for the three hitches.

## 10.0 INSPECTION OF RIGGING HARDWARE

- A. Deformation - Remove from service if any significant deformation; check throat opening of hooks.
- B. Wear - Remove from service if excessive wear (wear is excessive if: More than 5% wear in throat or eye of hooks and other critical areas of hardware; More than 10% wear in other areas).
- C. Cracks, Nicks, & Gouges - Remove from service if cracks, nicks or gouges are detected.
- D. Modification - Do not weld, do not substitute shackle pins or other components, do not heat, bend or modify in any manner.
- E. Proper Function - Improperly installed hardware or malfunction is cause for removal. Check for latches, swivel bearings, locking devices, and installation of wire rope clips and wedge sockets.

## 11.0 EMPLOYEE TRAINING

- A. The Company shall require all personnel responsible for rigging on customer and/or Company property to successfully complete a rigger training course in order to be considered a qualified rigger.
- B. All training shall include formal classroom facilitation as well as a hands-on practical review (proper inspection, use, selection and maintenance of slings, shackles, hooks, etc.) and a written examination. Training will incorporate familiarization with rigging, hardware, slings and safety issues associated with rigging, lifting loads and lift planning.
- C. Training shall be documented and shall be good for four years.
- D. All qualified riggers shall carry updated training cards with them on jobs where rigging may be required. Training cards must indicate expiration date, certified under API RP 2D, 6<sup>th</sup> Edition, date of training, and signature of trainer.

## **RISK ASSESSMENT PROCEDURES**

### **PURPOSE**

To provide guidelines for identifying, assessing and controlling workplace hazards and ensure the potential hazards of new processes are identified before they are introduced.

### **1.0 KEY RESPONSIBILITIES**

The Site Supervisor shall assess the work site and identify existing or potential hazards prior to the start of any operation at a work site.

### **2.0 HAZARD / RISK IDENTIFICATION**

- A. The hazard identification process is used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.
- B. The Site Supervisor shall conduct a baseline worksite hazard assessment which is a formal process to identify potential hazards specific to the Operation. The results shall include the methods used to control or eliminate the hazards identified. The hazard assessment report must be signed and dated.
- C. Inputs into the baseline hazard identification include, but are not limited to:
  - Scope of work;
  - Worksite walk through; &
  - Potentially hazardous energy sources, contaminants and other environmental conditions that can cause injury;
- D. Hazards identifications shall include:
  - Working Alone,
  - Confined Spaces,
  - Thermal Exposure,
  - Hearing Protection,
  - Isolation of Energy,
  - Bloodborne Pathogens,
  - Musculoskeletal Hazards,
  - General Safety Precautions,
  - Established policies & procedures, &
  - Any other site-specific work scope

- E. All identified hazards are assessed for risk and controls are assigned within the worksite for that specific hazard.
- F. All affected personnel and/or sub-contractors shall be actively involved in the hazard identification process and review.
- G. All Employees shall be trained in the hazard identification process including the use and care of proper PPE.
- H. Any Unsafe hazards shall be reported immediately and addressed by the Site Supervisor.

### 3.0 REVIEW OF HAZARD ASSESSMENTS

- A. Existing worksite hazard identifications are formally reviewed annually and/or at practicable intervals to prevent the development of unsafe and unhealthy working conditions. Updates shall be made when new tasks are to be performed that have not been assessed for risk, when a work process changes, or when significant changes are made to "Standard Operating Procedures".
- B. The Site Supervisor shall advise the HSE Manager when additional hazards are introduced into the work place in order to revise planning and assessment needs.

### 4.0 RISK ASSESSMENT MATRIX

The "Risk Assessment Matrix" below is designed to classify and address identified hazards based on the risk associated with the task.

CONSEQUENCE					PROBABILITY				
Severity	People	Assets	Environment	Reputation	A	B	C	D	E
					Not Done	Rarely	Once a week	Several Times in a Week	Multiple Times in a Day
0	No health effect	No damage	No effect	No impact					
1	Slight health effect	Slight damage	Slight effect	Slight impact					
2	Minor health effect	Minor damage	Minor effect	Limited impact					
3	Major health effect	Localized damage	Localized effect	Considerable impact					
4	Single fatality	Major damage	Major effect	National impact					
5	Multiple fatalities	Extensive damage	Massive effect	Global impact					

Key	Manage for continuous improvement (Low)	Incorporate risk reduction measures (Medium)	Intolerable (High)
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## 5.0 RISK CONTROL METHODS

- A. Risks are mitigated through dedicated assignment and implemented controls methods including engineering, administrative controls and PPE. No work will begin before the worksite assessment is completed. Additionally, no risk assessed as "High/Intolerable" shall be performed.
- B. If an existing or potential hazard to workers is identified during a hazard assessment, the Company will take measures to eliminate or control the hazard. If practicable, the potential hazard shall be eliminated or controlled through the use of engineering controls. If a hazard cannot be adequately controlled using engineering controls, the Company will use administrative controls to a level as low as reasonably achievable. If the hazard cannot be adequately controlled using engineering and/or administrative controls, the Company will ensure that the appropriate personal protective equipment (PPE) is used by workers affected by the hazard. *Note: The Company may use a combination of engineering controls, administrative controls, and personal protective equipment if it provides a greater level of worker safety.*

## 6.0 EMERGENCY CONTROL OF HAZARDS

Only those employees competent in correcting emergency controls of hazards may be exposed to the hazard and only the minimum number of competent employees may be exposed during an emergency control. An example is "Emergency Well Control" or "Fire". The Company will make every possible effort to control the hazard while the condition is being corrected or under the supervision of client emergency response personnel.

## 7.0 JOB SAFETY ANALYSIS

A Job Safety Analysis (JSA) shall be performed and documented prior to the start of any operation at a Client location. Additionally, a new "JSA" shall be performed and documented for any operation that has undergone major changes in processes and/or procedures. Completed "JSAs" shall be turned into the HSE Manager for quality reviews and trending.

## 8.0 SITE SPECIFIC SAFETY REQUIREMENTS

Each employee reporting to a location shall actively participate in the onsite Job Safety Analysis process. The Wireline Supervisor and/or Operator shall ensure that all affected personnel are provided with adequate PPE as well as participate in the walk through & hazard assessment process.

## **SPILL PREVENTION & RESPONSE**

### **PURPOSE**

The purpose of this program is to ensure that all hazardous substances and chemical wastes are handled and managed in a way that prevents release.

### **1.0 GENERAL**

- A. The Company shall maintain an Emergency Response Plan to include proper communication measures for employees to initiate in the event of a spill. Communication procedures should be based on type and quantity of materials spilled.
- B. The Company has appointed the Onsite Supervisor to be responsible for the reporting of spills and associated incident reports.
- C. In the event of a spill, the Onsite Supervisor will be responsible for determining the extent of the spill and communicating incident to all applicable personnel and agencies.
- D. The Company shall maintain a proper spill kit with appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials.

### **2.0 PREVENTION**

The following shall be used as a general guideline for onsite spill prevention measures:

- Areas where chemicals may be used or stored must be maintained using good housekeeping best management practices. This includes, but is not limited to, clean and organized storage, labeling, and secondary containment where necessary;
- All chemicals that are transferred from larger to smaller containers must be transferred by use of a funnel or spigot;
- All hazardous substance containers should be closed while not in use;
- Use drip pans or other collection devices to contain drips or leaks from dispensing containers or equipment;
- Implement preventative maintenance activities to reduce the potential for release from equipment;
- Immediately clean up and properly manage all small spills or leaks;



- Periodically inspect equipment and hazardous substance storage areas to ensure leaks or spills are not occurring;
- Use signage to identify hazardous substance storage or waste collection areas;
- Keep all work areas and hazardous substance storage areas clean and in good general condition;
- Chemicals should be stored in proper containers to minimize the potential for a spill;
- Whenever possible, chemicals should be kept in closed containers and stored so they are not exposed to storm water.

### 3.0 RESPONSE

- A. All spills regardless of size must be reported to the Company's Onsite Supervisor. The person observing the incident will take the following actions:
  - Assess the safety of the situation, including the risk to the surrounding public, if any;
  - If safe to do so, make every effort to remove potential ignition sources and stop the source of the spill;
  - Promptly notify the Company's Onsite Supervisor and/or Client Representative
- B. Upon learning of the spill, the Onsite Supervisor will implement the following measures:
  - If safe to do so, barriers will be constructed with available equipment to physically contain the spill;
  - Sorbent materials will be applied to the spill area;
  - If a spill is beyond the scope of on-site equipment and personnel, an Emergency Response Team will be secured to further contain and clean up the spill.

### 4.0 EMPLOYEE TRAINING

- A. Company Employees shall be trained on the proper response procedures for spilled materials. The training should include materials available for use, proper waste disposal, and communication procedures.
- B. Training shall include a review of the Spill Prevention and Emergency Response Plan, and a review of location and use of emergency response equipment. Training can be recorded through safety committee meetings, employee training sessions, or other equivalent record keeping.

## **SHORT SERVICE EMPLOYEE PROGRAM**

### **PURPOSE**

The purpose of this program is to identify, train and supervise Short Service Employees in order to prevent injury to themselves and others, damage to property or harm to the environment.

### **1.0 GENERAL**

- A. The Company recognizes that employees, who are new to a position, whether due to hiring or transfer, will require a period of orientation and adjustment, to both job-related duties as well as Company operational policies and procedures. This period shall last no less than 6 months or longer based on the employee's prior experience and documented evaluations. It is because of this need for monitoring and instruction, combined with the proper selection of those individuals who will best serve to assist in the Company's goal of zero accidents, that this program was developed.
- B. Prior to the job mobilization, the Company will notify the customer or onsite representative for all jobs containing SSE personnel. The customer or onsite representative will determine approval status of the crew makeup. The Company will not allow an SSE as a single person crew and will follow a guideline of no more than one (1) SSE for every five crew members.
- C. The Company is committed to working with all Sub-Contractors in alignment with this process with an ultimate goal of preventing accidents and injuries to any Short Service Employees.

### **2.0 HIRING PRACTICES**

- A. The Company will attempt to recruit and hire individuals who have exhibited, through past employment, the desire to contribute to team goals, while adhering to stringent personal commitments toward safety. Such employees, once screened and selected, will undergo a period of familiarization to Company policies and procedures.
- B. When the Company hires an individual, who has neither applicable past work experience, nor offshore work experience, the Company may opt to not allow such employee to work in a "covered" position at temporary job site locations.
- C. When possible, the Company will hire individuals who have previous experience, in conjunction with actual or similar work experience in our field.

- D. The Company will not offer employment to any individual(s) who meet one or more of the following:
1. Has refused to submit to pre-employment drug and alcohol testing, and/or physical test requirements
  2. Has failed the pre-employment drug/alcohol testing and/or other pre-employment requirements.
  3. Has exhibited behavior and/or demeanor on past jobs which serve to conflict with the philosophy of quality service and safe job performance as maintained by the Company.
  4. Has falsified information on the employment application.
- E. The Company may require an individual to provide references to support employment application information.

### 3.0 PROCEDURE FOR TEMPORARY JOB SITE ACTIVITIES

- A. Employees, having completed those requirements prior to being allocated to temporary job site, will be required to adhere to additional requirements for a predetermined period. Such requirements may include, but not be limited to:
1. A "High Visibility Orange" hard hat will be used as the method to identify the SSE and shall be communicated to the Owner/Client Representative.
  2. The Company has established a mentoring process in accordance with Customer requirements and is designed to provide guidance and development for SSE personnel. Each mentor will be assigned only one (1) SSE per crew, which will allow the onsite Supervisor the ability to effectively monitor the SSE.
  3. The new employee will be accompanied by an experienced Company Supervisor/Mentor during the entire job activity and shall not allow the SSE to perform any task in which he/she either has not been properly trained or has not had previous craft experience to perform the task effectively and safely. The purpose of this monitoring is to ensure that the individual has both a safe trip onshore and offshore, and to acclimate the employee to the requirements of the customer.
  4. The Company Supervisor/Mentor will review with the SSE any hazards associated with the task and review all emergency equipment and procedures. The Job Safety Analysis (JSA) process shall be utilized prior to job startup.

5. The new employee will be required to attend site-specific orientation, onsite safety, toolbox and/or tail gate meeting. As some point prior to the end of the "introductory period", the new employee himself will conduct a safety or toolbox meeting.
- B. New employees who have been assigned to a "covered position", will be required to adhere to these additional requirements:
1. Adherence to those requirements of the Company's Anti-Drug & Alcohol Policy, from which he/she has been orientated, as well as those requirements of the customer's Drug & Alcohol Program.
  2. Adherence to federal, state, and customer requirements for environmental controls and proper waste disposal.
  3. Adherence to those job or site-specific requirements, which may differ from those of other temporary job sites.
  4. Understanding and compliance to alarms and other instructions applicable during an emergency situation.
  5. Adherence to proper reporting requirements as established by the Company and the customer.
  6. Understanding of the various training requirements, which are necessary prior to deployment onshore or offshore, to include, but not limited to:
    - Stop-Work-Authority,
    - Job Safety Analysis (JSA),
    - Proper Lifting Techniques,
    - Helicopter and Boat Safety,
    - Personal Protective Equipment,
    - Behavioral Observation Program,
    - Management of Change Process,
    - Swing Rope and Personnel Transfer Basket, &
    - Proper Clothing and other General Safety Topics

#### 4.0 REMOVAL FROM SSE STATUS

- A. The Company will monitor its employees, including SSE personnel, for compliance with health, safety, and environmental policies and procedures. Once the Short Service Employee has demonstrated competency and compliance with HSE policies and procedures and has no recordable incident attributable to him/her, the hi-visibility identifier may be removed. The Company will require any employee that does not complete the six-month period recordable free to get Customer approval in writing prior to returning to a Customer property. To remove an employee from SSE status, the Company Supervisor and/or Manager must be convinced that the SSE has a working knowledge of both the Company's and customer's safety policies, and has demonstrated safe behavior for a predetermined period as agreed upon between the Company and the Customer.
- B. A predetermined period of SSE status shall also be based upon the following eligibility factors (at a minimum).
  - 1. New employees with no experience in this craft, shall continue as an SSE for not less than six (6) months.
  - 2. New employees with experience in this craft either with a previous Company, shall be deemed eligible for consideration as having achieved minimal requirements for removal as a SSE.

*Note: All new employees no matter how much experience shall remain as an SSE at a minimum of 90 days.*

## **STOP WORK AUTHORITY POLICY**

### **PURPOSE**

The purpose for the Company's Stop Work Authority Policy is to ensure that employees understand their Responsibility and Obligation as it relates to their own safety, as well as the safety of others. The Company's management supports the right of any individual to suspend a single work task or group operation when the control of any risk is not clearly understood.

### **1.0 PROTOCOL INSTRUCTIONS**

- A. When an employee identifies a perceived unsafe condition, act, omission or lack of understanding that could result in an undesirable event a "stop work" intervention should be initiated directly with those at risk.
- B. If supervisor is available and affected person(s) are not in immediate risk the "stop work action" should be coordinated through the supervisor.
- C. Interventions should be initiated in a positive manner by briefly introducing yourself and starting a conversation with the phrase "I am using my stop work authority because..." Using this phrase will clarify the user's intent and set expectations.
- D. Notify all affected personnel and supervisors of the stop work issue.
- E. All parties shall discuss and agree on the stop work issue.
- F. If determined and agree that the stop work issue is valid, then every attempt should be made to resolve the issue to all affected person's satisfaction prior to the commencement of work.
- G. If the stop work issue cannot be resolved immediately, work shall be suspended until proper resolution is achieved. When opinions differ regarding the validity of the stop work issue, the Company's Onsite Supervisor will ensure that the issue is corrected and resume work when safe to do so.
- H. Positive feedback should be given to all affected employees regarding resolution of the stop work issue. Any form of retribution or intimidation directed at any individual or Company for exercising their right to issue a stop work authority will not be tolerated.

## 2.0 REPORTING

- A. All employees shall formally document and report all stop work interventions in order to:
- Determine quality of interventions and follow-up
  - Measure participation in the process
  - Identify opportunities for improvement
  - Manage corrective measures
  - Share learning's with peers
  - Give recognition to participants
  - Monitor and trend common issues
- B. Upper management will regularly announce details regarding the number of "stop work" actions reported by employees and review common trends and learnings.

## 3.0 FOLLOW-UP

- A. It is the Company's desired outcome that any "Stop Work" intervention has been addressed to the satisfaction of all involved personnel prior to the resumption of work.
- B. Most issues can be adequately resolved in a timely manner at the job site. Occasionally additional investigation and corrective actions may be required to identify and address root causes.

## 4.0 RECOGNITION

The Company's management will be consistent with the recognition process and will positively reinforce desired behaviors by regular peer recognition through safety meetings and/or individual recognition by supervisors and upper management.

## 5.0 ROLES AND RESPONSIBILITIES

- A. All Employees have the authority and obligation to stop any task or operation where concerns or questions regarding the control of any risk exists. Employees are responsible to initiate a "Stop Work" intervention when warranted and support the intervention of others.
- B. Line Supervisors and Upper Management are responsible to create a culture where "SWA" is exercised freely, positive recognition of proactive participation, and work to resolve issues before operations resume.

- C. Senior Leaders will establish and support clear expectations to exercise "SWA". They are also responsible for creating cultures where "SWA" is exercised freely, as well as resolving conflicts when they arise. Those that choose not to comply with established "SWA" policies shall be held accountable.

## 6.0 EMPLOYEE TRAINING

All Company Employees will receive "Stop Work Authority" training before initial assignment. The training must be documented including the employee name, the dates of training, subject matter and instructor signature. Training will include, but not limited to Intervention Protocols, Employee Expectations & Responsibilities and the Process of Documenting a "Stop Work" Intervention.



## **SUBCONTRACTOR MANAGEMENT POLICY**

### **PURPOSE**

The purpose of this program is to establish the Company's written policy towards protecting and maintaining the quality of the environment while providing a safe and healthy work place for our employees and Subcontractors.

### **1.0 GENERAL**

Whenever applicable, the company is committed to conducting pre-qualification audits and reviews on Subcontractors to ensure that all health, safety and environmental policies and procedures are established and maintained in accordance with applicable laws and Customer requirements.

### **2.0 COMPANY ROLES & RESPONSIBILITIES**

A. The Company assumes the overall responsibility of ensuring that Subcontractors meet minimum Health, Safety & Environmental metrics. This will be accomplished by:

- Validating the experience level of the Subcontractors;
- Reviewing the Subcontractor's Safety Management System;
- Reviewing the Subcontractor's OSHA Logs and EMR Reports;
- Validating the Subcontractor's safety & regulatory training records;
- Ensuring that all Subcontractors actively participate and sign-off on the methods of hazard identification including the Company's Job Safety Analysis Program, Behavioral Based Safety Observation Process and Stop-Work-Authority Policy;
- Ensuring that all Subcontractors actively participate in pre-job safety orientations, tailgate meetings, onsite safety inspections and have a complete understanding & means of resolving safety issues.

B. Additionally, the Company will conduct & document post-job safety performance reviews with Subcontractors with an overall goal of continuously improving its safety and operational procedures.

C. An acceptable Safety Metric will include, but is not limited to:

- An Experience Modification Rate (EMR) of 1.0 or less; and
- A Total Recordable Incident Rate (TRIR) of 2.0 or less
- Days Away & Restricted Totals (DART) 25 days or less

### 3.0 SUBCONTACTOR RESPONSIBILITIES

Subcontractors shall adhere to the following minimum safety precautions with an ultimate goal of preventing bodily injury, damage to property or harm to the environment:

- Smoke only in "Designated Smoking Areas"
- No horseplay of any kind including practical jokes;
- Allow only trained, qualified and authorized personnel to operate Company and/or Client owned equipment and machinery;
- Report all defective machines and equipment immediately to the Onsite Supervisor;
- Evaluate all items that will be manually lifted, and get help when lifting an object which is clearly too heavy for one person to lift safely;
- Use caution when going up or down stairs by maintaining at least one foot and one hand on the railing at all times;
- Report all work related incidents and injuries immediately to the Onsite Supervisor, regardless of severity

## **TRENCHING, SHORING & EXCAVATIONS**

### **PURPOSE**

The purpose for the Company's Trenching & Shoring program is to establish the process for compliance with OSHA's regulatory requirements specific to "Excavations, Trenching and Shoring".

### **1.0 DUTIES & RESPONSIBILITIES**

#### **A. Health, Safety & Environmental Department:**

- Provide consultation;
- Prepare the Trenching and Shoring Plan with periodic review and revisions as needed;
- Distribute the Trenching and Shoring Plan to all individuals who are authorized to excavate;
- Investigate and document all reported accidents and/or near-miss accidents that are directly or indirectly related to trenching; &
- Coordinate training and retraining of those who may be involved in excavations.

#### **B. Onsite Supervisors:**

- Receive training for "Competent Person" for trenching as defined by OSHA.
- Implement all provisions of the Trenching and Shoring Plan for work areas under their control to ensure protection of employee through sloping, shoring, scaling loose material, trench boxes, etc.
- Act as the "Competent Person" for excavation sites under their control;
- Assure that the equipment necessary to complete an excavation safely is available and in good condition;
- Assure that all underground utility installations such as sewer, telephone, fuel tanks, electric, gas, and water lines are located and marked before excavation begins;
- Receive written approval from the Client Representative before digging, trenching or excavation.
- Ensure soil tests are conducted to determine soil type;
- Ensure that underground installations are protected, supported or removed while the excavation is open.
- Ensure worker protection and compliance with other applicable safety plans, programs and guidelines;
- Ensure protection of the public with appropriate barricades;
- Determine what protective systems will be used to prevent cave-ins;

- Conduct daily inspections of excavations, the adjacent areas, and protective systems for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions; &
- Immediately notify the Client Representative in the event a utility system is damaged during the excavation process.

C. Employees:

- Complete all safety training requirements and request further instruction if unclear on any part of the Trenching and Shoring Plan;
- Use appropriate safety and personal protective equipment (PPE);
- Adhere to the requirements of the Trenching and Shoring Plan; &
- Report all work place injuries and unsafe conditions.

## 2.0 UTILITIES & PRE-WORK SITE INSPECTION

The Onsite Supervisor shall determine and locate underground installations before excavation. Excavations shall not proceed until the utility companies or clients determine and verify the exact location of the underground utilities.

## 3.0 STABILITY OF ADJACENT STRUCTURES

The Designated Supervisor will take precautions as needed to protect workers, nearby buildings or other structures. A Registered Professional Engineer should evaluate these structures and recommend precautions such as shoring, bracing, or underpinning. The Designated Supervisor will ensure that the recommendations of the engineer are carried out. Plans that outline the design of such precautions approved by the engineer will be maintained on site while the work is in progress.

## 4.0 PROTECTION OF THE PUBLIC

Barricades, walkways, lighting and signs will be provided for the protection of the public before the start of excavation operations. Guardrails, fences or barricades will be provided adjacent to walkways, driveways and other pedestrian or vehicle thoroughfares.

## 5.0 PROTECTION OF WORKERS IN EXCAVATIONS

- The Designated Supervisor will assure that workers are protected from hazards that may arise during excavation work.

- Stairs, ladders or ramps will be provided when workers enter excavations over four (4) feet deep. Two (2) or more means of exit will be provided if the excavation is more than 20 feet in length. The means of egress shall be within 25 feet of lateral travel for employees and a clear path of no more than 25 ft for a worker to exit the excavation.
- A competent person, qualified in structural design, will design structural ramps used for egress or access of equipment. The ramp will be constructed in accordance with the design. Ramps with two (2) or more structural members will have the structural members that are uniform thickness and connected together to prevent displacement and will not present a tripping hazard.
- When personnel are exposed to traffic, barriers/barricades shall be erected and employees provided with reflective vests.
- No one shall work underneath loads handled by lifting or digging equipment. Workers will stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials.
- A warning system will be used when mobile equipment is operated next to the edge of an excavation if the operator does not have a clear, direct view of the edge of the excavation.
- Materials and equipment should be kept at least two (2) feet from the edge of the excavation with the proper protective system in place.

## 6.0 HAZARDOUS ATMOSPHERES & CONFINED SPACES

- A. Tests shall be conducted for air contaminants (oxygen, flammable gases, etc.) and provide ventilation where necessary. Atmospheric testing should be completed before entry and periodically for the duration of operations. Workers will not be permitted to work in hazardous and/or toxic atmospheres. Such atmospheres include those with the following:
  - Atmospheric oxygen concentration below 19.5% or above 23.5%.
  - A combustible gas concentration greater than 10% of the lower flammable limit.
  - Concentrations of hazardous substances that exceed those specified in the Threshold Limit Values (TLVs) for airborne contaminants established by the American Conference of Industrial Hygienists (ACGIH).
- B. If there is any possibility that the trench or excavation could contain a hazardous atmosphere, the Designated Supervisor will ensure that atmospheric testing is conducted before worker entry and continuously during work. Excavations near underground storage tanks or those that contain gas pipelines will be monitored. Suitable precautions will be taken as necessary to protect workers.

## 7.0 PERSONAL PROTECTIVE EQUIPMENT

- The Designated Supervisor will ensure that all workers wear all required safety equipment as detailed below. Hardhats, safety eyewear, gloves, hearing protection and fall protection devices will be furnished by the HSE Department. The HSE Department shall ensure that anyone conducting work in excavations wears safety footwear in accordance with ASTM-2413.
- Everyone working in trenches or excavations will wear ANSI approved hardhats at all times.
- Those exposed to flying fragments, dust or other materials produced by drilling, sawing, sanding, grinding and similar operations will wear ANSI approved safety glasses with side shields.
- All workers will wear gloves or other suitable hand protection as determined by the HSE Department.
- Workers at the edge of an excavation four (4) feet or more deep will be protected from falling by guardrails systems, fences, barricades, or other approved means.
- The supervisor or other qualified person will conduct a Workplace Hazard Assessment according to the requirements described in the Company's Personal Protective Equipment Program.

## 8.0 CROSSINGS, WALKWAYS & GUARDRAILS

Walkways will be provided where workers or equipment are allowed to cross over excavations. Guardrails will be provided on walkways used by the general public regardless of the height above the excavation. Guardrails will be provided on walkways used only by on-site personnel if the walkway is six (6) feet or more above lower levels. Guardrails and toe boards will be provided when or if workers pass below a walkway.

## 9.0 HAZARDS ASSOCIATED WITH WATER ACCUMULATION

Excavations with standing water or where water is collecting shall be inspected by a Competent Person before work begins. Methods for controlling water accumulation will be provided and will consist of the following if anyone must work in the excavation:

- Use of special support or shield systems approved by a Registered Professional Engineer.
- Water removal equipment, such as well pointing, used and monitored by the Designated Supervisor.
- Use of safety harnesses and lifelines.
- No one will work in excavations during a rainstorm.
- Trenches will be inspected by the Designated Supervisor after each rain and before anyone is permitted to re-enter the excavation.

## 10.0 PROTECTION OF WORKERS FROM FALLING OBJECTS

- A. The Designated Supervisor will ensure that workers are protected from loose rock or soil that could fall or roll from an excavation face. Such protection will consist of:
- Scaling to remove loose material;
  - Installation of barricades such as wire mesh or timber as needed to stop and contain falling material; or
  - Sloping will be used instead of barricades when practical.
- B. Workers shall not work under loads of digging equipment where loads may fall and shall be protected from excavated materials, equipment or other objects that could pose a hazard by falling or rolling into excavation. These materials or equipment will be kept at least two (2) feet from the edge of the excavation or otherwise restrained. Materials piled, grouped or stacked near the edge of an excavation must be stable and self-supporting.

## 11.0 INSPECTIONS

- A. A Onsite Supervisor / Competent Person shall conduct daily inspections of excavations, adjacent area and protective systems for evidence of a situation that could result in a cave-in, failure of protective systems, hazardous atmospheres or other hazardous conditions. Inspections will be conducted before the start of work and as needed throughout the shift. Inspections will also be made after every rainstorm. These inspections are only required when the trench will be or is expected to be occupied. When a hazardous condition is found, exposed workers will be removed immediately from the area until precautions have been taken to assure their safety.
- B. These inspections will be documented in writing and kept on-site. They will be made available to the HSE Department or any other authority upon request.

## 12.0 SOIL CLASSIFICATIONS

In order to design the most appropriate protective system, the Designated Supervisor shall determine if the soil is Type "B" or Type "C" by using a visual test with one or more manual tests:

- Visual Test: During the visual test, the entire excavation site including the soil adjacent to the site will be observed. The Designated Supervisor will check for crack-line openings along the failure zone that indicate tension crack and observe the open side of the excavation for indications of layered geologic structuring. Other conditions to look for are signs of bulging, boiling, or sloughing, as well as signs of surface water seeping from the side of the excavation or from the water table.
- Manual Test / Thumb Penetration Test: When the thumb is pressed firmly into the soil and penetrates no further than the length of the nail, it is probably Type B soil. If the thumb penetrates the full length of the thumb, it is Type C. This is the least accurate of the manual test methods.
- Dry Strength Test: If a sample of dry soil is crumbled freely or with moderate pressure into individual grains it is considered granular, or Type C. Dry soil that falls into clumps that subsequently break into smaller clumps is probably clay in combination with gravel, sand or silt (Type B).
- Plasticity or Wet Thread Test: A moist sample of the soil is molded into a ball and then rolled into a thin thread approximately 1/8 inch in diameter by two inches in length. If the soil sample does not break when held by one end, it may be considered Type B. If the soil sample does break, it is considered Type C.

## 13.0 EMERGENCY RESCUE

- Emergency rescue equipment, such as breathing apparatus, a safety harness and line or a basket stretcher, will be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during working in an excavation. This equipment will be attended when in use.
- Rescue services that can be performed safely from outside the excavation, such as hoisting a harnessed victim. Other personnel in the excavation will exit immediately, providing assistance only when not endangering their own safety.
- Local fire and rescue services will provide their own equipment and training in accordance with federal and state regulations.



## 14.0 TRAINING OF WORKERS

- C. Personnel who perform work in excavations will comply with the requirements of this plan and receive appropriate training that includes at a minimum:
  - Safe work practices that must be followed during work in excavations;
  - The use of personal protective equipment (PPE) that will typically be required during work in excavations, including but not limited to safety shoes, hardhats, and fall protection devices;
  - Procedures to be followed if a hazardous atmosphere exists or could reasonably be expected to develop during work in an excavation; &
  - Emergency and non-entry rescue methods, and procedures for calling rescue services.
- D. Retraining will be performed whenever work site inspections conducted by the Designated Supervisor or EHS indicate that a worker does not have the necessary knowledge or skills to safely work in or around excavations.
- E. The HSE Department will maintain training records.

## **WELDING, CUTTING & COMPRESSED GAS CYLINDERS**

### **PURPOSE**

The purpose of this program is to prevent any fires or injuries that may result from hot work processes.

### **1.0 WELDING & CUTTING REQUIREMENTS**

- A. Before cutting or welding is permitted, the area shall be inspected by a "Competent Person" and must be granted authorization for welding and cutting operations. Precautions that are to be taken shall be in the form of a written "Hot Work Permit".
- B. When working in a confined space/area, ventilation, cylinder securement, lifelines, electrode removal, gas shutoff and warning signs must be addressed.
- C. Any personnel involved with the welding, cutting or burning of lead base metals, zinc, cadmium, mercury, beryllium or exotic metals or paints shall have proper ventilation or respiratory protection.
- D. When burning or welding anywhere on a mobile rig or platform where drilling, work over or wire line work is in progress, a means of signaling must be prearranged whereby operations will cease should a hazardous situation arise.
- E. The welding area must be thoroughly washed down upon completion of welding activities, except in areas where it is impractical.
- F. Designated welding areas;
  - Must be shown on building drawings and maintained at the company headquarters.
  - Cutting or welding shall not be permitted in areas not authorized by management, in sprinkled buildings while such protection is impaired, in the presence of explosive atmospheres, areas near the storage of large quantities of exposed, readily ignitable materials
- G. Personnel operating the arc welding or cutting equipment in an area with wet flooring must be protected from possible shock.

H. Engine driven welding machines must;

- Have properly insulated cables and electrode holders;
- Have controls and accessories that are in good operating condition; and
- Be diesel driven and equipped with drip pans, spark-arresting muffler, controls and air box shutdowns.

## 2.0 FIRE-WATCH REQUIREMENTS

A. Fire-Watch personnel shall have fire extinguishers readily available. A fire watch shall be maintained at least 1/2 hour after the welding or cutting operation is completed.

B. The Fire-Watch shall be required when welding, cutting, brazing and/or soldering is performed near:

- Locations with combustible materials.
- Locations where other than a minor fire might develop.
- Combustible materials closer than 35 ft. to point of operation.
- Combustibles that are more than 35 ft. away, but are easily ignited.
- Combustibles within a 35' radius of a wall or floor openings
- Combustible materials adjacent to the opposite side of metal partitions, ceilings or roofs.

## 3.0 ADDITIONAL WELDING & CUTTING SAFEGUARDS

A. First aid equipment shall be available at all times.

B. The welding area must be restricted to the above spaces of the work area.

C. Prior to the start of any welding or cutting operation, if the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed. If all the fire hazards cannot be removed, then guards and/or barriers shall be used to confine the heat sparks and slag and to protect the immovable fire hazards.

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

- E. Special Precautions: Wherever there are floor openings or cracks in the flooring that cannot be closed, precautions shall be taken so that no readily combustible materials on the floor below will be exposed to sparks which might drop through the floor. The same precautions shall be observed with regard to cracks or holes in walls, open doorways and open or broken windows.

#### 4.0 INSPECTION AND MAINTENANCE

- A. Visual inspections shall be conducted to determine that compressed gas cylinders are in a safe condition.
- B. Check valves should be installed at both the torch end and the regulator end of all hoses.
- C. Hoses and connections should be inspected regularly for damage and stored in cool areas and protected from damage.
- D. Equipment Operators shall report any equipment defects or safety hazards and shall discontinue use until its safety has been assured. Repairs shall be made only by qualified personnel.
- E. Soapy water should be used to detect leaks on Compressed Gas Cylinders. If the leak is at the junction of the cylinder valve and cylinder, do not try to repair it. Contact the supplier and ask for response instructions. Leaking cylinders should be moved to an isolated, well-ventilated area, away from ignition sources.
- F. Cylinders must be equipped with the correct regulators. Regulators and cylinder valves should be inspected for grease, oil, dirt and solvents.

#### 5.0 HANDLING OF COMPRESSED GAS CYLINDERS, HOSES AND TORCHES

- A. Oxygen and acetylene cylinders shall be handled carefully even when they are empty. Rough handling may damage cylinders or cause leakage with consequent danger of fire and explosion.
- B. Only tools provided by the supplier should be used to open and close cylinder valves.
- C. Cylinder valves should be closed with caps in place, except when in use. When a cylinder cap cannot be removed by hand, the cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor. Dented or damaged cylinders shall not be used and must be tagged and returned to the owner.

- D. Cylinders must always be fastened securely in an upright position. An oxygen cylinder may be mounted horizontally on a welding truck.
- E. Do not transfer welding gas from one cylinder to another.
- F. If a hose catches fire, close the valve at the cylinder, if it is safe to do so. Do not try to extinguish the fire by pinching the hose.
- G. Cylinders must be transported in a vertical secured position using a cylinder basket or cart, and must not be rolled. Regulators should be removed and cylinders capped before moving or transporting. Cylinders should not be dropped or permitted to strike against other objects violently. Never lift cylinders by their protective caps.
- H. Cylinders should be marked as "MT" and dated when empty. Never mix gases in a cylinder and only trained, qualified professionals should refill cylinders. Empty cylinders must be handled as carefully as full cylinders.

#### 6.0 STORAGE & LABELING OF COMPRESSED GAS CYLINDERS & REGULATORS

- A. Compressed Cylinders must be stored in a safe, dry, well protected area. When stored inside of buildings, cylinders shall be stored in a well-ventilate location. Cylinders shall not be kept in unventilated enclosures such as lockers and/or cupboards.
- B. Compressed Cylinders shall be clearly label or stenciled so as to identify gas content. No compressed gas cylinder should be accepted for use that does not legibly identify its content by name.
- C. Compressed Cylinders must be secured at all times in such a way as to avoid them being knocked over or damaged.
- D. Compressed Cylinders must be stored in a vertical position and segregated based upon contents. Twenty (20) feet should be maintained between oxidizers and flammables or firewalls erected at least 5 feet high and with a fire rating of 30 minutes.
- E. Compressed Cylinders must be protected from damage, corrosion, sunlight and kept away from heat sources.
- F. Cylinders should be capped when they are not being used.
- G. Storage areas for full and empty cylinders must be designated and labeled. Cylinders should be stored in definitely assigned places away from elevators, stairs, gangways or public hallways.

## 7.0 EMPLOYEE TRAINING REQUIREMENTS

- A. Personnel assigned to operate arc welding equipment must be properly instructed and qualified to operate such equipment and must be familiar with 29 CFR 1910.254 and 1910.252(a)(b) & (c).
- B. Welders and their supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
- C. Cutters, welders and their supervisors must be suitably trained in the safe operations specific to their equipment and operational processes.
- D. Assigned Fire-Watch personnel must be trained in the use of fire extinguishing equipment and familiar with the facility for the purpose of sounding an alarm in the event of a fire.
- E. Any worker in charge of oxygen or fuel-gas supply equipment (including distribution piping systems and generators) must be instructed and judged competent for such work.
- F. Employees must be trained on the proper use, handling and storage of Compressed Gas Cylinders.
- G. Employees must be instructed to never use compressed gas to dust off clothing, as this may cause serious injury to the eyes or body, or create a fire hazard
- H. Welders & Cutters must be trained the proper maintenance of their equipment including housekeeping and proper disposal of used welding stubs.