

an American Service Company



## **HEALTH, SAFETY & ENVIRONMENTAL HANDBOOK**

This handbook is a guide and reference for the rules and standards at Rig-Tech, LLC. It is an integral part of the Rig-Tech Injury and Illness Prevention Program. Compliance with such rules and standards is a condition of employment for Rig-Tech employees and a contractual obligation for contractor employees. It is not all-inclusive, so consult other Rig-Tech Corporate HSE manuals or reference material for additional health, safety, and environmental information. This Handbook will be updated as necessary.



## HEALTH, SAFETY, & ENVIRONMENTAL HANDBOOK

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## **OBJECTIVE**

At Rig-Tech safety is our number one priority. We take pride in our facilities and our employees. Our ongoing goal is to provide our employees with the proper training and equipment to ensure their safety and a safe work environment. This manual is designed to provide an overview of Rig-Tech's safety rules, guidelines, and policies.

## **OVERVIEW**

The Safety Policy of Rig-Tech is designed to comply with the Standards of the Occupational Safety and Health Administration, and to endeavor to maintain a safe and injury/illness free workplace. Compliance with the following Safety Policy and all items contained therein is mandatory for all employees of the company.

It is company policy that accident prevention be a prime concern of all employees. This includes the safety and wellbeing of our employees, subcontractors, and customers, as well as the prevention of wasteful, inefficient operations, and damage to property and equipment.

This Safety Policy applies to all employees of Rig-Tech, regardless of position within the company. The Safety Rules contained herein apply to all subcontractors and anyone who is on a company project site.

Every employee is expected to comply with the Safety Policy, as well as OSHA Health and Safety Standards.

## **SCOPE**

The policies of this manual cover all Rig-Tech employees. All new hires will be required to read this manual at the time of their employee orientation. Additionally, supervisors should review these policies with their staff at least annually to ensure continued adherence.

## **POLICIES**

Working safely and promoting safety is expected of each employee during their employment at Rig-Tech. Any employee that willfully disregards safety regulations, policies and/or procedures, or that bypasses or attempts to bypass safety features on equipment will face disciplinary action up to and including termination.



## **1.0 HEALTH, SAFETY, & ENVIRONMENTAL POLICY**

Protection of the environment and the safety and health of our employees, customers, contractors, communities and the public is fundamental to the manner in which Rig-Tech conducts its business. In order to integrate successful health, safety, and environmental management into our business activities and services worldwide, Rig-Tech is committed to the following:

- Consideration of safety excellence in the design, construction, testing, assembly, operation and restoration of all properties & facilities;
- Provide a safe and healthful working environment for all employees in an effort to reduce work related physical injury and illness;
- Communicate openly regarding business activities;
- Provide clear environmental, safety and health responsibilities to all employees and contractors;
- Assess and address the potential risks and hazards of business activities;
- Compliance with all applicable legislative and regulatory requirements;
- Participation in the development of new legislation, regulations and technologies;
- Review performance and communicate progress;
- Prevention of Pollution; and
- Provide resources necessary for the implementation, control and continual improvement of environmental, safety and health performance.

Our Vision: Accident Free - No Harm to Environment

### Quality Performance

It is expected that all contractors, purchasers and other parties on Rig-Tech property will also abide by our established environmental, safety and health policies and procedures.

## **2.0 HEALTH, SAFETY, and ENVIRONMENTAL RESPONSIBILITIES**

### Employee Responsibilities

- Comply with applicable health, safety, and environmental rules and standards in the performance of his/her job.
- Communicate health, safety, and environmental rules and standards to contractor personnel.
- Maintain compliance with applicable health, safety, and environmental rules and standards.
- Report all injuries, accidents, spills, unsafe working conditions and incidents to your supervisor immediately.
- Assist in incident investigation as necessary.
- Participate in health, safety, and environmental meetings.
- Inspect and maintain facilities in environmentally sound and safe working environment.
- Maintain knowledge of health, safety, and environmental requirements through attendance of regular safety meetings.



### Supervisor Responsibilities

- Communicate HSE rules and standards to any employee or contractor personnel working for Rig-Tech. Document such orientation.
- Maintain compliance with applicable HSE rules and standards.
- Report all injuries, accidents, spills, unsafe working conditions and other incidents in writing to the HSE Manager. Assist with investigations conducted as a result of injuries, accidents, spills, unsafe working conditions and other incidents.
- Correct unsafe work conditions promptly.
- Provide the necessary resources and training for employees.
- Conduct regular HSE meetings.
- Conduct regular inspections to maintain facilities in environmentally sound and safe working environment.
- Periodically review facility and employee HSE performance and provide feedback.

### Contractor Responsibilities

- Comply with all Rig-Tech rules along with federal, state and local rules and regulations.
- Report all injuries, accidents, spills, unsafe working conditions and other incidents immediately to Rig-Tech person-in-charge and/or the HSE Manager.
- Reporting unsafe conditions promptly to Rig-Tech person-in-charge and/or the HSE Manager.
- Operate Rig-Tech equipment only with Rig-Tech approval.
- Hold regular pre-job meetings and other safety meetings through the duration of the job.

## **3.0 GENERAL SAFETY RULES**

1. Immediately report all injuries, accidents, fires, spills, or other incidents, no matter how slight, to your supervisor/person-in-charge and/or the HSE Manager.
2. Immediately report any unsafe condition or practice to your supervisor and/or the HSE Manager.
3. Horseplay or fighting in the workplace is prohibited.
4. The driver of any Rig-Tech vehicles, including rental cars and personal cars utilized on business travel, is responsible for wearing a seat belt, as well as ensuring that all other vehicle passengers wear their seatbelts.
5. The use, possession or distribution of illegal drugs, explosives or deadly weapons while on Rig-Tech premises, in Rig-Tech vehicles, or rental/personal vehicles while on company business is prohibited.



6. Permitted handguns (people possessing a current permit to carry a concealed handgun), rifles and shotguns are only allowed on company property if: 1) all guns remain inside the employee's vehicle at all times and 2) bringing such firearm onto company property has been previously authorized by the employee's supervisor. At no time are any firearms allowed to be inside of Company crew trucks.
7. The use or possession of alcoholic beverages or being under the influence of alcohol in Rig-Tech vehicles, including rental and personal vehicles while on company business is strictly prohibited. The unauthorized use or being under the influence of alcohol while on company premises or business is strictly prohibited.
8. Smoking is permitted in designated areas only. No smoking is allowed in any test area or flammable storage area. These special areas prohibiting smoking will be marked with "NO SMOKING" signs posted.
9. No hazardous work may be started in any area or on any equipment without consent of the Rig-Tech person-in-charge.
10. No contractor will start work on Rig-Tech premises without first receiving approval from the appropriate project manager and operations manager where applicable.
11. All portable grinding activity performed at the Rig-Tech shop is to be done outside on a tarp or drop cloth to capture the waste for proper disposal. Proper eye and face protection shall be worn while performing any grinding operations. The following rules address types of personal protective equipment (PPE) for all personnel, including contractors and visitors in certain situations. For more information on the Rig-Tech Personal Protective Equipment Program, refer to the PPE section of this Manual
12. Eye and face protection SHALL be worn as directed by the applicable Material Safety Data Sheet (MSDS) as well as rules and conditions that are present in outside shops and work areas. Additionally, Figure I below should be consulted for other operations requiring eye and face protection.
13. ANSI Approved SAFETY GLASSES are required in the Shop Areas during operation hours. This list is not all-inclusive. It is possible a Rig-Tech employee may engage in work not listed above which may require eye or face protection and/or Additional PPE not listed here. If you have questions regarding the necessity of eye and face protection or any other PPE, please consult your supervisor or HSE Manager.
14. Approved safety -toed shoes are required while working in the shop and at all outside job sites. Rig-Tech employees assigned to testing areas are required to wear safety steel toed shoes. Witnessing a test or touring the shop does not require safety steel toed shoes, as long as such activity does not commence. Reminder: Safety toed shoes with heels are required to be worn at worksites outside of the shop.
15. As indicated on each appropriate MSDS, all personnel handling chemicals or other potentially hazardous agents must wear proper PPE. Applicable PPE may include, but is not limited to: eye or face protection, respiratory protection, rubber gloves, aprons or special clothing.
16. Wear hearing protection in high noise areas (85 dB or higher). Such areas will be marked by appropriate signage.
17. Proper hand protection must be worn by personnel when performing tasks that may cause injury to hands.



18. Life jackets or work-vests shall be worn by all personnel while flying over water, while working on boats/barges, or while working outside handrails or on the plus 12 level of an offshore platform or rig.

19. Personnel shall wear an approved safety harness and be tied off with a lifeline whenever working in any unsecured area 6 ft (1.8 m) or more above ground or deck level. This rule applies to activities occurring on Rig-Tech property, as well as on offsite job locations. Employees who fail to observe this policy can be subjected to immediate termination from employment.

#### **4.0 GENERAL OFFICE SAFETY**

Employees working in an office environment are not immune to occupational injuries or illnesses. The following checklist should be utilized in office areas to maintain general office safety:

##### **4.1 OFFICE SAFETY CHECKLIST**

###### **INDIVIDUAL WORKSTATIONS**

Sufficient ventilation Open floor space sufficient illumination

###### **WORKSTATION BEHAVIORS**

Maintain neutral posture Take regular breaks keep arms level Keep elbows in Avoid extended reaches

###### **WALKING SURFACES** Aisles correctly established and clear

(30 inches/76 cm recommended) Tripping hazards cleared (carpets/mats secure) Mats available to prevent slipping hazards Floors dry—not slippery

###### **HALLS, RAMPS, LIGHTING**

Adequate lighting, suitable for work Ramps have non-slip surface Handrails installed and in good condition Halls kept clear of equipment and supplies.

###### **STORAGE AREAS**

Shelves and file drawers safely loaded Heavy items stored at waist level

Heavy storage shelves/files secured to wall Avoid storage within 2 ft (0.6 m) of ceiling noisy equipment isolated

###### **OFFICE EQUIPMENT, TOOLS**

Chairs (springs, casters, hydraulics) in good condition Fans guarded, secure from falling or tipping

Paper cutter blade down and functioning Safety step ladders available Chemicals properly

labeled/stored Paper supplies and material safely stacked Scissors, sharp tools stored correctly

Mechanical equipment properly guarded



## ELECTRIC HAZARDS

Machines and equipment grounded or double insulated Proper multi-outlet devices used/circuits properly loaded Extension cords -maximum length 10 ft (3 m) Power cords, plugs, and wall outlets free from defects Electric switch panels clear (30 inches/9 m open area) Wiring properly routed

## FIRE PREVENTION

Fire extinguishers properly identified/installed  
Fire extinguisher tagged with current inspection and hydrostatically tested Fire extinguishers unobstructed Fire escapes and routes clear Stairwell fire doors closed Exits properly marked  
Sprinkler heads unobstructed Excess paper and trash removed

## COMMON AREAS

External corridors in good repair Stairways clear—uncluttered Restroom in safe/sanitary condition Caution barricade available for wet floors Emergency supplies available All required notices posted Mats available to prevent slipping hazards Floors dry—no potential slip hazards

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

### 5.1 INTRODUCTION

Personal Protective Equipment (PPE) is all clothing and any other work safety accessories, which are designed to create a barrier between the employee and potential workplace hazards. PPE is usually intended to protect the eyes, ears, face, head, hands, feet and other extremities. Various forms of PPE usually include protective clothing, protective shields, eye/face protection, earplugs, respiratory devices, and other barriers.

*YOU SHOULD ALWAYS REMEMBER THAT ALL FORMS OF PPE ARE TO BE CONSIDERED THE LAST Line OF DEFENSE AND PROTECTION NOT THE FIRST.*

### 5.2 HEARING PROTECTION

Hearing protection shall be worn at all times in noisy environments and as posted on facility signage. Various forms of hearing protection are available from the Company.

### 5.3 EYE AND FACE PROTECTION

Eye protection is required at all times. Non-prescription safety glasses with side shields meeting the ANSI Z-87.1 Standards for industrial eyewear, is provided by Rig-Tech.

All employees who are required must wear the approved eye protection on any job or activity where exposure could occur.

Contact lenses may be worn, but only with approved non-prescription safety eye wear. OSHA prohibits wearing contact lenses with respirators. A kit is available that allows a pair of safety glasses, without temple bars, to be mounted inside the respirator mask, if a respirator is necessary.





If an employee is required to regularly wear a respirator and needs corrective lenses in order to perform their work, this kit and an additional set of glasses without temple bars should be purchased.

Employees should only wear approved eye protection for the job. Safety glasses are not designed to take the place of specialized safety eye wear such as chemical goggles, welding goggles or masks, or high impact goggles.

In addition, OSHA requires that eye and face protector to meet the following Minimum requirements:

- Provide adequate protection against the particular hazards for which they are designed;
- Be reasonable comfortable when worn under the designated conditions;
- Fit snugly and not unduly interfere with the movement of the person wearing the equipment;
- Be durable;
- Be capable of being disinfected;
- Be easily cleanable;
- Be kept clean and in good repair; and
- Be clearly marked to identify the manufacturer.

Many operations may require more eye and face protection than provided by safety glasses.

Eye and face protection shall be worn as dictated by applicable MSDS' as well as rules and conditions present in outside shops and work areas. Additionally, Figure I below should be consulted for other operations requiring eye and face protection. Goggles and face shields should be relatively scratch-free, chemical free and clean. Hard hat-mountable goggles and face shields are available. The elastic band should be in good enough shape to hold the goggles on. Goggles should be splash-proof if used for chemical handling. Splash-proof means indirect ventilation around the lens, not perforated with holes on the sides.

#### 5.4 FOOT PROTECTION

Safety -toed shoes must be worn in plant and field operations. Approved safety toe shoes are those that are labeled as meeting the ANSI 241-1991. A well-defined heel on the sole will provide an extra level of protection against slipping when climbing a ladder or stairs and are therefore recommended.

Athletic type shoes and sandals shall not be worn by plant and field employees. This is due to the poor walking surface protection from sharps such as nails, and poor upper protection from chemical spills. Most tennis shoes have uppers with ventilating holes.

Visitors are required to wear footwear appropriate for the exposures present. Safety -toed shoes should be replaced if they become saturated with a chemical resulting in constant contact of the feet with the chemical. If the shoe's upper becomes so worn that they have holes where spilled chemical could easily migrate to the inside next to the feet, the shoes should be replaced.



In addition, if the soles are so worn or “caked-up” to the point that they no longer provide a safe level of traction, they should be cleaned or replaced, as necessary.

### 5.5 HEAD PROTECTION

Pursuant to OSHA 29 CFR, Part 1910.135, approved hard hats (meeting ANSI Z89.1-1986, Class A). Metallic hard hats are prohibited. Hard hats should be clean and regularly inspected for visible cracks and defects.

- Hard hats that are in sun daily, either on a head or in a car should be replaced every year or two, depending on the wear; if the hat needs cleaning, use soap and water. Do not use solvents to clean the hat. Also, do not paint the hat; If the hat has received a hard blow, replace it immediately; and routinely check the suspension system and replace as necessary. Neither the Hard Hat itself, nor the liner should be modified or altered in any way and the bill of the hat will be worn in front at all times.

### 5.6 HAND PROTECTION

There are many different types of material used in protective gloves:

- Cotton
- Neoprene
- Nitrile
- Leather
- Latex
- Yitron
- PVC/Nitrile

No single glove will suit the needs of every task. Each material responds differently to different chemicals, so make sure that you check the chemical’s Material Safety Data Sheet (MSDS) for the appropriate glove materials that is necessary. Some chemicals will permeate through the rubber in as little as five minutes of continuous immersion. Permeation results in skin contact with the chemical, as though you didn’t have any gloves on at all.

Gloves should be cleaned in soapy water after each chemical use to remove the chemical. Once chemical gets on the rubber, it begins to soak through (permeate) and degrade the rubber. Even if cleaned regularly, rubber gloves should be discarded when they begin to show signs of deterioration such as becoming stiff or gummy. This may mean replacing rubber gloves as often as daily, depending upon how much and what type of chemical contact they endure.

Wear the following types of gloves to protect the hands:

- Hydrocarbon-resistant (neoprene) rubber gloves to protect the hands when handling chemicals such as kerosene or other Stoddard solvents;
- Butyl rubber or Polyvinyl Alcohol (PVA) with aromatic or halogenated hydrocarbons such as benzene, toluene, xylene or carbon tetrachloride. Avoid water if PVA is used;



- Appropriate chemical-resistant gloves for handling acids, caustic soda, soda ash and other chemicals;
- Rubber gloves (hot gloves) approved for electrical work. Inspect the gloves before each job. Use the air test to check the gloves. Inspect the glove “protector” before each use for worn spots, holes or tears. Do not use defective gloves. Document a third party comprehensive voltage-leakage test on the gloves every six months or automatically replace the gloves in lieu of inspection. Hot gloves should be stored in a special box or container that protects them from damage from other tools or chemicals;
- Insulated or heat-resistant gloves when handling steam hoses or when performing other duties in which regular work gloves do not afford burn protection, such as when working in cryogenic operations (LPG, nitrogen, CO<sub>2</sub>);
- Leather or leather-palmed gloves when handling wire rope; and
- Cotton gloves when handling pipe or most hand tools.

## **6.0 BLOOD BORNE PATHOGEN SAFETY**

Blood borne pathogens are disease-causing microorganisms in blood and other potentially infectious body fluids. The hepatitis B virus, hepatitis C virus, and human immunodeficiency virus (HIV) are examples of blood borne pathogens. These viruses can be passed on to others, and can cause serious illness or death.

Blood borne pathogens can enter your body through exposure to blood or other potentially infectious body fluids. Exposure may occur through your mucous membranes, including eyes, nose, and mouth or through an opening in your skin if you are splashed with blood or other potentially infectious body fluids or by being stuck with a contaminated needle or sharp object. Providing first aid puts you at risk of exposure to blood borne pathogens. It is very important to wear appropriate personal protective equipment to decrease this risk.

Here are some ways you can reduce your risk when dealing with situations that may expose you to infection:

- A. If you are helping someone who is bleeding or if you are exposed to blood or other potentially infectious body fluids, you must wear PPE such as gloves, gown, goggles or face shield.
- B. If blood or other potentially infectious body fluid is on your gloves, dispose of the gloves properly by putting them in a biohazard waste bag. If you do not have a biohazard waste bag, put the gloves in a plastic bag that can be sealed before you dispose of it. Always wash your hands with soap and water after you remove and dispose of gloves.
- C. It is essential that you quickly and completely clean up any blood or other potentially infectious body fluids with soap and water to limit the chance of exposing your coworkers to blood borne pathogens. Wear PPE when cleaning up blood or potentially infectious fluids



D. Hands are the most likely areas to be exposed to blood or other potentially infectious body fluids. If you wash your hands with soap and running water after contact, you greatly reduce your chance of becoming sick or spreading germs to others.

E. It is very important that you report any exposures to blood or other potentially infectious body fluids to your supervisor. Reporting all exposures helps you get treatment and helps your employer identify and reduce causes of exposure.

## **7.0 FIRE PROTECTION & EMERGENCY RESPONSE**

### **EMERGENCY RESPONSE PROCEDURES**

In case of fire, the following procedures should be used:

1. CALL FOR HELP.
2. Only trained personnel should operate fire extinguishers.
3. Isolate all fuel sources and/or threatened facilities and close doors. Normally, gas fires are extinguished by eliminating the fuel source.
4. TEST EXTINGUISHER BEFORE ATTEMPTING TO EXTINGUISH FIRE.
5. DO NOT FIGHT LARGE FIRES BEYOND THE INCIDENT (INITIAL) STAGE OR ANY OTHER FIRE FOR WHICH YOU ARE NOT TRAINED.
6. Locate the firefighting equipment and approach the fire FROM THE UPWIND SIDE.
7. NEVER OPERATE AN Extinguisher IN SUCH A MANNER THAT ANY PART OF THE BODY IS LOCATED DIRECTLY IN FRONT OF THE FILL CAP.
8. After the fire is extinguished, stand by to ensure that there are no flashbacks.

### **PREVENTION IS THE BEST FIRE PROTECTION MEASURE**

#### **FIRE PREVENTION GUIDELINES**

- Creating an ignition source within 100 ft. of an exposed flammable liquid or vapor within the Rig-Tech shop is prohibited without a valid and current Hot Work Permit for the work to be done.
- Buildings in which solvents or chemicals are being handled should be well ventilated at all times.
- Report and repair all flammable liquid or gas leaks immediately.
- In the event of a flammable liquid or gas leak, extinguish and remove all ignition sources immediately. Shut down machines, engines and other potential sources of ignition, such as pilot lights. (Immediately leave the area and avoid inhaling gas fumes, if possible.)
- Store small flammable liquid containers in an NFPA spec storage cabinet.
- Use “snoop” suds when testing for gas leaks on connections.
- Do not use gasoline as a cleaning agent.
- Transport gasoline only in approved, clearly marked containers.



- Never place gasoline containers inside car or truck passenger compartments.
- When filling gasoline containers, keep container outside of vehicle until filled.

Fire Safety is everyone's responsibility and prevention is the best defense against fire hazards. Employees should know the location of, how to use, and when to use the nearest fire extinguisher. Different types of fires require different types of extinguishers. Never attempt to use an extinguisher unless you are knowledgeable about the differences. Employees should attempt to extinguish the fire only if the fire is small and contained, they are safe from toxic smoke, there is a means of escape, and the employee knows how to properly use the fire extinguisher.

### Fire Triangle:

Three things must be present at the same time to produce a fire:

1. Oxygen (enough to sustain combustion)
2. Heat (enough to reach ignition temperature)
3. Fuel (or combustible material)

Take away any of these things and the fire will be extinguished

### Classes of Fire:

Class A = Combustible Solids (ie. wood, paper, rubber, plastic, cloth) not metal

Class B = Flammable Liquids (ie. gasoline, oil, grease, acetone)

Class C = Electrical (energized electrical equipment)

Class D = Metals (ie. potassium, sodium, magnesium, aluminum)

### Types of Extinguishers:

Water = Use for Class A only

Carbon Dioxide (CO<sub>2</sub>) = Use for Class B and C only

Dry Chemical = Use for Class A, B, or C

Class D fires require a special extinguishing agent.

### How to Use A Fire Extinguisher:

Use the PASS system:

P = Pull the Pin

A = Aim at the Base of the Fire

S = Squeeze the Top Handle

S = Sweep from side to side

Once the fire is out, keep an eye on the area in case it re-ignites.



## **8.0 ACCIDENT / INCIDENT REPORTING**

This section briefly describes normal reporting requirements for injuries, incidents, and spills at Rig-Tech facilities. For any questions regarding incident reporting or insurance issues contact the HSE Manager. For severe injury or incidents, an initial notification shall be made to the HSE Manager.

All employees will be held accountable for reporting an injury immediately after an accident occurs, even if medical treatment is not required. (Notice must be made at or near the time of the injury and on the same day of the injury.) Employees must report the injury to their immediate supervisor. Failure to report an injury immediately (meaning at or near the time of the injury and on the same day of the injury) is a violation of the Safety Policy, and they may result in immediate termination, in accordance with company policy.

All injuries and occupational illnesses of Rig-Tech employee's shall be reported on either the First Aid Report or the First Report of injury. The Report is to be initiated by the injured employee's supervisor. The Report should be sent immediately with as much information as possible, for notification and classification, to the HSE Manager. Following proper medical treatment, a thorough investigation including corrective actions should be completed by the Rig-Tech supervisor to prevent reoccurrence. Injuries involving lost workdays shall be reported to management as soon as possible.

### **CONTRACTOR INJURIES**

All injuries and occupational illnesses of contractor employees should be reported and investigated. Following proper medical treatment, a thorough investigation should be completed by the Rig-Tech HSE Manager. Injuries involving lost workdays shall be reported to management as soon as possible.

### **SERIOUS POTENTIAL INCIDENTS (SPI)**

A Serious Potential Incident (SPI) is a "near-miss" incident with or without injury or damage (If injury or damage occur, the incident is no longer a "near miss") that by its nature had potential for much more serious results than actually occurred. To prevent similar incidents, the SPI form, shall be used to investigate such incidents. Normally, an SPI investigation committee consisting of the personnel involved and the HSE Manager will complete the form. To encourage reporting of incidents, no names of the personnel involved will appear on the report. The SPI is then reviewed by appropriate management for possible company wide distribution by the HSE Manager.

### **VEHICLE COLLISIONS**

All vehicle collisions involving a Rig-Tech employee, while on company business or involving a company vehicle shall be reported and investigated. All vehicle collisions must be reported immediately to your supervisor and the HSE Manager. Under no circumstances should an employee admit responsibility or discuss the incident except as required by law enforcement officials. If applicable, Police Reports should be presented to the HSE Manager.



#### PROPERTY DAMAGE/BUSINESS INTERRUPTION LOSS

Property damages or loss should be reported immediately to the local supervisor. All property damage incidents shall be reported and investigated.

#### SAFETY/ENVIRONMENTAL MEETINGS

Regular safety meetings for employees should be scheduled and documented by the Rig-Tech supervisor. Documentation should include names of attendees, topics covered and the date.

#### PRE-JOB SAFETY MEETINGS

Pre-Job Safety Meetings should be conducted and documented before large projects or unusual jobs are performed. Documentation should include names of attendees, topics covered and the date. All contractors or sub-contractors should be included in pre-job meetings.

#### INCIDENT/ACCIDENT REPORT FORM

A REPORT FORM MUST BE RETURNED WITHIN 24 HOURS OF INCIDENT

### **9.0 FORKLIFT SAFETY**

Although forklifts are indispensable tools for moving heavy objects, their proper operation and maintenance require special precautions and training. The use of forklifts is restricted to qualified trained personnel, authorized by Rig-Tech.

#### PRECAUTIONS

- Seat belts shall be used when operating forklifts.
- Inspect forklifts before and after use, including warning and safety devices. Report any deficiency to the department supervisor in charge of the forklift.
- Make sure the brakes are set on the trailer or truck that is being loaded or unloaded, to prevent movement.
- Only handle loads within the rated capacity of the forklift.
- Carry loads low, with forks just off the ground and tilted back.
- Do not allow any person to stand or walk under elevated forks, whether loaded or empty.
- Move all 55 gallon drums on a pallet, a drum rack, in a basket, or with a drum handling extension. No drums shall be moved by “sandwiching” them between forks.
- Do not use a forklift to raise people for overhead work without an approved platform. Never use a forklift for transportation of personnel.

### **10.0 MATERIALS LIFTING & HANDLING**

#### Cable/Sling Rope/Chain Safety

Rig-Tech has established a Cable Safety Program to ensure the integrity of cables, hooks, slings and various devices used in conjunction with these components for the purpose of lifting.

#### Inspection Process



- A. All equipment-mounted cables will be included in the facility's annual Inspection Report.
- B. Inspections shall be made by qualified technicians or by competent, trained local personnel.
- C. The inspection will include a non-destructive evaluation of the hooks.
- D. Cables, hooks and other devices that do not meet the inspection criteria shall immediately be removed item service.
- E. All metal cable, non-metal slings (nylon, polypropylene, etc.), hooks, and various components must be visually inspected before each use.

### **11.0 PRESSURE TESTING SAFETY**

Space for the future safety policy.

### **12.0 MOTORIZED EQUIPMENT SAFETY**

#### **GENERAL SAFE OPERATION**

- Only properly trained personnel shall operate motorized equipment (overhead crane and forklift).
- Motorized equipment shall only be used in operations for which it was designed.
- Operation of equipment shall not be allowed when any part of that equipment can come close to or into contact with overhead lines.
- Ground personnel should maintain a safe distance from operating equipment and establish eye contact with the operator before approaching.
- All utilities must be identified before any digging or cleanup work is to be started.
- Personnel shall not be allowed to ride in or work off any part of the equipment unless specifically designed for personnel.
- Ground personnel shall be notified when the operator's visibility is obstructed in any direction. Spotters should be used to assist the operator in such cases.
- Seat belts shall be worn in equipment where provided.
- No employee shall move construction equipment or vehicles onto any access roadway or grade unless the access roadway or grade is constructed and maintained to safely accommodate the movement of the equipment and vehicles involved.
- All equipment shall be operated in a manner that will not cause injury or harm to the operator or fellow workers. If conditions are present which may injure or harm a worker i.e., muddy conditions, mechanical problems, etc., equipment operation will be suspended until the problem is resolved.

#### **EQUIPMENT**

- Seat belts shall be provided on all earth-moving and other material handling equipment equipped with a rollover protective structure.
- Appropriate fire extinguishers must be mounted to all heavy equipment such as forklifts.
- All bi-directional machines shall be equipped with an audible backup alarm
- Equipment shall be equipped with operable parking brakes• All vehicles in use shall be checked at the beginning of each shift to assure equipment is in safe operating condition. All hoses and belts shall be inspected prior to operating equipment. Leaking or deteriorated hoses or belts shall be replaced before the equipment is operated.





## ROLLOVER PROTECTIVE STRUCTURE (ROPS)

- All material handling equipment manufactured after July 1, 1969, must be equipped with ROPS.
- Rollover protective structures and supporting attachments shall meet industry standard.

## 13.0 HAZARD COMMUNICATION (HAZCOM)

### INTRODUCTION

Rig-Tech in an effort to maintain safe working conditions for our Employees and to comply with federal and state right-to-know and hazard communication regulations, institutes this written Hazard Communication Program. Hazard Communication pertains to chemical hazards and is made up of five parts: Written program, chemical inventory, Material Safety Data Sheets (MSDS), labeling, and training. It is the policy of Rig-Tech to communicate any known hazards associated with these materials and to train our employees in safe handling techniques.

### RESPONSIBILITIES

Management and supervisors must ensure that the proper information is obtained and communicated to appropriate employees. Employees must follow the safe work practices outlined in training sessions, Materials Safety Data Sheets, warning labels and/or operating procedures. The effectiveness and success of this or any program depends on the commitment, active support, and involvement of all personnel. The Hazard Communication Program Administrator for Rig-Tech is the HSE Manager. Various parts of this program may be carried out by one of his/her designees.

### MATERIAL SAFETY DATA SHEET (MSDS)

Material Safety Data Sheets ("MSDS") are the center of focus of the federal regulation governing OSHA's Hazard Communication Standard. MSDS' contain valuable and vital information necessary to safely handle specific materials. MSDS' provide employees with the following information:

- Name, address, telephone number, of the manufacturer, distributor or importer;
- Chemical name and/or Common name of the material;
- Chemical makeup/composition
  
- Hazards associated with the use of the chemical
- Physical data;
- Fire and explosion hazard data;
- Reactive Data
- Health hazards and associated risks;
- Spill, leakage and waste disposal data;
- Special protection information, such as recommended Personal Protective Equipment (PPE);
- Special precautions and comments;
- MSDS Identification Number; and
- Emergency and First Aid Response Data.



## DOCUMENTED CHEMICAL INVENTORY

It is important to obtain an MSDS from suppliers for each chemical purchased. Chemical suppliers are required to ship an MSDS with every delivery. An MSDS must be kept on file for each chemical physically located within the facility. This will include items such as WD40, Windex, copier toner, soaps, etc.

There must be a documented Inventory List of all chemicals used onsite at each facility. Each department will conduct a physical inventory of chemicals and materials, which are used in their respective operating location, at least annually. The Chemical Inventory List will be maintained by the Shipping Department and will be made available for review by all employees of the facility upon request.

Pursuant to the OSHA HazCom regulation, MSDS' must be maintained for 30 years beyond the last use of the chemical. Two separate files will be maintained by the Shipping Department, along with a documented Inventory List for each one. The first file will contain the most recent and active MSDSs for each chemical currently in use. The second file will contain all MSDS' that are either no longer in use or that has been replaced by a more current version. If an MSDS is received that has the same "revision date" as your current copy, it may be thrown away.

If an employee purchases a chemical at a supply store, they are responsible for obtaining a current/recent MSDS for that chemical.

## LABELS AND OTHER FORMS OF WARNING

Labels and other forms of warning, list any hazards associated with containerized materials. Therefore, all materials will be stored in with appropriate labels identifying the contents. Labels must not be defaced, ripped, torn, faded or removed and must always be clearly visible so that anyone would be able to identify the contents. If for some reason, the label becomes illegible, the vendor will usually replace it. However -if not, the person discovering the illegible label should use a permanent marker, paint stick, stencil or other means to provide a legible identification label on the container -if the contents are known. If an employee receives or purchases a chemical, they are responsible for ensuring that the containers are properly labeled and a current MSDS is on file.

Labels should include the following information:

- A list of any Hazardous Ingredients that are contained;
- Appropriate Hazard Warnings; and
- Name, address and emergency phone number of the manufacturer, distributor or importer.

Labels are to be legible and in English, with other secondary languages optional and will consist of the materials name. If the chemical name is used, the common name can be found by referring to the applicable MSDS or Chemical Inventory List. Employees should not rely solely upon a label along for detailed handling information, but should review the product's MSDS that is provided and maintained.



## TRAINING

Prior to working with hazardous chemicals, each new or transferred employee will be trained on Rig-Tech Hazard Communication Program, with such training being documented in the employee's file.

Training will include the following:

- A briefing on the OSHA Hazard Communication (HAZCOM) Standard regarding employee and Company rights and responsibilities;
- Any operations in their work area where hazardous chemicals are used and stored;
- Location and availability of the written program, including the Chemical Inventory Listing and MSDS';
- How to use and read an MSDS, i.e. what information is contained, where to find the information, and how to use it;
- How to identify a spill of the hazardous chemicals;
- How to protect themselves from exposure to the chemicals;
- Labeling requirements; and
- What to do if in doubt -contact a supervisor or the HSE Manager

## 14.0 CHEMICAL HANDLING & STORAGE

### BASIC RULES FOR WORKING WITH CHEMICALS

1. Always consult the appropriate MSDS for chemical information before handling hazardous chemicals.
2. In case of eye contact, promptly flush eyes with water for a prolonged period (15 minutes) and seek medical attention.
3. In case of skin contact, promptly flush the affected area with water (15 minutes), remove contaminated clothing and seek medical attention.
4. Promptly clean up "table-top" spills using appropriate protective apparel and equipment, and dispose of all materials properly.
5. Do not smell or taste chemicals.
6. Do not eat, drink, smoke, chew gum or apply cosmetics in areas where hazardous chemicals are present. Wash hands before conducting these activities.
7. Use chemical handling equipment only for its designed purpose.
8. Do not use mouth suction for starting a siphon.
9. Chemicals and associated equipment should be properly labeled and stored.
10. Make sure that appropriate eye protection is worn by all persons, including visitors, where chemicals are in use, stored or handled.
11. Wear appropriate gloves when the potential for contact with hazardous materials exists; inspect the gloves before each use, wash them before removal and replace them periodically.
12. Use appropriate respiratory equipment when air contaminate concentrations are not sufficiently restricted by engineering controls or natural ventilation. Inspect the respirator before and after each use.



13. An MSDS for each chemical in the facility should be readily available.
14. At least two (2) people must be present at all times if a compound in use is highly toxic or of unknown toxicity.
15. Battery acid shall be handled as per manufacturer's recommendations and appropriate MSDS.
16. Flammable and combustible materials should be stored in NFPA flammable storage cabinets.

#### CHEMICAL HANDLING AND STORAGE

- Before a chemical is received or transported, information on proper handling, storage and disposal should be known to those handling it. No container should be accepted without appropriate labeling.
- Toxic substances should be segregated in a well-identified area with proper exhaust ventilation. Highly toxic chemicals whose containers have been opened should be in unbreakable secondary containers.
- Stored chemicals should be examined periodically for container seal and integrity.
- Chemical storage should be minimized. Storage on bench tops or at high levels is not recommended.
- Incompatible chemicals must not be stored near each other or allowed to contact accidentally. Read the MSDS for information or consult with the HSE Manager if uncertain.

#### HANDLING CYLINDERS

- Keep protective caps on cylinders not in use.
- Keep cylinders away from direct flame, heat and sources of ignition.
- Properly secure cylinders during movement and when in use. Do not use wire slings or ropes in movement unless cylinders are in proper rack.
- Cylinder contents must be properly labeled, do not rely on color of the cylinder.
- Cylinders should not be allowed to strike each other.

#### USING CYLINDERS

- Never use a cylinder of compressed gas without a properly sized, pressure reducing regulator connected to the cylinder valve.
- Always close the cylinder valve and bleed down system before attempting to stop leaks.
- Do not use oil or grease as a lubricant on oxygen cylinder valves or attachments.
- Threads on fittings must correspond to cylinder valve outlets.

#### STORING CYLINDERS

- Store cylinders in an upright, secured position.
- Stored or transported oxygen cylinders shall be separated from fuel gas cylinders by at least 20 ft (6 m) or by a noncombustible barrier at least 5 ft (1.5 M) high.
- Store empty and full cylinders separately and provide proper "EMPTY" or "FULL" labels.



## **15.0 ELECTRICAL SAFETY**

### **SAFETY PRECAUTIONS**

- Only personnel qualified for the type of electrical work to be undertaken shall repair or install electrical equipment, or work around live circuits. “Qualified” persons will be designated by Rig-Tech. Personnel who need to identify and possibly de-energize a breaker or switch shall be “qualified”.
- Consider all electrical conductors energized.
- Employees authorized to work on electrical circuits should be trained in CPR and First Aid.
- De-energize all circuits before beginning work. Use LOTO to prevent the electrical circuits from being inadvertently energized.
- Use suitable protective equipment including rubber gloves, mats and blankets to provide insulation from other elements that are energized or grounded.
- Personnel shall not wear rings, watches or other similar metallic objects while working on energized electrical equipment. Employees wearing glasses with metal frames shall be aware of hazards involved.
- Do not render electrical interlocks inoperative by removal, modification or destruction.
- Blown fuses shall be removed with approved fuse pullers and replaced only with fuses of the proper type and rating.
- Use non-conductive ladders when working on or near electrical equipment or conductors. The use of metal ladders is prohibited.
- Never use defective electrical equipment or extension cords. Replace all defective electrical equipment.
- Extension cords should not be used as a substitute for permanent wiring.

### **POWER LINES**

All power lines should be considered energized unless proper measures have been taken for de-energizing. When work is being performed near energized overhead power lines, no part of the crane, boom, mast or machinery, should be permitted within 10 ft (3 m) of the power lines rated 50 KY or below. For energized lines rated above 50 KY, the minimum distance between power lines and the boom, mast, crane or its load, must be 10 ft (3 m) plus 0.4 in (1 cm) for each Kv over 50Kv

## **16.0 FALL PROTECTION**

Rig-Tech has established a written fall protection program that includes the following minimum requirements when performing work tasks at heights greater than or equal to 6 ft (1.8 m) from ground level.

When working at heights equal to or greater than 6 ft, consideration must be given to the following:

- Fall prevention methods
- Procedures for assembly, maintenance, inspection and disassembly of fall protection equipment
- Procedures for the handling, storage and securing of tools and materials
- Overhead protection for workers
- Emergency procedures for prompt safe removal of fallen, suspended workers



## PERSONAL FALL ARREST SYSTEMS

Fall arrest systems, which include compatible body harnesses, lifelines and connectors, must be used when performing work tasks at heights greater than or equal to 6 ft (1.8 m) from ground level except when OSHA approved scaffolding, ladders or handrails and toe boards are in place.

- When working between heights of 6 and 17 ft. a retractable lanyard (yo-yo) must be used.
- Tie-off points capable of supporting 5000 lbs shall be used with fall protection.
- Fall arrest systems must be inspected prior to each use for wear, damage and other deterioration. Defective components must be removed from service.

- Fall arrest system components must be protected against cuts or abrasion.
- Fall arrest systems and components must not be used to hoist materials.
- Fall arrest systems and components that have experienced impact loading (a worker falling) must be immediately removed from service and inspected by a competent person, prior to reuse.

Note: Non-locking snap-hooks or body belts are prohibited for use as a part of a fall arrest system.

## LADDER SAFETY-GENERAL

- All new portable ladders will be a minimum of Class IA.
- All existing portable ladders will be a minimum of Class IA, or I, (Class IA are rated for 300 lbs. (136.1 kg) and Class I are rated for 250 lbs. (113.4 kg).
- When climbing up or down any ladder, face the ladder and maintain a 3-point contact with hands free of materials.
- If the work is over 6 ft (1.8 m), long term in nature or requires heavy physical exertion, personal fall protection or other methods such as scaffolds or personnel lifts should be used. The 6 ft (1.8 m) is measured from the ground to the bottom of the feet. Exceptions are to be approved by the local supervisor AND Safety Manager or in the Safety Manager's absence, two local supervisors.
- All ladders must be inspected prior to and after use, taking appropriate actions if ladder is damaged consult manufacturer recommendations for proper care, use and inspection information.

## PORTABLE EXTENSION LADDER

- Ladder shall be positioned at a safe angle, which is typically a 4:1 vertical to horizontal ratio.
- The ladder should optimally be secured at the top, with a person stabilizing the ladder at the bottom while the climber climbs and secures the ladder at the top.
- The workers body weight should be centered in the middle of the ladder rung area, and 3-point contact should be maintained while working on the ladder.
- Place the top of the ladder so both rails are fully supported. The support shall be at least 12 inches (.30 m) wide for each one of the rails. If support is of a different configuration, utilize manufacturer's recommendations.

## PORTABLE STEP LADDERS

- On ladders 6 ft (1.8 m) and taller, where no one is available to steady the ladder, outriggers must be utilized.
- A step ladder must be used with the spreader bars in the locked down position, never as a straight ladder.
- Never stand on the top two steps of a step ladder.



## FIXED LADDERS

- If the fixed ladder is over 20 ft (6.10m) and not equipped with a cage, then fall protection must be used when climbing up or down the ladder.

## ELEVATED PLATFORMS -GENERAL

- Elevated platforms include but are not limited to personnel lifts and scaffolds.
- All elevated platforms should be visually inspected prior to use.
- All employees utilizing elevated platforms shall be properly trained.
- Every floor opening where persons can accidentally walk into shall be guarded by barrier tape or railings with toe-boards on all exposed sides. The railings may be portable or removable. This includes areas where grating has been removed, open vaults, stairways, skylights, etc.
- Standing on a rung of the guardrail, or on a ladder in close proximity to the edge of an elevated platform is strictly prohibited.
- All initial changes in elevation shall be denoted in yellow. This includes sidewalks, tops of stairways, last steps, etc.

## PERSONNEL LIFTS

- Personnel lifts should only be operated by trained personnel.
- Written operating procedures should be attached to the personnel lift.
- A second person should be used as a “spotter” if:
  - Working in a limited work area
  - Ascending/descending a work area through the use of ramps
- Vehicle mounted elevating and rotating work platforms, and personnel lifts should be the preferred method for personnel lifting. Retrofitting of powered material handling devices can only be accomplished with the written consent of the manufacturer of the lifting device.
- Powered lifting devices will be used as per manufacturer requirements. Personnel lifts designed for indoor use only must not be used out doors. Outriggers must be used when attached to equipment.
- Personnel must wear a safety harness with lanyard attached to an anchor point on the lift. Personnel must work within the bounds of the lifting platform or scaffold with both feet securely on the floor of the platform. Working with feet on a rail, or working from a ladder placed on the platform is strictly prohibited.
- All entrance gates or chains shall be in their fully closed position before moving the lift.

## SCAFFOLDS

(Rig-Tech employees are prohibited from erecting a scaffold)

- Only heavy duty pole scaffolds and tube and coupler scaffolds should be purchased or rented.
- Footing shall be sound, rigid, and capable of carrying the maximum intended I load. Unstable objects such as barrels, boxes, loose brick, or concrete blocks shall not be used.
- Outriggers will be used when the scaffold is four times higher than the narrowest base dimensions.



- Avoid working under a scaffold when work is being performed overhead. Overhead protection is required when work is being done over personnel working below a scaffold.
  - Fixed or portable ladders must be utilized to gain access to the working platform.
  - Guardrails shall be utilized at any height. Toe-boards must be installed when platform is a minimum of 10 ft (3.05 m) above ground level.
- Height of any scaffold must not exceed 24 ft (7.32 m)

## **17.0 CONFINED SPACE ENTRY**

### **Permit -REQUIRED CONFINED SPACE PURPOSE**

To establish procedures necessary for the safe preparation, entry, and restoration of a permit-required confined space to be entered by personnel. Zero work may be done in a permit-required confined space until a permit has been issued for the work.

Typically, confined space entries are ordered, planned, permitted, executed, supervised and terminated by the Host Company or Person-in-Charge representing the host company. If an Rig-Tech employee is contracted to perform work in a Non-Permit Required Confined Space, he/she must first be provided an orientation of the space to be entered including an emergency plan in the event conditions change.

If a Rig-Tech employee is contracted to perform work in a Permit Required Confined Space, he/she must first attend a Permit Required Confined Space Entry training course that meets OSHA requirements as outlined in 29 CFR Part 1910.146.

### **DEFINITIONS**

Permit-Required Confined Space (Permit Space): means (a) a confined space large enough in which a person may enter and work, but has limited entry or exit and is not designed for continuous employee occupancy, and (b) has anyone of the following characteristics: (i) contains or could contain a hazardous atmosphere; (ii) contains a material that could engulf a person; (iii) has an internal configuration which could trap a person inside; or (iv) contains any other recognized serious safety or health hazard. A Permit Space includes but is not limited to: storage tanks, tank trucks, process vessels, furnace boxes, sewer systems, ducts, flues, manholes, valve boxes, cellars, pipes, pipelines, pits or excavations with side walls 4 feet or deeper without easy means to enter or exit, or any other confined spaces which may contain toxic or corrosive conditions, or flammable, oxygen deficient or oxygen rich atmospheres.

Entry: The action by which a person passes through an opening into a Permit Space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space. Entry does not include part of any employee's body passing through an opening too small to accommodate the entire body.

Site Entry Supervisor: The Site Entry Supervisor is responsible for proper Identification and preparation of the permit space to be entered. He/she should know the proper procedure for testing





and monitoring of the permit space to determine if acceptable or prohibitive conditions exist. [In preparation for entry, a Confined Space Entry Permit, attached as Exhibit A, must be initiated and completed according to the following procedures.

**Entrants (Authorized Workers):** One or more properly equipped and trained person(s) who have been authorized by the Site Entry Supervisor to enter a permitted space.

These workers will be made aware of any known hazards, be properly trained in the use of Personal Protective Equipment and be versed in visual and/or hand communication signals to enhance the monitoring of the entrants status by the attendant while within the permit space.

**(Attendant) Stand-by Personnel:** One or more properly equipped and trained person(s) stationed OUTSIDE the permitted space. The Attendant shall protect the entrants by continuously monitoring all activities within & outside of the permit space. At no time may the Attendant enter the permit space. If an emergency situation arises, the Attendant shall actively participate in a non-entry rescue by requesting emergency services, providing accurate information to rescue personnel (number of entrants, possible problems, atmospheric conditions, time of last contact, etc...) and also assist in directing the emergency situation. These shall be his only job duties while posted as a standby.

**Rescue Service:** One or more properly equipped and trained person(s) designated by the Site Entry Supervisor to rescue or remove injured entrants from permitted space. This service should be stationed on site and may be designated employee or outside contractor who is trained in this procedure.

**Emergency Evacuation Equipment:** That equipment, which is, located outside the permit space that would be needed to rescue or extract a worker from the permitted space. The equipment is not limited to but may include the following: Self Contained Breathing Apparatus or approved hose line with escape feature, lifelines, harness and other equipment such as hoist where rescuing workers from deep excavations (5 ft. or more in depth) and/or large vessels would be difficult. A First Aid Kit shall also be located at the work site.

**Hazardous Atmosphere:** An atmosphere containing flammable vapors, oxygen deficiency or oxygen enrichment, or any air contaminant measured by instrumentation to be in excess of the limits outlined in Section 1.B.5 Atmospheric checks.

**Isolation:** Actions taken to prevent the entry of hazardous materials or the creation of hazardous conditions in a permitted confined space.

**Immediately Dangerous to Life or Health (IDLH):** A condition that possess an immediate or delayed threat to life, could result in irreversible adverse health effects or could interfere with an individual's ability to escape unaided from the confined space. Examples could include, but are not necessarily limited to, oxygen deficiency, explosive or flammable atmospheres and/or concentrations of toxic substances (i.e., carbon monoxide, hydrocarbons, hydrogen sulfide, etc).



## PROCEDURES

### I. Prior to Beginning Work

#### A. Permit Space Preparation

1. The permit space must be properly isolated prior to entry. This permit space isolation shall incorporate the Lockout/Tagout of pressurized vessels/piping, electrical sources, valves & hyd. equipment and the installation of blinds. Disconnection and blinding should take place as close as possible to the permit space. Any isolation or removal of equipment should be listed on a separate sheet and attached to the permit. If necessary, the Lockout tag out standard should be reviewed. The permit space must be purged, steamed, washed, or otherwise cleaned to sufficiently free the permit space of all possible contaminants. All resulting waste shall be disposed in accordance with waste disposal procedures.

2 The required duties of all employees/contractors will be reviewed prior to opening the permit space. This shall include, but is not limited to, the Site Entry Supervisor, Authorized Workers, Stand-by Personnel and Rescue Services.

3 Upon opening the permit space, a "DO NOT ENTER" sign shall be posted at the entrance. This sign shall stay in place until the Confined Space Permit is completed and signed. A "DANGER Confined SPACE ENTRY in PROGRESS, NO Unauthorized ENTRANTS" sign will be in place upon entering the permit space by any occupant.

#### B. Atmosphere Checks and Preparation

1. Natural ventilation is considered inadequate. Mechanical ventilation must be established to ensure movement of fresh air in the permit space. Mechanical ventilation should be started prior to and after testing. The ventilation shall be continued during the entry process to help reduce and/or eliminate atmospheric hazards. An approved breathing airline and escape air cylinder may be used only as an additional precaution for entry after attempts to normalize the atmosphere have failed.

- Air driven or explosion proof electric fans shall be used to pull air from the permit space to ensure proper ventilation. Internal combustion (non-explosive proof power sources) may be utilized for forced air ventilation of the permit space when the worksite has all potential hazards secured and the air intake of the ventilation system is placed in an area that prevents contaminants from entering the fans' intake and being discharged into the permit space.

2. Atmospheric checks shall be taken at various levels of the permit space and recorded on the Permit. Ventilation shall be discontinued during this process. In some cases it may be necessary to enter the permit space to properly check the atmospheric condition. If this is required, a Self-Contained Breathing Apparatus or an approved hose line unit with an escape pack must be worn while the worker is attached to a lifeline or other rescue device during this initial entry.



3. The atmosphere within a permit space shall be tested:

- Prior to entry;
- After each break or interruption of work;
- At each shift change;
- At predetermined intervals; or
- Following an employee complaint or concern.

4. Test instruments shall be calibrated in accordance with manufacturers' instructions. Each instrument shall be tested prior to its use for the completion of a Confined Space Permit.

5. Atmospheric checks shall include the following:

a) Oxygen

Safe test for entry: Minimum 19.5%, Maximum 21.5%

NOTE: Care should be taken while entering a permit space that has been purged by an inert gas.

b) Flammable or Explosive Vapors (% of LEU Safe test for entry: 0% of LEL without respiratory equipment, Maximum 10% of LEL with respiratory equipment, above 10% of LEL, rescue purpose only with respiratory equipment.

6. Emergency Evacuation Equipment shall be available at the worksite. The rescue and extraction equipment will be inspected to ensure that it is in proper working condition.

#### C. Permit Issuance

Upon completion of the above requirements, the Site Entry Supervisor shall review the preparations and the permit space. If all requirements are met, the supervisor may sign the permit and shall post it conspicuously at the work site.

## II. Entry into the Permit Space

A. Prior to Entry, the Site Supervisor shall review the following with all authorized workers (employee(s)/contractor(s); known hazards within the permit space, the responsibility of each authorized worker (Supervisor, Workers, Stand-by Personnel & Rescue Services), & the location and procedures for calling for outside Emergency Services. The facility's Emergency Plan is located at the Facility's Guard Post Station.

B. Authorized workers may enter the permit space only after a Confined Space Entry Permit has been signed and issued.

C. Unauthorized personnel shall not be allowed entry.

D. The permit space atmosphere shall be RE-CHECKED as often as necessary while entrants are within the permit space to ensure a safe work environment.

E. Stand-by personnel must remain in contact (visual, hand signals, etc.) with the personnel in the confined space at all times.



F. Authorized Workers shall wear a full body harness with attached retrieval line while working within the permit space. [n spaces that require a vertical descent of 5' or greater, the retrieval line shall be connected to a hoist.

G. Rescue Services shall be on location while a Permit Space Entry is in progress.

H. The Site Supervisor and/or the attendant shall terminate the permit and instruct all entrants to evacuate the permit space if: an unauthorized worker enters the permit space, when operations covered by the permit have been completed or if conditions not allowed under the permit arise in or near the permit space.

### III. Restoration of the Permit Space

When all work is completed, the permit space must be restored to normal service conditions. Use the Permit as a checklist for proper restoration. The site supervisor will review the work, the restoration of the permit space and, if everything is acceptable, initial the Permit. The Permit should be kept with other records pertaining to the work done.

### IV. Training

Annual training shall be conducted and documented to ensure that each employee is well versed as to his/her role as an active participant in the entry of a permitted space.

## **18.0 RESPIRATORS**

Reserved Section

## **19.0 LEAD/SILICA/ASBESTOS**

Reserved Section

## **20.0 HEARING CONSERVATION**

Reserved Section

## **21.0 LOCKOUT / TAGOUT**

Electrical lockout/tagout procedures shall be used before commencing any work requiring employees to work on or near de-energized circuit parts or any situation where there is danger of injury due to unexpected startup of equipment (Example: motor driven pump).

Other lockout/tagout procedures such as chaining or blinding shall be used for safely isolating other energy sources such as process fluids, hydraulic, pneumatic, thermal, chemical and mechanical systems.

Detailed written procedures for lockout/tagout of primary equipment such as control systems and electrical panels shall be developed and maintained by Operations personnel. Training is required for employees involved in lockout/tagout of energy sources.

### **ELECTRICAL LOCKOUT/TAGOUT PROCEDURE**

The following procedures for lockout/tagout lock, tag, clear, try) shall be followed for exposure to electrical equipment and hazards, except where routine minor adjustments and servicing activities can be performed safely.



1. Perform an initial evaluation to determine exposure(s).
2. Notify affected personnel and properly Shutdown/de-energize the equipment.
3. The person doing the work shall lockout using an approved lock (remember to LOCK open circuit breaker(s). If the device cannot be locked out, it must at a minimum be de-energized and tagged.
4. TAG the lockout with a "DANGER, DO NOT OPERATE" tag.
5. Stored or potential energy should be released or discharged.
6. Each person doing the work shall install a lock and tag. There must be only one key for each lock or set of locks, which will be held by the locking employee(s) until completion of that particular job.
7. Where more than one person is performing work on the equipment requiring lockout/Tagout, a multi-lock adapter must be used.
8. CLEAR the area of personnel and tools prior to trying to start the equipment.
9. Before starting work, attempt to energize the equipment locally. Where an end device is not present to be test started, electrical circuits should be checked for power.
10. Only the person(s) originally attaching the lock and tag is authorized to remove the lock and tag. If absolutely unavailable, the SUPERVISOR can assume responsibility for removal of the lock and tag and notification of all parties.
11. When work is complete, affected personnel shall be notified, locks and tags removed, and the equipment placed back in service.

#### OTHER LOCKOUT/TAGOUT PROCEDURES

- Disconnection of piping and tubing when physically possible. ~
- Single block valves should be closed, locked and tagged as a minimum for certain routine maintenance operations.

#### TAGGING / FLAGGING PROCEDURES

THIS SECTION IS NOT APPLICABLE TO PANELS AND ASSOCIATED EQUIPMENT DURING FABRICATION OR WHILE STILL AT THE PANEL FABRICATION SITE.

Danger tags indicate that a hazard exists. A "DANGER, DO NOT OPERATE" tag (Exhibit II) should be used in the following situations: Valves not in normal operating position. Switches, valves and blinds used to isolate equipment undergoing maintenance. Defective valves, equipment or tools.

- Safety or emergency equipment unfit for use.

#### PROCEDURE

The items listed above should be tagged in the following manner to ensure proper attention.

1. Note the equipment name/identification on the tag.
- 2 Note the condition, fault or reason for tagging.
- 3 Note the date.



- 4 Sign the tag.
- 5 Properly attach the tag.
- 6 If the tag is not readily visible, a flag (bright orange or red ribbon) should also be attached. A flag should never be used without a tag.
- 7 Notify your immediate supervisor.
- 8 Remove tags and flags after safe conditions are restored.

## **22.0 HOT WORK SAFETY**

A Hot Work Permit is a permit that ensures that the area in which hot work is to be performed has been checked and permitted for hot work by a competent person. A Hot Work Permit is required for the following operations:

- Open flames, welding, burning, or creating other ignition sources within 100 ft (30 m) of hydrocarbons, or other flammable substances.

Typically, a Hot Work Permit is initiated and issued by the person-in-charge of a facility or project. If a Rig-Tech employee intends to perform hot work in or near an area where flammable substances may be present, he/she shall consult the person-in-charge prior to commencing work.

## **23.0 HYDROGEN SULFIDE (H<sub>2</sub>S) SAFETY**

### **EFFECTS OF HYDROGEN SULFIDE (H<sub>2</sub>S)**

Hydrogen Sulfide (H<sub>2</sub>S) can potentially be present in some Rig-Tech operations. Exposure may cause some of the following individual symptoms or a combination of these symptoms with longer or more intense exposure: Loss of sense of smell, Skin irritation, Headache, Dryness in nose and throat, Eye irritation, Loss of appetite, Coughing, Fatigue Dizziness, Nausea, Irrational behavior, Loss of consciousness and Death.

### **EFFECTS OF HYDROGEN SULFIDE (H<sub>2</sub>S)**

All Hydrogen Sulfide over-exposure victims should be treated by a physician before returning to work.

#### **Detection Devices**

- Colorimetric tube detectors -Generally used for screening purposes, but (if used in conjunction with the proper respiratory protection) can be used to test atmospheres for safe entry or work typically performed by customer representative.
- Personal monitors -Portable electronic units designed to alert personnel who may encounter Hydrogen Sulfide levels beyond permissible exposure levels.
- Fixed monitors -In areas where Hydrogen Sulfide is present in high concentrations and can affect company or contractor personnel or the public, fixed monitor systems can be used to detect Hydrogen Sulfide.

#### **Respiratory Equipment**

- Escape units -Designed strictly for escape from a Hydrogen Sulfide atmosphere.



- Supplied air unit -Generally used as a work unit. Such units must have a positive pressure feature and must be equipped with an escape cylinder, in case the air supply is interrupted.

#### Safety Precautions

- DO NOT RELY ON YOUR SENSE OF SMELL TO DETECT HYDROGEN SULFIDE.
  - Personal monitors shall be used by all personnel in areas where H<sub>2</sub>S gas concentrations have been detected at concentration of 10 ppm or greater. Pay close attention to enclosed or low lying areas.
  - Warning signs shall be displayed warning of the potential presence of H<sub>2</sub>S. A wind sock shall also be present at H<sub>2</sub>S facilities.
  - Do not enter a Hydrogen Sulfide area without proper training (including CPR) and authorization. In atmospheres immediately dangerous to life or health (IDLH level of 300 ppm or greater), a standby person(s), with suitable self-contained breathing apparatus must be available for purposes of rescue.
  - Never attempt to rescue a Hydrogen Sulfide victim without proper respiratory protection in the form of a SCBA or an approved hose line unit.
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- Employees working in Hydrogen Sulfide areas are required to be ~ clean-shaven to ensure a proper respirator mask-to-face seal.
  - Iron Sulfide deposits are generally found in Hydrogen Sulfide areas in tanks, vessels and piping, Iron Sulfide scale open to air should always be kept wet to prevent ignition.

## 24.0 TRAVEL SAFETY

### DOMESTIC TRAVEL

Rig-Tech employees should plan for safety during domestic travel, giving consideration to general vehicle safety, hotel safety, and avoidance of locations/situations where one could be a potential victim of crime. Key precautions in domestic travel include, but are not limited to the following:

### HOTEL SAFETY

- Enter hotel through main entrance.
- Keep room key hidden until needed.
- When retiring for the night, leave room key on top of nightstand for immediate access.
- Avoid ground floor rooms to prevent entry through the window. Request room on floor; 2-6.
- Secure room door immediately upon entering.
- Verify guest(s) with front desk before answering the door. • notify hotel management of suspicious activity.
- When leaving your room, turn the radio or television on to a moderate volume.
- Avoid conversations with strangers concerning your company, position or purpose of trip.

### HOTEL FIRE SURVIVAL CHECKLIST

- Familiarize yourself with the hotel fire plan.



- Locate the two closest exits to your room.
- Check window for alternative escape route.
- Practice room evacuation in the dark.

#### IN CASE OF FIRE

- Test door for heat before opening and always take room key.
  - Proceed to nearest exit (not elevators).
  - Notify front desk that you are still in your room.
  - Fill the bathtub with water.
  - Use wet towels and sheets to seal cracks under doors.
  - Make a tent to provide fresh air if needed.
- Crawl low to floor to escape the room

#### INTERNATIONAL TRAVEL

In addition to the general travel safety precautions for domestic travel, the following precautions should be taken by Rig-Tech employees who travel abroad. Generally speaking, a low profile should be maintained at all times especially with security.

- Contact HSE Manager for medical briefing, necessary vaccines, supplies and emergency instructions prior to travel.
- Report any security or medical incident immediately to your supervisor.

#### BEFORE YOU LEAVE HOME

- Do not write your company name in passports or on luggage.
- Carry an extra passport copy and photo in luggage.
- Pack any controversial material, business cards or records in luggage.
- Limit the number of credit cards you carry.
- Obtain necessary foreign currency or traveler's checks and avoid displaying currency.
- Learn how to operate public telephones and carry necessary coins.
- Do not wear expensive jewelry or carry large amounts of cash.

#### AIRLINES AND AIRPORTS

- Travel on U.S. airlines where possible.
- If itinerary changes, immediately notify your office and home.
- If possible, travel coach or business class and avoid sitting on the aisle.
- Do not make reservations in the company name.
- Go as quickly as possible to the departure gate and avoid lingering in public lobbies.
- On board, do not discuss your travel plans with strangers.

#### AFTER ARRIVAL

- Utilize transportation arranged by the office or business to be visited as much as possible.
- Do not walk to and from your hotel if possible.





- Choose a taxi carefully and tell your driver your destination only after the taxi is in motion. While walking, use the middle of the sidewalk and avoid curbs.

## **25.0 HELICOPTER SAFETY**

- The helicopter pilot should always provide a safety orientation briefing prior to takeoff.
- When boarding, keep clear of the helipad until the helicopter has landed.
- Approach or depart the helicopter only on signal or command from the helicopter pilot.
- Approach or depart the helicopter from the front quadrants or either side to avoid the tail rotor. When possible, stay in full view of the pilot. When boarding or departing, always approach or leave the aircraft at a 45 degree angle to the front of the aircraft. Under NO circumstances should you walk under the tail rotor or tail boom. See (Exhibit I) to review helicopter danger areas.
- Keep your head low when approaching or departing the helicopter. Beware of the large main rotor.
- Carry long awkward objects horizontal to the ground and always be careful while maneuvering the object for storage, to keep it out of the path of the rotors.
- Keep a firm grip on all hand carried articles, including hard hats, when walking to and from the helicopter.
- Declare any hazardous materials or pressurized containers. Many of these materials are not allowed to be transported by aircraft carrying passengers.
- The pilot is in complete charge of the aircraft; always follow his/her instructions.

## **OFFSHORE SAFETY**

The offshore environment presents some unique hazards. This section provides an overview of travel to and from offshore platforms and rigs and some other operations. “Going Offshore” orientation programs and platform rig briefings should be provided. If you have a specific offshore question, ASK. \*\* Before you travel, make sure you have the following:

- I. Valid Driver License (Photo 10)
- 1 SAFEGULF Card
- 2 Water Survival Card
- 3 Any client license (BP’s 6-1 card)

## **REPORTING TO THE SHOREBASE**

I. Report to the Dispatcher or gate guard at the shore-base or pier to arrange transportation. Transportation will be by helicopter or by boat. Arrive at least 45 minutes to 1 hour before departure time.

- 1 Complete the Passenger Manifest including name, company and destination.

Personnel and baggage weight are also required for helicopter travel.

- 2 All travelers should have personal protective equipment (hardhat, steel-toed shoes or boots, eye protection and hearing protection).



## HELICOPTER SAFETY

The pilot, prior to leaving for offshore destinations, will conduct a preflight orientation. If you have any questions, ask the pilot. For further information on the aircraft, Refer to “General Safety Information Card, Helicopter Safety” provided on board each helicopter.

## BOAT SAFETY

1. Follow the boat captain’s instructions. The captain is in complete charge of the boat and its passengers. The captain has the authority to refuse passage to anyone considered to be an unsafe passenger.
- 2 Provide the captain with all information requested at the time of boarding to include your name, company affiliation and destination.
- 3 Disembarking to/from boat and platform in open water is potentially hazardous. **YOU SHOULD WEAR A TYPE I LIFE JACKET**, snugly fitted and securely fastened while on the boat deck and during personnel transfer by personnel basket or swing rope.

Transfer by personnel basket: Position yourself on the deck of the boat as directed by the boat crew. The basket will be lowered onto the deck from the structure or rig platform. When it is on the deck, place your luggage in the bottom center of the basket. Place one foot on the outside rim of the basket, and grasp the basket ropes securely. Keep your knees slightly bent or flexed, and be prepared for unexpected moves, particularly in rough seas. As the basket is lifted off the boat deck, step onto outside rim of basket with the other foot. Do not lean in or out, but stand straight up.

**NOTE:** Only personal articles, luggage and small parts should be transferred in personnel basket.

Transfer by swing rope: If you are carrying any articles, request assistance from the boat crew during swing rope transfer. Face where the boat is against the platform. Have both hands and arms free, catch the knotted rope when the boat is on top of a swell as the boat begins to drop, swing to the platform by pushing off the boat with your feet. Do not let swing rope get between your legs. Always keep feet and legs clear of the platform landing edge.

**NOTE:** Do not carry luggage while transferring by swing rope. Have luggage handed to you once the transfer has been completed. If luggage is of excess weight, have the articles lifted by other means.

4. In the event that a person falls in the water, immediately shout “Man Overboard”. Assist in the rescue as directed by the captain.

## **27.0 VEHICLE LOADING/UNLOADING**

### GERNERAL SAFETY PRECAUTIONS

- Wear proper personal protective equipment which may include but is not limited to: hard hat, safety glasses, safety shoes and gloves, as required whenever loading or unloading commercial trucks or operating a crane.



- All personnel not assisting in the operation shall stand clear of the operation at all times. Truck drivers and other visitors should not assist in operations other than their own and should also be properly equipped with appropriate PPE.
- All personnel shall adhere to applicable laws and regulations and any Rig-Tech policies and procedures applicable to the operation.
- Forklift and crane operators shall be properly trained.

## EQUIPMENT

- Forklifts and cranes shall not be loaded in excess of their load rating and shall be maintained in good operating condition.
- Securing equipment such as chains, slings, ropes, straps and other load securing equipment shall be sized according to the load requirements and in good condition.

## LOADING/UNLOADING PRECAUTIONS

- Drivers shall report to the person-in-charge upon entering a marine terminal, facility or well location.
  - The carrier is responsible for providing sufficient load securing equipment.
  - The driver is responsible for positioning the load on the trailer and breaking the load.
  - Before loading or unloading, the brakes shall be set.
  - Trucks shall not be repositioned until all personnel are clear.
  - Proper rigging shall be used when loading and offloading equipment and tubulars.
  - Before a truck is allowed to enter or leave a Rig-Tech bay, a spotter shall be positioned to watch for personnel encroaching on the path of the vehicle.
- Any vehicle parked or left unattended in Rig-Tech shop shall shut down engine.



## VEHICLE SAFETY

In addition to the rules listed below, drivers who operate company vehicles, drive rental vehicles on company time or operate their own vehicles on behalf of the company are responsible for the safe operation of that vehicle and may be required to complete a safe driving course, paid for by the employee, if driving records indicate the need (Three moving violations within the time period of three years).

- Drivers must maintain a valid driver's license at all times and must report any changes in status immediately to their supervisor
- Drivers should safely operate vehicles in accordance with all applicable laws
- The 15 MPH speed limit in Rig-TechIC parking lot shall be strictly adhered to.
- Company vehicles should be maintained in a safe operating condition and any unsafe condition should be corrected or reported immediately.
- Operators of vehicles should ensure that all occupants wear seatbelts.
- Drivers shall report all vehicle incidents immediately, to supervisor, no matter how minor (see Vehicle Incident Reporting).
- The use of intoxicants while operating a vehicle is prohibited.
- Alcohol and illegal drugs are prohibited in company vehicles, rental vehicles and personal vehicles driven on company business.
  
- Permitted handguns (handguns carried by persons with current permits to carry concealed handguns), rifles and shotguns are permitted on company property if authorized by the employee's supervisor. All guns must remain in employee vehicles.
- MVR record checks will be periodically accessed and reviewed on all drivers of company vehicles.
- Rig-Tech reserves the right to refuse the operation of company vehicles by anyone with a questionable driving record until completion of a defensive driving course and approval of the Rig-Tech HSE Manager.

### Safe Driving Suggestions:

- Perform a 360 degree walk-around before getting into your vehicle.
- Drive with your lights 011 for safety.
- When parking, "pull through" or back in unless doing so would create a safety hazard or if it is against local policy.
- Check documentation (Insurance Card, Registration, and Inspection)