

# PACIFIC COAST DRILLING CO., INC

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# Introduction

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This Safety and Accident Prevention Program has been developed for the purpose of providing written information to Branch Managers to assist with ensuring employee compliance with established safety standards. All material in this program is geared to give supervisory personnel and employees of Pacific Coast Drilling the necessary structure for an effective safety program on the job.

## Goals and Objectives

Pacific Coast Drilling considers no phase of its operations or administration more important than safety and health. Pacific Coast Drilling will provide and maintain safe and healthful working conditions and insist on safe work methods and procedures at all time. The goals and objectives of this program are:

- ▶ To reduce on-the-job injuries
- ▶ To improve operations by reducing overhead costs associated with injuries and accidents
- ▶ To have employees cooperate with all aspects of our safety efforts
- ▶ To resolve safety problems before they cause accidents
- ▶ To comply with all Federal, State, Local and company safety requirements

Accidents and injuries are defined as unplanned events that disrupt the orderly process of performing work. Accidents can result in job delay and interruption, personal injury, damage to property, material, or equipment, or any combination of these.

To operate an effective program, **Supervisors** are responsible for:

- ▶ The safety of the employees under their direction
- ▶ Ensuring compliance with the company safety program
- ▶ Ensuring that a foreman is designated to assume responsibility when absent from the job
- ▶ Conducting frequent safety inspections of the area of responsibility for the purpose of identifying and correcting unsafe conditions and practices
- ▶ Actively participate in accident investigations when necessary
- ▶ Train and orient employees on safety procedures
- ▶ Ensuring employees are capable of performing their work safely
- ▶ Lead by example in all aspects of work

**Employees** are responsible for:

- ▶ Following all safety requirements contained in this program
- ▶ Follow safety instructions from foreman, superintendents, corporate officers or other competent personnel
- ▶ Inform supervisors about unsafe conditions and practices immediately upon knowledge
- ▶ Notify a supervisor, immediately, in the event of an injury
- ▶ Develop and adopt safe work habits, procedures and practices

**Failure to follow this program will result in disciplinary action up to and including discharge.**

## *Introduction - Continued*

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**Branch Managers** are responsible for:

- ▶ Establishing and dictating safety and health procedures for their location, which conforms to the scope of operations performed
- ▶ Monitoring the effectiveness of the program using claim frequency and dollars spent on workers' compensation
- ▶ Evaluating the efficiency of established safety standards and making changes when appropriate
- ▶ Discussing safety and health matters at all staff meetings
- ▶ Assuming responsibility for the safety of all employees working under their management

**Yard Superintendents** are responsible for:

- ▶ Taking full responsibility for the safety of field operations
- ▶ Pre-planning safety into all new and existing construction projects
- ▶ Meeting with the general contractors when necessary
- ▶ Conducting regular and unscheduled safety inspections to identify and correct unsafe conditions and unsafe practices
- ▶ Conducting or participating in accident investigations on all injuries
- ▶ Ensuring that new-hire orientation and training are conducted for all Pacific Coast Drilling employees

# Safety Policy Statement

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It is the policy of Pacific Coast Drilling Co., Inc that the Safety and Health of our employees is of the highest priority. Accident prevention shall be considered of primary importance in all phases of operations and administration. It is our intent to always maintain effective standards that will guard against injuries and illnesses occurring on the job.

It is our direct responsibility to provide you a program that will conform to safe work practices in the construction industry. For the program to be successful, your active and positive attitude toward the prevention of injuries and illnesses is mandatory.

It is the duty of each employee to accept and follow established safety regulations and procedures. Only through cooperation and efforts among the company, its supervisors, and all employees, can we maintain an effective Safety and Accident Prevention Program.

The primary objective is to avoid accidents through the means of eliminating unsafe working conditions and work practices. Every effort will be made to provide adequate training to employees. It is the employee's responsibility to seek assistance from a qualified person when unsure how to perform a job safely. Pacific Coast Drilling believes that injuries can be prevented by following accident prevention practices and procedures. Pacific Cost Drilling will provide all equipment and facilities necessary for personal safety.

Any injury that occurs on the job, even a slight cut or strain, must be reported to management or your job supervisor immediately. Under no circumstance, except in an emergency, should an employee leave the workplace without reporting an injury that occurred.

Violation of company safety standards could not only threaten your health, but the health of co-employees. Violation of safety regulations and procedures is grounds for disciplinary action. Any willful violation could result in termination of employment.

The person in charge of the Pacific Coast Drilling Co., Inc Safety Program is Chris Sykes. You may call Chris Sykes to make suggestions, report safety violations or discuss concerns, at any time.

**NO EMPLOYEE IS REQUIRED TO WORK AT A JOB SITE THAT THEY BELIEVE IS NOT SAFE AND NO JOB IS SO IMPORTANT THAT WE CANNOT TAKE THE TIME TO PERFORM IT SAFELY.**

Your support with ensuring compliance is sincerely appreciated,

Chris Sykes, Sec/Tre  
PACIFIC COAST DRILLING CO., INC.

Date

# Safety Communication Policy Statement

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It is the policy of Pacific Coast Drilling Co., Inc to maintain open communication between management and staff on matters pertaining to safety. Your thoughts regarding safety are considered important, and we encourage your active participation in the safety program.

We want to encourage all employees to express any concerns or suggestions, during safety meetings, individually to your Job Supervisor, or in writing on the Employee Safety Information Form. You have the choice of remaining anonymous, however this will make it difficult to provide you special recognition if your suggestion is effectively put to action.

All safety suggestions are given serious consideration, and no suggestions will go unanswered.

No employee will be discouraged, or suffer negative consequences, for actively participating in the safety program.

In turn, to communicate matters of safety, Pacific Coast Drilling will provide current safety news, safety activities and reading materials, signs, and posters, which will be easily accessible to all employees.

Regular safety meetings will be held so that all employees have an opportunity to receive ongoing training and voice personal opinions regarding safety. Employee attendance at scheduled safety meetings is mandatory.

Thank you for your participation in maintaining a safe and healthy workplace.

Chris Sykes, Sec/Tre  
PACIFIC COAST DRILLING CO., INC.

Date

# Hazard Communication Policy Statement

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The purpose of this notice is to inform and/or remind you that Pacific Coast Drilling Co., Inc has developed a Hazard Communication Program, in compliance with Title 8 of the California Code of Regulations, Section 5194. The program is intended to provide information relevant to potentially toxic substances or harmful agents that you may be exposed to during normal working conditions or during emergencies.

Together with the job supervisor(s), Chris Sykes has been assigned as the responsible individual for implementation and maintenance of the Hazard Communication Program.

Chris Sykes maintains a master list of all potentially toxic substances used by the company, with corresponding Material Safety Data Sheets (MSDS). Job Supervisors are responsible for advising Chris Sykes of any new substances that may be introduced at a specific job location.

Job Supervisors are responsible for providing training to employees when initially hired and when new substances are introduced at a job location. Job Supervisors are required to maintain a list of all substances present at a specific job location, with corresponding Material Safety Data Sheets (MSDS).

Job Supervisors will be responsible for obtaining information relevant to potentially hazardous substances used by other contractors at specific job locations. This information will be relayed to all employees to ensure proper safety measures are implemented to avoid potential exposure to injury or illness.

All employees are entitled to the following information:

- Notification of your right to review the Hazard Communication Program, and information relevant to the required elements of the program
- Identity of the person responsible for the implementation and maintenance of the program
- Location(s) of inventory lists and corresponding MSDS
- Notice of availability of Material Safety Data Sheets (MSDS) to all employees, collective bargaining representatives, or treating physicians

In addition to your right to review Material Safety Data Sheets or other information that exists for chemicals or substances used in the workplace, under the provision of the General Safety Order §3204, employees have the right to see and copy:

- Your medical records and records of exposure to toxic substances or harmful physical agents
- Records of exposure to toxic substances or harmful physical agents of other employees with work conditions similar to yours

The master inventory of hazardous substances and corresponding Material Safety Data Sheets is accessible at the corporate office, in the lunchroom during working hours. For questions regarding the Hazard Communication Program, contact Chris Sykes.

If you believe you are working with potentially hazardous substances that you have not been properly trained for, or are being exposed to substances at a specific job location, please advise Chris Sykes immediately.

Employees are not permitted to bring hazardous substances to the workplace, without prior approval.

No employee shall be discharged, or in any manner discriminated against, because they exercise their rights provided under the provisions of Labor Code §6360 through §6399.7 (Hazardous Substances Information and Training Act).

## Section

# 1

## Injury & Illness Prevention Program

Pacific Coast Drilling Co., Inc has developed the following Injury and Illness Prevention Program, in compliance with Title 8 of the California Code of Regulations, General Industry, and Construction Safety orders.

As outlined in our company Safety Policy Statement, our primary objective is to avoid accidents through the means of eliminating unsafe working conditions and work practices.

### **OUR GOAL IS ZERO ACCIDENTS AND INJURIES**

Our Injury and Illness Prevention Program is designed to address, in detail, the following areas:

- 1) Program Implementation and Responsible Person
- 2) Supervisor's Responsibilities
- 3) Safety & Health Policy Communication
- 4) Workplace Inspections and Corrections
- 5) Employee Communication Policy
- 6) Employee Notification and Training
- 7) Employee Compliance Procedures
- 8) Accident Investigation Procedures
- 9) Documentation and Recordkeeping Policy
- 10) Multi-Employer Job Site Exposures

## 11) Cal/OSHA Inspections

### 1) **PROGRAM IMPLEMENTATION AND RESPONSIBLE PERSON**

Chris Sykes is responsible for the implementation and maintenance of the Injury and Illness Prevention Program (IIPP) for Pacific Coast Drilling Co., Inc. Full authority is granted by Pacific Coast Drilling to properly manage and enforce all provisions of this policy.

#### **Responsibilities will include:**

- Identifying exposures specific to operations performed by Pacific Coast Drilling
- Developing procedures for complying with required elements of the safety program and delegating responsibility to Supervisors, as appropriate
- Establishing safety procedures to be followed by all employees
- Providing appropriate training and continued education to Supervisors responsible for enforcement of safe work practices and conditions
- Monitoring delegated responsibilities to ensure compliance
- Monitoring workplace hazard inspections and corrections
- Maintaining all records and documentation relevant to the implementation and maintenance of the IIPP
- Maintaining all records relating to changes implemented in response to new regulatory requirements and changing needs within the company
- Performing periodic reviews of the IIPP to confirm that no changes are required
- Conducting periodic meetings with Branch Managers and Supervisors for discussion of safety and accident concerns

### 2) **SUPERVISOR'S RESPONSIBILITY**

Supervisors are responsible for enforcing compliance with the IIPP at the job sites. A copy of this program is provided to each Supervisor for their reference. Supervisors are required to familiarize themselves with the IIPP to assist with its effective implementation.

At specific job sites, Supervisors will be responsible for the following functions:

- Conduct initial job site inspection and document all identified hazards and potential exposures
- Communicate existence of all safety policies implemented to employees
- Assist management with the new-hire process and verify employees are properly trained to performed assigned tasks

- Ensure all required job site posting notices are displayed and/or accessible
- Conduct daily job site surveys to assess any potential hazards and communicate findings to employees
- Conduct and document safety training every 10 working days
- Conduct formal job site inspections, not to exceed every 30 days
- Correct all identified job site hazards and potential exposures
- Enforce employee compliance with safe work practices
- Perform accident investigations when required
- Document all required elements of the IIPP

### 3) **SAFETY AND HEALTH POLICY COMMUNICATION**

Pacific Coast Drilling will maintain the following procedures for communicating to employees' policies implemented in effort to maintain safe work practices and conditions.

#### **Required Posters:**

All necessary posters will be displayed on facility bulletin boards. Poster verification is to be performed during scheduled inspections to make sure they are posted. If a poster is missing, the supervisor is to replace the poster as soon as possible. Mandatory posters on the bulletin board include all Federal, State and Cal/OSHA required notices. The company's safety program will also be posted. Medical arrangements will be posted along with the criteria for reporting injuries and accidents.

#### **Employee Placement and Orientation:**

Pacific Coast Drilling will not discriminate against any employee by race, creed color, sex, national origin, or any other factors that are considered discriminatory. Nevertheless, when hiring employees at Pacific Coast Drilling, safety will be considered during the hiring process. Safety aspects such as skill level and a person's ability to perform manual material handling and their ability to work on elevated work areas must be considered when placing an employee.

When a new employee or group of employees is about to start work, the supervisor will orient each person to the job and find out what the new person can and cannot do.

During orientation, the supervisor will:

- Introduce the safety program
- Discuss safety and performance expectations
- Provide the necessary personal protective equipment required to perform assigned tasks safely
- Demonstrate proper use and care of equipment.
- Review initial job responsibilities, special plans and procedures, with the emphasis being on safety

- Review the work area and discuss potential hazards
- Instruct proper safety procedures implemented
- Review ongoing training that will be provided during employment, and how the training will be conducted
- Review of employee's requirement to comply with all safety and health standards, and consequence for violation of same

Documentation provided to all new hires will include:

- A copy of the company Injury & Illness Prevention Program
- A copy of the Safety Communication Policy Statement
- A copy of the Hazard Communication Policy Statement
- A copy of the Code of Safe Practices (A signed Code of Safe Practices - Acknowledgement of Receipt will be obtained from all employees)

#### **4) WORKPLACE INSPECTIONS AND CORRECTIONS**

In addition to daily job site inspections, Branch Managers and Supervisors will perform formal inspections (not to exceed every 30 days) for the purpose of identifying and evaluating workplace hazards.

A Hazard Inspection Form (Checklist) will be used when performing workplace inspections.

A Hazard Identification & Correction Form will be used to document identified hazards and potential exposures requiring correction. This form will also be used to document the following:

- When new substances, procedures or equipment are introduced at the workplace/job site
- When new or previously unidentified hazards are recognized, or brought to management's attention
- When an accident occurs
- Whenever a work practice or condition requires attention

Identified unsafe or unhealthy work practices and conditions will be corrected in a timely manner to be consistent with the severity of the identified hazard.

Under no circumstances will an employee be permitted to work under conditions that pose a clear or imminent danger.

When an imminent hazard is identified and immediate correction is not possible, all exposed workers will be removed from the area. Employees responsible for correcting the hazardous condition will be provided with the necessary training and protection.

#### **5) EMPLOYEE COMMUNICATION POLICY**

Pacific Coast Drilling encourages all employees to report unsafe work practices and job hazards to their Supervisor or Management for correction. A copy of the Safety

Communication Policy Statement is provided to all employees at the time of hire.

Employee Safety Information forms will be made available to employees for the purpose of providing suggestions, or reporting an unsafe workplace condition or practice. Forms are provided at the time of hire, with the Code of Safe Practices.

Employees who report job site hazards, or identify unsafe work practices, will not suffer retaliation because of their active participation in supporting Pacific Coast Drilling's efforts to maintain an effective Injury and Illness Prevention Program.

Employee participation in securing a safe and healthy workplace is expected. Employees are advised of their role in safety prevention at the time of hire.

## **6) EMPLOYEE NOTIFICATION AND TRAINING**

All employees, permanent and intermittent, to include Managers and Supervisors will be provided necessary training and instruction on general and job-specific safety and health practices. Employees who have been trained through an approved Cal/OSHA Occupational Safety and Health training program will be advised of all job site hazards to confirm that there are no areas that they have not received training for.

Management will provide Supervisors with the proper tools, and training, to assist with the enforcement of job safety.

The training of employees will be an ongoing operation at Pacific Coast Drilling. Safety must be incorporated into all training sessions.

In order to train effectively, supervisory personnel need to follow these simple guidelines:

- Be familiar with the subject being taught
- Believe in the subject. If you do not believe in what is being taught, then employees will tend to be less receptive.

The training of employees will be continual and frequent, using the guidelines listed below (Please note that these are minimums.):

- Orientation.....All new employees prior to starting work
- Safety Meetings.....All personnel not to exceed every 3 months
- General Training.....As needed to address identified hazards
- Toolbox Training.....Job Foreman are responsible for conducting safety raining at least every 10 working days. Training will be documented on the Toolbox Safety Meeting Report. Employee participation is mandatory.

- Supervisory meetings will be held on a quarterly basis to discuss inspections, job progress, anticipated hazards and problems, accidents and injuries, along with any other business that is pertinent to the safety of the employees
- Additional meetings must be held after any injury or accident, prior to any unusual hazardous operations, and when new equipment or procedures are introduced.

The following personnel are responsible for training:

- General Training & Safety.....Company Safety Officer
- Crane Training & Safety.....Crane Superintendent
- Trucking & Warehousing.....Yard Superintendent
- Rigging & Machinery Moving.....Rigging Superintendent

## 7) EMPLOYEE COMPLIANCE PROCEDURES

Mandatory compliance with safe work practices is required from all employees, permanent and intermittent, to include Managers and Supervisors.

Supervisors are responsible for ensuring that all employees comply with the provisions established for safe work practices, and that personal protection equipment is properly used.

Supervisors are required to enforce safe work practices in a fair and uniform manner.

Supervisors are responsible for evaluating the performance of all employees, and providing specific training to employees whose work habits are unacceptable.

Supervisors are responsible for informing management when employees fail to comply with safe work practices. A Notice of Safety Infraction form will be used to document safety violations.

Management will review the Notice of Safety Infraction to determine the appropriate disciplinary action required.

**Infractions of safety rules will result in the following action(s):**

- |                                  |   |
|----------------------------------|---|
| <b>1<sup>st</sup> Infraction</b> | <b>Written Warning</b>                    |
| <b>2<sup>nd</sup> Infraction</b> | <b>Written Warning w/Probation Status</b> |
| <b>3<sup>rd</sup> Infraction</b> | <b>Suspension</b>                         |

A willful violation of safe work practices, which threatens the employee's life or

the life of another individual, may result in immediate termination of employment.

#### **8) ACCIDENT INVESTIGATION PROCEDURES**

In the event of an accident resulting in injury or illness, or near-miss incident, Supervisors will conduct an investigation. A Supervisor's Report of Accident/Exposure form will be used to document the investigation, which will consist of the following:

- Interviewing the injured worker(s), if possible
- Obtaining names of witness(s)
- Determining the cause of the accident/exposure
- Examining the work site for hazards that may be associated with the accident/exposure
- Determining whether or not the accident/exposure could have been avoided, and if so, how
- Identifying the corrective action, if applicable, taken to prevent the accident/exposure from reoccurring. This procedure will also be documented on the Hazard Identification & Correction form
- Provide necessary training to employees when a new hazard is identified. This procedure will be documented on the Report of Safety Meeting form

#### **8) ACCIDENT INVESTIGATION PROCEDURES - *CONTINUED***

Supervisors must notify management, immediately, of any accident/exposure. Supervisors are required to submit the completed Supervisor's Report of Accident/Exposure form to management within 1 working day of the occurrence.

Supervisors will be responsible for providing the injured employee with an Employee's Report of Accident/Exposure form.

The injured employee is required to complete the Employee's Report of Accident/Exposure form and provide a copy to Management within 24 hours of the accident/exposure, unless he or she is physically unable to do so.

Management will be responsible for processing appropriate documentation relevant to Workers' Compensation procedures.

#### **9) DOCUMENTATION AND RECORD KEEPING POLICY**

The following records will be retained for a minimum of **3 years**:

- Scheduled and unscheduled periodic inspections, which will include methods used to identify, evaluate and correct work site conditions and practices.
- Records relating to individual safety and health training

- Records relating to group training and tailgate sessions
- Records relating to the investigation of accidents/exposures resulting in injury or illness
- All records relating to the implementation and maintenance of all safety programs

The following records will be retained for at least **5 years**:

- Records relating to workplace fatalities, injuries and illnesses (form 5020)
- Cal/OSHA Form 200 (Log and Summary of Occupational Injury and Illness)

The following records will be retained for at least **30 years**, as applicable:

- Records relating to employee exposure to hazardous and toxic substances, in accordance with 8CCR §3204 General Industry Safety Orders

#### **10) MULTI-EMPLOYER JOB SITE EXPOSURES**

Supervisors will be responsible for ensuring that all employees comply with safety procedures implemented by other contractors/employers that Pacific Coast Drilling has a contractual relationship with.

#### **11) CAL/OSHA INSPECTIONS**

When a Cal/OSHA officer shows up on the job site to perform an inspection, the following guidelines must be followed:

- Be cordial and professional
- Ask why the inspection is taking place
- Have the appropriate personnel accompany the compliance officer during the inspection. The superintendent must accompany the compliance officer at all times on the job site.
- Do not offer anything or hide anything. Show the compliance officer only what is asked for.
- Notify the office immediately after the inspection and give an overview of what happened. Following the phone conversation, the superintendent must draft a brief written account and forward a copy to Pacific Coast Drilling's corporation office.
- Make immediate arrangements to investigate possible citations.

## Section

# 2

## Code of Safe Practices

It is the policy of Pacific Coast Drilling Co., Inc that everything possible will be done to protect employees, as well as the general public. Safety is a cooperative undertaking requiring participation by every employee. Failure by an employee to comply with safety rules will be grounds for corrective discipline. Supervisors will insist that employees observe all applicable State, Federal, and Cal/OSHA safety rules and practices, and take the necessary action to obtain compliance.

Chris Sykes is the responsible individual for establishing procedures and ensuring compliance with the company's Code of Safe Practices

To comply with the Code of Safe Work Practices, employees will:

- **GENERAL SAFETY RULES**

- 1) Observe and obey all safety rules and regulations. Pacific Coast Drilling's Injury & Illness Prevention Program is available for review upon request.
- 2) Supervisors will insist on employees observing and obeying safety rules and regulations, and shall take necessary action to obtain compliance.
- 3) Be attentive to safety training that will be provided at hire, at Toolbox Safety Meetings and whenever warranted to address identified hazards. All employees are required to attend safety meetings whether conducted by Pacific Coast Drilling or the acting General Contractor at any given job site.
- 4) Report all unsafe work practices and conditions to your Supervisor. If you do not receive proper response from your Supervisor, contact Chris Sykes.
- 5) Report to work refreshed, alert, and ready to work, safely and responsibly. No employee shall attempt to work when his or her ability, or alertness, is impaired to the extent that duties performed might cause exposure to personal injury or injury to others.
- 6) If you are under the influence of alcohol, drugs, or other controlled substances, you will not be allowed at work. If you are caught consuming these substances on the job, you may be discharged.
- 7) Only perform tasks that have been assigned to you and that you have been

properly trained to perform. If you are unfamiliar with the operation of a specific tool or piece of equipment, advise your Supervisor immediately to ensure that you receive the appropriate training.

- **GENERAL SAFETY RULES - CONTINUED**

- 8) Employees are not permitted to enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that it is safe by a competent person and proper training has been provided.
- 9) Employees are to ensure that all guards and other protective devices are functioning, and shall report deficiencies promptly to the Supervisor.
- 10) Horseplay, fighting and any other action that has a negative impact on the safety of employees is prohibited.
- 11) When lifting heavy objects, the large muscles of the leg, instead of the smaller muscles of the back should be used.
- 12) Inappropriate footwear or shoes with thin or badly worn soles shall not be worn.
- 13) Materials, tools, or other objects are not to be thrown from buildings or structures, unless proper precautions are taken to protect others from the falling objects.
- 14) Always obey “No Smoking” and other safety signs.
- 15) Hazard Communication: At the time of hire all employees will be trained in the content of the Hazard Communication Program. Supervisors are responsible for advising employees of hazardous substances present at a specific job site. If you have not been advised of the proper procedures for handling hazardous substances, advise your Supervisor or Management.
- 16) Emergencies: Supervisors are responsible for instructing the employees in the procedures implemented for specific job sites. If you have not been advised of the proper procedures to follow in the event of an emergency and evacuation, advise your Supervisor or Management.
- 17) Fire Prevention: Supervisors are responsible for instructing the employees in the procedures implemented for the specific job site. If you have not been advised of procedures implemented for fire safety, advise your Supervisor or Management.
- 18) **IMPORTANT:** When you are injured, notify your Supervisor or management immediately. As a California employer, we maintain workers’ compensation insurance in order to make sure you receive proper medical care, and the benefits allowed by law. Unless you have provided written notification to Management of your designated physician in the event of a work related injury (prior to an injury occurring), your medical treatment will be provided by a facility designated by Pacific Coast Drilling. For additional information,

contact Management.

- 19) MOST IMPORTANT: When in doubt, ASK QUESTIONS FIRST!  
Employees will never be reprimanded for being safe.

- **CLOTHING & PERSONAL PROTECTION EQUIPMENT**

All personal protective equipment will be supplied by Pacific Coast Drilling for its employees. The Supervisor will provide and demonstrate the use and care of this equipment during new-hire orientation and when new tasks are assigned.

Personally owned safety equipment will be allowed if it is in good condition and meets all Federal, State, Cal/OSHA, and company safety requirements.

Regardless of precautions taken when performing certain tasks, hazards may remain that could cause serious and even fatal injuries. When a task cannot be redesigned to eliminate all hazards, an acceptable means to prevent injury is the use of Personal Protective Equipment (PPE). The following safe practices addresses proper clothing and the use of PPE:

- 1) Dress appropriately! Loose clothing and jewelry could result in injury. Supervisors are required to enforce the “no jewelry” rule, which includes no necklaces, bracelets, or rings.
- 2) Supervisors must enforce the use of hats, hairnets, or other devices to keep the hair away from machinery.
- 3) Work boots specifically designed for the construction industry must be worn on all job sites.
- 4) Wear your hard hat when required.
- 5) Supervisors must evaluate tasks to determine if there is a need for the employee to wear PPE. This determination should be based upon the types of exposures that exist and the actual loss experience for a particular task. The evaluation has to determine which exposures may be harmful. PPE must meet ANSI standards and OSHA guidelines. This evaluation process must be documented.
- 6) Supervisors must enforce the use of PPE and ensure PPE is maintained in a sanitary and good working condition.
- 7) Supervisors are responsible for training employees on the proper fit, use and care of the PPE. All training must be documented.
- 8) When necessary (i.e., grinding, sawing, concrete work, jack hammering or chipping), eye protection must be worn.
- 9) Always wear dust masks when cutting fire retardant lumber.

- 10) If working around traffic or equipment, wear your safety vest at all times. Utilize the correct equipment provided for the job (i.e., signs, paddles and flags).
- 11) Gloves are to be worn when handling concrete, lumber, cable, or any material that can cause injury to your hands.
- 12) Rubber boots are to be worn when working with concrete or any other substance that could cause irritation or injury.
- 13) Earplugs, or other hearing protection, must be worn around any equipment or noisy area.

- **CLOTHING & PERSONAL PROTECTION EQUIPMENT - CONTINUED**

- 14) If you are doing any kind of work that may require special protective equipment, let your supervisor know. Employees have the right to know what hazards are associated with the material they are handling. This information is available in the form of Material Safety Data Sheets (MSDS).

- **HAND PROTECTION**

As our own personal tools, our hands are subjected to unbelievable punishment. Safeguarding our hands from such injuries as burns, lacerations, splinters, and amputations is an important part of a safety program. The following steps are guidelines to help Managers, Supervisors, and Employees reduce hand injuries.

- 1) Identify tasks and processes that expose hands to potential injuries
- 2) Hand protection is required for workers exposed to cuts, burns, or harmful physical or chemical agents. Safety guidelines must be followed to reduce the exposure to such injuries.
- 3) Select and use appropriate hand protection, such as gloves. When working with solvents, use barrier creams. Supervisors are responsible for enforcing use of safety precautions.
- 4) Supervisors must train employees to recognize hazards, such as sharp edges, broken glass, falling objects, chemicals, flammables, electricity, and tasks that require repetitive hand and wrist movements. Supervisors are required to train employees on procedures implemented to avoid injuries caused by these types of injuries.
- 5) Supervisors are required to ensure prompt first-aid and medical treatment is administered when an employee sustains a hand injury.

- **LIFTING PROCEDURES**

Many painful injuries happen to construction workers because they forget the basics of safe lifting. If you are not conscious of how easy it is to hurt your back, and fail to develop habits to protect it from excessive strain, you could end up suffering with a serious back problem.

Some tips to avoid back strains and conditions caused by gradual wear-and-tear are:

- 1) Before you proceed to lift and move an object, make sure your path of travel is free of debris and obstacles that could cause you to trip and fall.
- 2) Do not attempt to lift objects over 100 pounds, or large objects that cannot be easily balanced, without assistance.
- 3) Remove mud or grease from your hands and feet before lifting and carrying objects.
- 4) Inspect objects for sharp edges, corners, or nails.
- 5) When you prepare to lift an object—NEVER bend at the waist!
  - Get close to the load
  - Bend your knees and squat down
  - Tighten your stomach muscles (don't hold your breath)
  - Keep your back aligned as much as possible
  - Make sure you have a secure grip and solid footing
  - Lift with your leg muscles—NOT your back!
  - Lift smoothly—DO NOT jerk your body when lifting! (Hint: If you have to jerk your body to lift something, chances are it is too heavy and you should have asked for help!)
- 6) Keep the load close to your body to minimize the strain.
- 7) When carrying or setting down an object—pivot with your feet, NOT your back!
- 8) Use hand-trucks and other mechanical aids when possible.

- 9) When the load is too heavy or awkward—Ask for help!
- 10) If lifting an object with another employee, establish signals for moving and setting down the object.

- **FIRE SAFETY**

**Fire Safety – General Procedures:**

- 1) Supervisors are responsible for instructing the employees in the procedures implemented for specific job site locations.
- 2) Fire extinguishers and applicable fire suppression equipment will be located in easily accessible locations and remain visible at all times.
- 3) Building exits will be clearly identified and kept free from obstructions.
- 4) General work areas will be kept clean and free of unnecessary clutter.
- 5) Discarded packing material or scrap will not be allowed to accumulate in open areas.
- 6) Sufficient number of wastebaskets and/or trash receptacles (including noncombustible containers) will be accessible in all work areas.
- 7) Floors will be swept or vacuumed to prevent accumulation of combustible materials.
- 8) Equipment will be kept clean (avoid build up of fluids, grease, etc.).
- 9) Designated “NO SMOKING” areas will be observed. Signs will be clearly posted in areas where flammable or combustible liquids are stored.

**Fire Extinguishers (Portable):**

Fire extinguishers are a first-aid device used to extinguish minor fires before they become major. The law requires that such units be selected appropriately, maintained, ready for use at all times, and that those who use them are fully trained to do so. The following steps will help management ensure that fire extinguishers are maintained adequately and that employees know how to use them.

- 10) Select fire extinguishers that are approved to extinguish the specific type of

fire that could occur in each area. The most common type of extinguishers now used throughout industry are dry chemical units which are capable of extinguishing all basic types of fires including wood and paper (Class A), flammables (Class B), and electrical (Class C). These extinguishers have an ABC rating.

Halon extinguishers are recommended over dry chemical units to protect computer rooms because the latter are caustic and can damage expensive, sensitive equipment.

The size of the extinguisher is based upon the area that needs to be protected. Fire extinguisher distributors will help in selecting the proper type and size.

- 11) In general, mount fire extinguishers where employees can see them, close to exits. Where a fire may start in a small room, it may be better to mount the extinguisher on the outside of the room so that firefighters can grab the unit before entering the room. In most cases, the tops of fire extinguisher unit must be no more than 48 inches from the ground and be accessible, i.e., clear of storage in front of the unit, a distance of 36 inches, minimum.

- **FIRE SAFETY - CONTINUED**

- 12) Fire extinguishers require a monthly inspection by in-house personnel. The inspection is documented on a tag tied to the unit or in a logbook maintained in a central location.
- 13) A qualified contractor must inspect extinguishers yearly and such inspection must be documented.
- 14) Extinguisher cylinders require hydrostatic testing on a periodic basis in accordance with OSHA and NFPA standards.

**Flammable Liquids:**

If not handled extremely carefully, flammable liquids can produce catastrophic results. Knowing how to handle such liquids is a basic necessity.

- 15) Provide adequate ventilation when storing or using flammable liquids to prevent the accumulation of flammable vapors.
- 16) Eliminate sources of ignition near flammable and combustible liquids.
- 17) Substitute with nonflammable liquids wherever possible.
- 18) Use approved containers for the storage and handling of flammable and combustible liquids.
- 19) Keep solvent wastes and flammable liquids in fire-resistive covered containers until they are removed from the work area.
- 20) Store combustible scrap, debris, and waste material (oily rags, etc.) in covered metal receptacles, and remove such wastes from the worksite daily.

- 21) When using a solvent to clean oily or greasy parts, put the solvent in a parts washer that has a fusible link built into the cover. In the event of a flash fire in the washer, the fusible link will burn through and the cover will close, suffocating the flames. Such washers and their covers must be maintained to ensure that this mechanism operates properly at all times.
- 22) Smoking or any open flame will not be permitted around gasoline pumps, tanks, paint, lacquers, stains, glue, or flammable solvents.
- 23) Flammable liquids will only be used where there are no open flames or other sources of ignition with the possible path of vapor travel.
- 24) Gasoline, paint thinners, and other low flash point solvents will not be used for cleaning purposes.
- 25) Spilled flammable and combustible materials will be cleaned up immediately. Employees are to immediately notify the Supervisor if the substance is hazardous.
- 26) Oil or chemical soaked rags will be discarded/placed in metal or other suitable containers.
- 27) Employees will be instructed to notify the Supervisor of leaking or defective containers. Supervisors will be responsible for ensuring that materials used are properly contained and labeled.
- 28) Storage of flammable and combustible liquids in open containers will not be permitted.

- **HAZARD COMMUNICATION SAFETY BRIEFS (RIGHT-TO-KNOW)**

Pacific Coast Drilling provides information about hazardous materials used in our stores and distribution centers to all employees who use or who could be exposed to such materials. The data includes information on chemical labeling, Material Safety Data Sheets, and employee training on the safe use and handling of the materials. These eight steps are basic safe work practices to follow when working with hazardous materials.

- 1) Use warning labels to identify hazardous materials and use hazards associated with them.
- 2) Read all labels carefully to determine the recommended safety precautions.
- 3) Know where the Material Safety Data Sheets (MSDSs) are located. Read and use the MSDSs of the products you use to understand, determine, and apply the safety precautions, personal protective equipment, and the type of hazards associated with the use and storage of the material.
- 4) Wear all required personal protective equipment when working with hazardous materials.
- 5) Know how to fit, clean, and store the personal protective equipment.

- 6) Use established engineering methods to control exposures as instructed. Engineering controls help reduce exposure to hazardous materials.
- 7) Follow all safe work practices when using or handling hazardous chemicals. If in doubt, ask your Supervisor for help.
- 8) Know where Pacific Coast Drilling's written hazard communication program is kept for employee access and read it. The written program clearly outlines the purpose and intent of the Hazard Communication Policy.

- **EMERGENCY CRISIS RESPONSE**

In the event of an emergency, or a situation that could evolve into an emergency, management must be notified immediately.

During the new-hire orientation, employees will be advised of the company Emergency Action Plan and the procedures implemented for responding to emergencies, to include Fire/Explosion; Natural Disasters; Earthquake; Chemical Leak, Spill or Threatened Release; Bomb Threat; and Civil Disturbance.

When beginning work at a new project, employees will be informed of procedures implemented for responding to emergencies at that specific location. The alarm system that will be used to initiate evacuation of the job site will be identified.

When a job site evacuation is initiated, **Employees:**

- 1 must proceed to the designated assembly area
- 2 are not to stop and pick up personal belongings when exiting the job site/structure
- 3 are not to block areas that would be considered access for emergency vehicles

- 4 will not be allowed to re-enter the job site/structure without clear indication that it is safe to do so
- 5 cannot leave the assembly area unless advised to do so by a designated employee or supervisor
- 6 will be instructed not to respond to news media - Contact with the media is limited to management only

**The most important focus of an emergency is the protection of human life.**

- **OFFICE PERSONNEL**

- 1) Report all safety hazards to Management for correction.
- 2) Keep desk and work areas clean and orderly.
- 3) Wipe up spills immediately to prevent slips and falls.
- 4) Keep electrical and telephone cords out of aisles.
- 5) Keep all drawers closed when not in use. Never open more than one file drawer at a time.
- 6) Store heavy items at waist level in order to avoid unnecessary reaching or bending when lifting is required.
- 7) Be attentive when using scissors, paper cutters, staples, and other sharp items that could cause unnecessary cuts and lacerations.
- 8) Keep floor clear of sharp objects and other debris that could result in injury.

- 9) Do not overload electrical circuits.
- 10) Know where fire extinguishers and emergency exits are located.
- 11) Learn the proper procedures for reporting fires and other emergencies.
- 12) All equipment that has moving parts (i.e., copy machines, blue print copiers, and printers) should be properly guarded to prevent hands, hair, and clothing from being caught in the moving parts.
- 13) When using video display terminals (VDT's), position the VDT so that there are no reflections from bright lights and windows. Request a non-glare screen, if needed.
- 14) Avoid musculoskeletal stress by taking your breaks, stretching exercises and practicing correct posture. Report any concerns or required workspace corrections to your Supervisor.
- 15) Always be on guard for conditions and practices that could result in an injury occurring.
- 16) All office personnel are required to adhere to the vehicle safety program, as applicable.

- **HOUSEKEEPING/SHOP RULES**

- 1) Mark aisles and ensure they are kept clean.
- 2) Do not store items in aisles.
- 3) Do not permit anything to protrude into aisles.
- 4) Dispose of refuse and debris daily.
- 5) Store or hang tools in pre-designated storage areas. Store other equipment and materials in an orderly manner so they are easily retrievable and can be well maintained.

- 6) Smoke only in designated areas.
- 7) Store oily rags in self-closing and approved (ANSI, NFPA, MSHA, standards) metal containers.
- 8) Keep all doorways clear of obstructions.
- 9) Keep all electrical equipment free of dust, dirt, and other materials that could interfere with safe operation.
- 10) Ensure that employees maintain clean and orderly work areas.
- 11) For any task that is innately messy, clean up immediately after the task is completed.
- 12) Remove badly damaged slip-sheets and pallets from service.
- 13) Dispose of any hazardous waste, such as oils, paints, thinners, solvents, and spray cans according to local, state, and federal regulations.
- 14) Keep flammable substances in covered fire-resistant containers.
- 15) Maintain an employee awareness program that encourages the reporting of hazardous conditions and unsafe work practices.
- 16) Housekeeping in and around elevators is critical. Ensure that:
  - Hoist-ways and pits are kept free of debris and are not used as storage areas
  - Adequate lighting is maintained in the elevator pits at floor level
  - Machine rooms are not used as thoroughfares, are not used to store unauthorized items, are kept neat and orderly, and are equipped with a suitable fire extinguisher at the doorway.
  - Passenger and freight elevators are kept in good, clean condition to prevent injuries while loading or unloading cars

- **HEARING CONSERVATION**

Hearing conservation programs are required by law to be implemented where noise levels can expose employees to hearing damage. The following steps are designed to enable each facility to ascertain its exposures and implement an effective hearing conservation program, if need.

- 1) Determine noise areas by conducting sound level test to ascertain noise exposures that are 85 dB or greater. To accomplish this step, use the “A” scale of a standard sound level meter at slow response. This can be done in-house or by contracting with an industrial hygiene or safety consultant.

- 2) Where sound levels are found to be 85 dB or above on an eight-hour time-weighted average (TWA), implement a program to reduce such levels below 85 dB, where possible, or to provide hearing protection, where reduction is not possible. The program should include the following:
- Monitor and document employee noise exposures annually
  - Notify employees who are exposed to noise at or above the TWA of the monitoring results of what they must do to protect their hearing, and document this notification
  - Conduct an ongoing and documented audiometric testing program for all exposed employees. This includes an initial baseline test and retesting annually thereafter
  - Evaluate and document hearing protection for the specific noise environments
  - Attempt to reduce the noise by engineering means and document all such attempts
  - Attempt to reduce the noise exposure to individual employees via administrative controls, i.e., rotate job assignments into and out of the high noise areas, and document such attempts
  - Train employees who are exposed to high noise levels on the effects of noise on hearing; the purpose of hearing protectors; the use, care, and wearing of hearing protectors; and the purpose of audiometric testing. Document this training program.
  - Enforce the use of hearing protection, and document such enforcement
  - Use personal protective equipment such as hard hats, gloves, and steel-toe shoes

- **VEHICLE SAFETY**

Federal and State laws require that that you may not drive a vehicle unless you are satisfied that it is in a safe operating condition.

Employees must inspect their vehicle before operation and report any defects or unsafe conditions noted. Vehicles found to be defective or unsafe cannot be driven.

During work, monitor the condition of the vehicle components that may affect the safety of vehicle. Never continue to drive a vehicle if you are not sure that it is safe.

General rule of operating a motor vehicle include:

- 1) All employees operating a company vehicle must have a valid driver's license, and maintain an acceptable driving record. An acceptable driving record is defined a having no more than two (2) points issued by the California Department of Motor Vehicles (DMV). Citations for DUI's, reckless driving, or other major violations are not acceptable.
- 2) The class of license must be appropriate for the class of vehicle being driven.
- 3) Seat belts are to be used at all times, by driver and passenger(s).
- 4) Use of a company vehicle is strictly limited to work related activities only.
- 5) All company vehicles are to be driven by employees only, and may not be used for personal use.

- **DELIVERY OF MATERIAL**

- 6) When trucks arrive to deliver material, only authorized employees are to perform the unloading operations and the yard supervisor or designated supervisor will oversee this operation.
- 7) Before tie-downs are loosened, the load is to be inspected by the yard supervisor for shifted material or any situation that could cause injury. If a dangerous situation is observed, the load must be stabilized before unloading begins.

- **LADDER SAFETY**

Ladders are used throughout the district's operations and are needed to reach out-of-the-way locations and storage areas. Proper use of ladders is a matter of routine job safety. Many work site injuries are caused by accidents involving ladders that are not placed or used safely. Following these safety guidelines can help prevent ladder accidents.

- 1) Before using any ladder, check its condition. Make sure there are no broken, cracked, or missing rails and that rungs are not slippery from grease or oil
- 2) Check for damage or corrosion on metal ladders
- 3) All metal ladders are required to be marked "CAUTION – DO NOT USE AROUND ELECTRICAL EQUIPMENT"
- 4) Wood ladders are required to be treated with a suitable varnish or wood preservative. Do not paint wood ladders because the paint will hide defects and/or damages.
- 5) If a ladder is in poor condition, do not use it. Report the problem immediately and tag it "UNSAFE."
- 6) Ladders must be stored in designated storage areas only.
- 7) A competent person should periodically inspect all ladders and remove damaged ladders from use until they are repaired.
- 8) When choosing and using a ladder, keep the following in mind:
- 9) Choose the appropriate type and size ladder for the job, including correct fittings, and safety feet
- 10) Choose the appropriate height of the ladder for the job – Do not use a ladder that would require you to climb higher than the 2nd rung from the top of a stepladder, or the 3rd rung on an extension ladder
- 11) Near electrical conductors or equipment, use only ladders with non-conductive side rails
- 12) Set the ladder on solid footing, against a solid support
- 13) Before climbing on a stepladder, ensure that it is fully opened and the metal spreader is locked. Never stand on the top step.
- 14) Place the base of a straight ladder out away from the wall or edge of the upper level about 1 foot for every 4 feet of vertical height
- 15) Be sure straight ladders are long enough so that the side rails extend above the top support point by at least 36 inches
- 16) Never try to increase the height of a ladder by standing it on other objects, such

as boxes or barrels, or by splicing two ladders together

- 17) Portable ladders should be tied, blocked or otherwise secured to prevent movement
- 18) Do not leave straight ladders unattended, especially when used outdoors, unless they are anchored at the top and the bottom.

- **LADDER SAFETY - CONTINUED**

- 19) Keep ladders away from doorways or walkways, unless they can be protected by barriers
- 20) Keep the area around the top and base of the ladder clear—Don't run hoses, extension cords, or ropes on a ladder or anything that could create obstructions
- 21) To avoid slipping on a ladder, check your shoes for oil, grease, or mud and wipe it off before climbing
- 22) Climb the ladder carefully, facing it and using both hands—Use a tool belt or hand line to carry materials
- 23) Most ladders are designed to hold only one person at a time—2 people could cause the ladder to fall or be thrown off balance
- 24) Don't lean out to the side when you're on a ladder—If something is out of reach, get down and move the ladder
- 25) Ladders should never be used sideways as platforms, runways or scaffolds

- **HAND TOOLS**

- 1) Always use the right tool for the job. Do not substitute one tool for another.
- 2) Ensure that tools are clean and sharpened (if applicable). Always check the quality and condition of a tool before using it.
- 3) Never use tools with split, broken, or loose handles.
- 4) Never attempt to alter the original design of a tool for a specific use.
- 5) Carry tools in a box or tool belt, never in your clothing.
- 6) When cutting material, always place it on a flat surface. Never use your leg or other body part to support the object. Always cut away from you, rather than towards you.

- **PORTABLE POWER TOOLS**

A common type of occupational accident involves the use or misuse of portable power tools. These convenient and efficient devices can make daily tasks much easier, but can also be the cause of accidents and injuries.

- 1) Know how to properly use the tool you are working with. If you have not been properly trained to use a specific power tool, let your supervisor know. Supervisors are responsible for ensuring that employees who are assigned tasks requiring the use of a power tool have experience using it, and know the safety precautions required. New employees will be monitored closely to ensure that they are properly trained.
- 2) Employees need to maintain concentration when using power tools to avoid costly mistakes resulting in injury or damage of property.
- 3) Do not use a power tool that is not working properly, or if safety device/guard is not functioning. Tag defective equipment with “DO NOT USE” note and notify your supervisor immediately!
- 4) Guards must be in place and adjusted before the tool is used.
- 5) Power source must be disconnected before accessories are adjusted or changed.
- 6) Never lift a power tool by the cord.
- 7) Power cords must be in good repair, with no splice, no tape, and with electrical plugs appropriately attached in accordance with manufacturer’s standards.
- 8) Use only acceptable power cords on job. (NO household cords)

- 9) Make sure the tool is plugged into grounded electrical circuits, when required.
- 10) Use a low-voltage power supply, which reduces shock potential, when possible.
- 11) Use double insulated tools that are designed to prevent electric current from returning to ground through the operator in the event of an electrical fault.
- 12) Use ground fault circuit interrupters at the power supply to provide another level of electrical safety.

- **PORTABLE POWER TOOLS - CONTINUED**

- 13) Use the lift-lug on power saws to raise blade guards. Never tie or wedge back the guard.
- 14) Do not attempt to repair electric equipment, unless you are qualified to do so.
- 15) Never use tools with cords that are frayed or missing insulation.
- 16) Do not leave cords of portable and electric tools where vehicles or equipment could run over them.
- 17) Do not store tools in an overhead location where there is a chance that the cord or hose, if pulled, will cause the tool to fall.
- 18) Power lines across aisles should be rerouted to avoid trip hazards.
- 19) Stud guns are to only be used by properly licensed employees.
- 20) PPE should be worn as appropriate when using power tools. Protection for eyes is mandatory. Hearing protection is often needed when employees are using excessively loud tools. Gloves are appropriate where hand injuries could occur.
- 21) All tools must be placed on a maintenance and inspection schedule to ensure that the tools are always safe to use. Such a schedule is often best complied with when the tools are returned after each use. In this way, the tools are inspected and repaired, if necessary, before the next use.

- **COMPRESSED GAS CYLINDERS**

The following safety rules are intended to help control hazards when handling and using compressed gas cylinders.

- 1) All cylinders should be legible marked to clearly identify the gas contained in the cylinder.
- 2) Gas cylinders must be stored and used with the valve end up.
- 3) Cylinders containing fuel-gasses, oxygen, or acetylene cannot be taken into confined spaces.
- 4) Gas cylinders in service must be securely held in substantial fixed or portable racks, or placed so they will not fall.
- 5) Gas cylinders cannot be stored near oxygen cylinders. Cylinders must be separated at a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high that has a fire-resistance rating of at least one-half hour.
- 6) Handle gas cylinders with care. Roll smaller cylinders on their bottom edge when moving. Move cylinders weighing more than 40 pounds on a hand or motorized truck, properly secured. Handle carefully to avoid breaking the fittings.
- 7) Do not tamper with safety devices in valves or on cylinders. Keep valves and regulators free of oil or grease. Keep all connections tight to prevent leakage. Keep cylinder valves closed and caps in place when not in use.
- 8) Do not expose compressed gas cylinders or containers to excessive heat, sparks, or flames.
- 9) Cylinders must be kept far enough away from the actual welding or cutting operations so that sparks, hot slag, or flame will not reach them. If this is impractical, fire resistant shields must be provided.
- 10) Gas cylinders raised or lowered by crane, hoist, or derrick must be handled in suitable cradles, or skip boxes, and shall never be lifted by magnet or by rope or chain slings.

**Use of Fuel Gas:**

- 11) Before a regulator to a cylinder valve is connected, the valve shall be opened slightly and closed immediately. (This action is generally termed "cracking")

and is intended to clear the valve of dust or dirt that might otherwise enter the regulator.)

- 12) The person cracking the valve shall stand to one side of the outlet, not in front of it. The valve of a fuel gas cylinder shall not be cracked where the gas would reach welding work, sparks, flame, or other possible sources of ignition.
- 13) The cylinder valve shall be opened slowly to prevent damage to the regulator. For quick closing, valves on fuel gas cylinders shall not be opened more than 1 1/2 turns. When a special wrench is required, it shall be left in position on the stem of the valve while the cylinder is in use so that the fuel gas flow can be shut off quickly in case of an emergency. In the case of coupled cylinders, at least one such wrench shall be available for immediate use. Nothing shall be placed on top of a fuel gas cylinder, when in use, which may damage the safety device or interfere with the quick closing of the valve.

- **COMPRESSED GAS CYLINDERS - CONTINUED**

- 14) When the valve on a fuel gas cylinder is opened and there is found to be a leak around the valve stem, the valve shall be closed and the gland nut tightened. If this action does not stop the leak, the use of the cylinder shall be discontinued, and it shall be taken outdoors, to an isolated area, away from personnel and sources of ignition. The supplier shall promptly be notified of the leaking cylinder valve and the supplier's instructions shall be followed. In the event that fuel gas should leak from the cylinder valve, rather than from the valve stem, and the gas cannot be shut off, the cylinder shall be properly tagged and removed from the work area. If a regulator attached to a cylinder valve will effectively stop a leak through the valve seat, the cylinder need not be removed from the work area.
- 15) Follow established departmental procedures for changing cylinders and detecting leaks.

- **COMPRESSOR & AIR TOOLS**

- 1) Eye protection is required when operating a compressor
- 2) Tools should be chained to the air hose to keep the air hose from whipping about in the event the tool becomes disconnected.
- 3) Never use the air nozzle to clean clothes.
- 4) Air hoses must not be used for cleaning purposes, except when the pressure is reduced to 30 psi. When used as such, eye or face protection must be worn.
- 5) Never hold your thumb over the hose.
- 6) Always turn off the air valve before changing tools.
- 7) Airlines should be routed so a tripping hazard is not created.
- 8) Check condition of hoses and make sure safety chains are hooked up properly before turning on air.
- 9) Do not disconnect air hoses, until the hose line has been bled.
- 10) When parking the compressor, always make sure the wheels are against the curb and/or checked to keep from running away.
- 11) Pay attention to how the hose is being strung from the air source to the work area
- 12) Avoid sharp bends
- 13) Do not shut off the air flow by bending or crimping it with pliers
- 14) To limit the possibility of the hose whipping, secure the hose to fixed objects using sandbags, clamps, rope or sturdy tape

- 15) If a break in the line occurs, do not try to grab and restrain it – Get clear of the area and shut the flow off at the source

- **WELDING, CUTTING & CYLINDERS**

To avoid hazards caused by exposure to flammable vapors, toxic gases, and confined or restricted spaces during welding operations, the following safety procedures must be followed:

- 1) No employee is permitted to attempt welding operations, or use a burning torch, unless qualified and has had training to ensure knowledge of the proper procedures.
- 2) All welding equipment should be inspected each day before use. Any defects found in regulators, torches or electrical components must be reported immediately to your supervisor.
- 3) Use of Personal Protective Equipment is mandatory, to include eye protection, protective clothing, and respiratory protection if warranted.
- 4) The wearing of contact lenses is prohibited in working environments having harmful exposure to materials or light flashes, except when special precautionary procedures, which are medically approved, have been established for the protection of the exposed employee.
- 5) Where eye protection is required and the employee requires vision correction, such eye protection shall be provided as follows:
  - a) Safety spectacles with suitable corrected lenses, or
  - b) Safety goggles designed to fit over spectacles, or
  - c) Protective goggles with corrective lenses mounted behind the protective lenses.
- 6) Always use curtains or shields to protect others from the rays of the arc, especially during repair of equipment away from the shop where the public

may not know of the dangers.

- 7) No welding is permitted in an explosive environment.
- 8) All combustible materials must be removed from the area, prior to beginning welding operations
- 9) No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the supervisor.
- 10) When operations are suspended for any substantial period of time, such as during lunch or overnight, gas cylinders must be shut off.
- 11) Upon completion or discontinuance of welding operations, the welder shall warn other workers of the location of hot metal.
- 12) Before welding, cutting, or heating is commenced on any surface covered by a preservative coating of unknown flammability, a test shall be made by a qualified person to determine its flammability.
- 13) All surfaces covered with toxic preservatives, including coatings which generate toxic substances upon heating, shall be stripped for a distance of at least four inches from the area of heat application, or employees must be required to use supplied-air respirators.
- 14) Because the heat, sparks and slag from welding can start fires, keep a compatible fire extinguisher with each welding or cutting unit and be prepared to extinguish a fire immediately.

- **WELDING, CUTTING & CYLINDERS - CONTINUED**

- 15) Keep all gas welding equipment and connections free from grease and oil. (Oxygen explodes upon contact with oil or grease.)
- 16) Never weld or cut in a confined area that does not allow for proper ventilation.
- 17) Never weld or cut any drum, container, or tank that has contained gasoline, oil, or other flammable liquid.
- 18) Cylinders are not to be transported unless protective caps are on and tanks are secured.
- 19) Cylinders must be secured at all times in order to prevent falling or rolling.
- 20) Cylinders shall be stored only in authorized locations in an upright position with caps secured.
- 21) Cylinder valves should always be opened slowly, with the outlet pointing away from you.
- 22) Cylinders should always be clearly marked and identified.
- 23) Oxygen cylinders in storage must be separated from fuel gas cylinders a

distance of 20 feet or by a noncombustible barrier 5 feet high.

- 24) Never store full and empty cylinders together.
- 25) Gas cylinders must not be placed where they might form a part of any electrical circuit.
- 26) Fuel gas and oxygen hoses must be distinguished from each other.
- 27) Couplings must not disconnect by means of a straight-pull motion.
- 28) When the job is completed, close all valves and inspect the work area to ensure that no hot particles are smoldering.
- 29) When performing welding operations where metal fumes are present, the work must be performed in a well-ventilated area.
- 30) When welding on galvanized metals, the following safety precautions must be followed:
  - a) If acceptable ventilation is not possible, an approved respirator that fits underneath the welding helmet must be worn. A paper dust mask is not acceptable.
  - b) If you find white dust inside your welding shield, you are not properly protecting yourself from the fumes.
  - c) Do not eat, drink, or smoke in areas contaminated by welding fumes.
- 31) During outdoor operations, respirators are required for any operations involving beryllium, cadmium, lead, or mercury. For other operations and materials, respirators are not required where natural and/or mechanical ventilation is sufficient to prevent exposure to airborne contaminants exceeding specifications established by the California Code of Regulations (8CCR §5155)

- **WELDING, CUTTING & CYLINDERS - CONTINUED**

- 32) During indoor operations, respirators must be used when local exhaust or mechanical ventilation is not feasible to prevent exposures exceeding specifications established by the California Code of Regulations (8CCR §5155)
- 33) During operations in exposed spaces, air supplied respirators must be used where local exhaust ventilation is not an effective means for preventing potentially hazardous exposures.
- 34) Filter lenses or plates used in welding operations shall be in accordance with the following table. Shades more dense than those listed may be used to suit the individual's needs.

Table EP-1. Filter Lens Shade Numbers for Protection against Radiant Energy

<i>Welding operation</i>	<i>Shade number</i>
Shielded metal-arc welding 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.....	10
Gas-shielded arc welding (nonferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.....	11
Gas-shielded arc welding (ferrous) 1/16-, 3/32-, 1/8-, 5/32-inch diameter electrodes.....	12
Shielded metal-arc welding 3/16-, 7/32-, 1/4-inch diameter electrodes.....	12
5/16-, 3/8-inch diameter electrodes.....	14
Atomic hydrogen welding.....	10-14
Carbon-arc welding.....	14
Soldering.....	2
Torch brazing.....	3 or 4
Light cutting, up to 1-inch.....	3 or 4
Medium cutting, 1-inch to 6 inches.....	4 or 5
Heavy cutting, over 6 inches.....	5 or 6
Gas welding (light), up to 1/8-inch.....	4 or 5
Gas welding (medium), 1/8-inch to 1/2-inch.....	5 or 6
Gas welding (heavy), over 1/2-inch.....	6 or 8

- **LOCKOUT/BLOCKOUT**

The following procedures must be followed during the servicing or maintenance of machines, to avoid the unexpected start-up of the machinery or equipment, or the release of *stored* energy, which could cause injury to employees.

Specific procedures will vary, depending upon (1) whether the source of hazardous energy is electrical, hydraulic, pneumatic, mechanical, thermal, or chemical, and (2) how many employees are affected. Lockout procedures describe the energy sources, location of disconnects, type of disconnects, special hazards and special safety precautions.

Only trained and authorized employees will repair, replace, or adjust equipment. No employee is permitted to remove locking devices or tags from machinery,

equipment, or circuits, unless they are responsible for the initial lockout/blockout and the proper procedures have been followed for re-energizing the machinery or equipment.

The following SIX STEPS are a review of basic steps for safely de-energizing equipment:

- 1) Clear all personnel to safety
- 2) Clear away tools and materials from the equipment
- 3) Isolate all the equipment's energy sources
- 4) Lockout devices and re-energize systems, following written procedures
- 5) Release or restrain any stored energy by grounding, blocking, bleeding down, etc.
- 6) Make sure that the area is clear of all personnel, and then test the equipment to make sure that it will not operate.

Restoring Equipment to Service:

- 1) Clear all personnel to safety
- 2) Make sure all equipment components are intact, including safety guards and devices
- 3) Remove each lockout device using the correct removal sequence
- 4) Make a visual check before restoring energy to make sure that everyone and everything is clear of the equipment
- 5) Verify that equipment controls are in neutral.

Under no circumstance should work be performed on machinery or equipment that does not have a specific policy developed to address proper Lockout/Blockout procedures.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED)**

**Forklift Safety**

All training and evaluation must be completed before an Operator is permitted to use a Powered Industrial Truck (forklift, etc), without continual and close supervision. **Trainees may only operate a forklift when:**

- Under the direct supervision of persons, selected by management, who have the knowledge, training, and experience to train Operators and evaluate their

competence; and

- Where such operation does not endanger the trainee or other employees.

Training consists of a combination of formal instruction, practical training, and evaluation of the Operator's performance in the workplace. **Initial training will include the following topics:**

- 1) Operating instructions, warnings, and precautions for the types of truck the Operator will be authorized to operate
- 2) Differences between the truck and the automobile
- 3) Truck controls and instrumentation: where they are located, what they do, and how they work
- 4) Engine or motor operation
- 5) Steering and maneuvering
- 6) Visibility (including restrictions due to loading)
- 7) Fork and attachment adaptation, operation, and use limitations
- 8) Vehicle capacity
- 9) Vehicle stability
- 10) Any vehicle inspection and maintenance that the Operator will be required to perform
- 11) Refueling and/or charging and recharging of batteries
- 12) Operating limitations
- 13) Any other operating instructions, warnings, or precautions listed in the Operator's manual for the types of vehicle that the employee is being trained to operate.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) - CONTINUED**

**Workplace-related topics:**

- 1) Surface conditions where the vehicle will be operated

- 2) Composition of loads to be carried and load stability
- 3) Load manipulation, stacking, and unstacking
- 4) Pedestrian traffic in areas where the vehicle will be operated
- 5) Narrow aisles and other restricted places where the vehicle will be operated
- 6) Hazardous (classified) locations where the vehicle will be operated
- 7) Ramps and other sloped surfaces that could affect the vehicle's stability
- 8) Closed environments and other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust
- 9) Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation

**Refresher training will be required when:**

- 1) The Operator has been observed operating the forklift in an unsafe manner
- 2) The Operator has been involved in an accident or near-miss incident
- 3) The Operator has received an evaluation that reveals unsafe operation of the forklift – NOTE: An evaluation of the Operators performance must be conducted at least once every 3 years
- 4) The Operator is assigned to a different type of forklift
- 5) A change in the condition of the workplace occurs that could affect the safe operation of the forklift (change in scope of operation)

If an Operator has previously received training in a topic required, and such training is appropriate to the forklift and working conditions, additional training will not be required if the Operator has been evaluated and found competent to operate the forklift safely.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) - CONTINUED**

**Forklift Safe Operating Procedures & Rules**

- 1) Only authorized and trained personnel will operate forklifts

- 2) If any of the following conditions apply to you, notify your supervisor or management immediately to avoid the potential of injury to yourself or a co-worker:
    - 1 Vision problems that cannot be corrected by glasses or contacts
    - 2 Hearing loss that cannot be corrected with hearing aids
    - 3 Physical impairments that would impair safe operation
    - 4 Neurological disorders that affect balance or consciousness
    - 5 Under medication that affects perception, vision or physical abilities
  - 3) Stunt driving and horseplay are prohibited.
  - 4) All forklifts will be equipped with a headache rack, fire extinguisher, back-up alarm and seat belts
  - 5) Seat belts will be worn at all times by the Operator
  - 6) The Operator will perform daily pre- and post-trip inspections.
  - 7) Any safety defects (such as hydraulic fluid leaks; defective brakes, steering, lights, or horn; and/or missing fire extinguisher, lights, seat belt, or back-up alarm) will be reported for immediate repair or have the forklift taken "Out of Service."
  - 8) Operators will follow the proper recharging or refueling safety procedures.
  - 9) Loads will be tilted back and carried no more than 6 inches from the ground. Loads that restrict the Operator's vision will be transported backwards.
  - 10) Forklifts will travel no faster than 5 mph or faster than a normal walk.
  - 11) Hard hats will be worn by forklift Operators in high lift areas.
  - 12) Operator will sound horn and use extreme caution when meeting pedestrians, making turns and cornering.
  - 13) Passengers may not ride on any portion of a forklift. "NO PASSENGERS" decals will be affixed on all forklifts.
  - 14) If forklifts are used as a man lift, an appropriate man lift platform (cage with standard rails and toe-boards) will be used.
  - 15) Aisle will be maintained free from obstructions, marked and wide enough (six foot minimum) for vehicle operation.
  - 16) Lift capacity will be marked on all forklifts. Operator will assure load does not exceed rated weight limits.
  - 17) When un-attended, forklifts will be turned off, forks lowered to the ground and parking brake applied.
- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) - CONTINUED**  
**Forklift Safe Operating Procedures & Rules - *Continued***

- 18) All forklifts (with exception of pallet jacks) will be equipped with a multi-purpose dry chemical fire extinguisher. (Minimum rating; 2A:10B:C)
- 19) Operators are instructed to report all accidents, regardless of fault and severity, to Management. Management will conduct an accident investigation.

### **Operations**

- 1) If at any time a forklift is found to be in need of repair, defective, or in any way unsafe, it shall be taken out of service until it has been restored to safe operating condition.
- 2) Trucks shall not be driven up to anyone standing in front of a bench or other fixed object.
- 3) No person shall be allowed to stand or pass under the elevated portion of any truck, whether loaded or empty.
- 4) Arms or Legs shall not be placed between the uprights of the mast or outside the running lines of the truck.
- 5) When a forklift is left unattended, load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off, and brakes set. Wheels shall be blocked if the truck is parked on an incline.
- 6) A safe distance shall be maintained from the edge of ramps or platforms while on any elevated dock, or platform or freight car. Trucks shall not be used for opening or closing freight doors.
- 7) There shall be sufficient headroom under overhead installations, lights, pipes, sprinkler system, etc.
- 8) An overhead guard shall be used as protection against falling objects. It should be noted that an overhead guard is intended to offer protection from the impact of small packages, boxes, bagged material, etc., representative of the job application, but not to withstand the impact of a falling capacity load.
- 9) A load backrest extension shall be used whenever necessary to minimize the possibility of the load or part of it from falling rearward.
- 10) Trucks cannot be parked where they will block fire aisles, access to stairways, or fire equipment.
- 11) Fixed jacks may be necessary to support a semi-trailer and prevent upending during the loading or unloading when the trailer is not coupled to a tractor.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) - CONTINUED**

**Traveling**

- 1) All traffic regulations shall be observed, including authorized speed limits. A safe distance shall be maintained approximately three truck lengths from the truck ahead, and the truck shall be kept under control at all times.
- 2) The right of way shall be yielded to ambulances, fire trucks, or other vehicles in emergencies.
- 3) Other trucks traveling in the same direction at intersections, blind spots, or other dangerous locations shall not be passed.
- 4) The driver shall be required to slow down and sound the horn at cross aisles and other locations where vision is obstructed. If the load being carried obstructs forward view, the driver shall be required to travel with the load trailing.
- 5) Railroad tracks shall be crossed diagonally wherever possible. Parking closer than 8 feet from the center of railroad tracks is prohibited.
- 6) The driver shall be required to look in the direction of, and keep a clear view of the path of travel.
- 7) Grades shall be ascended or descended slowly. When ascending or descending grades in excess of 10 percent, loaded trucks shall be driven with the load upgrade. On all grades, the load and load engaging means shall be tilted back if applicable, and raised only as far as necessary to clear the road surface.
- 8) Under all travel conditions, the truck shall be operated at a speed that will permit it to be brought to a stop in a safe manner.
- 9) Stunt driving and horseplay shall not be permitted.
- 10) The driver shall be required to slow down for wet and slippery floors.
- 11) Dock board or bridge plates, shall be properly secured before they are driven over. Dock board or bridge plates shall be driven over carefully and slowly and their rated capacity never exceeded.
- 12) Running over loose objects on the roadway surface shall be avoided.
- 13) While negotiating turns, speed shall be reduced to a safe level by means of turning the hand steering wheel in a smooth, sweeping motion. Except when maneuvering at a very low speed, the hand steering wheel shall be turned at a moderate, even rate.

**Loading**

- 1) Only stable or safely arranged loads shall be handled. Caution shall be exercised when handling off-center loads that cannot be centered.
- 2) Only loads within the rated capacity of the truck shall be handled.

- 3) The long or high (including multiple-tiered) loads that may affect capacity shall be adjusted.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) - CONTINUED**

**Loading - *Continued***

- 4) Trucks equipped with attachments shall be operated as partially loaded trucks when not handling a load.
- 5) A load engaging means shall be placed under the load as far as possible; the mast shall be carefully tilted backward to stabilize the load.
- 6) Extreme care shall be used when tilting the load forward or backward, particularly with high tiering loads. Tilting forward with load engaging means elevated shall be prohibited except to pick up a load. An elevated load shall not be tilted forward except when the load is in a deposit position over a rack or stack. When stacking or tiering, only enough backward tilt to stabilize the load shall be used.

**Maintenance of Forklifts**

A check of the following items (as applicable) must be conducted by the Operator prior to use at each shift.

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Forks (bends, cracks)           | <input type="checkbox"/> Carriage/Mast/Boom    | <input type="checkbox"/> Tire & Wheels     |
| <input type="checkbox"/> Covers & Sheet metal Levels     | <input type="checkbox"/> Lift & Tilt Cylinders | <input type="checkbox"/> Fluid             |
| <input type="checkbox"/> Fuel (leaks & tank level) Hoses | <input type="checkbox"/> Seat Belts            | <input type="checkbox"/> Hydraulic         |
| <input type="checkbox"/> Gauges Functions                | <input type="checkbox"/> Lift Functions        | <input type="checkbox"/> Tilt              |
| <input type="checkbox"/> Emergency Parking Brake         | <input type="checkbox"/> Service Brake         | <input type="checkbox"/> Forward & Reverse |
| <input type="checkbox"/> Back-up Alarm & Horn            | <input type="checkbox"/> Steering              |  |

If any deficiencies are noted, the unit is to be tagged and placed OUT OF SERVICE until the problem has been corrected. It is the Operators responsibility to notify the immediate supervisor and fill out a maintenance request.

- 1) Any forklift not in safe operating condition shall be removed from service. Authorized personnel shall make all repairs.
- 2) Those repairs to the fuel and ignition systems of industrial trucks that involve fire hazards shall be conducted only in locations designated for such repairs.
- 3) Trucks in need of repairs to the electrical system shall have the battery disconnected before such repairs.
- 4) Any part of an industrial truck that requires replacement will be replaced only by parts equivalent to those used in the original design.

- 5) Industrial trucks shall not be altered so that the relative positions of the various parts are different from what they were when originally received from the manufacturer, nor shall they be altered either by the addition of extra parts not provided by the manufacturer or by the elimination of any parts. Additional counter-weighting of fork trucks shall not be done unless approved by the truck manufacturer.

- **FORKLIFTS - INDUSTRIAL TRUCKS (POWERED) – CONTINUED**

**Maintenance of Forklifts - *Continued***

- 6) Industrial trucks shall be examined before being placed in service, and shall not be placed in service if the examination shows any condition adversely affecting the safety of the vehicle. Such examination shall be made at least daily. Where industrial trucks are used on a round-the-clock basis, they shall be examined before use each shift. Defects when found shall be immediately reported and corrected.
- 7) When the temperature of any part of any truck is found to be in excess of its normal operating temperature, thus creating a hazardous condition, the vehicle shall be removed from service and not returned to service until the cause for such overheating has been eliminated.
- 8) Industrial trucks shall be kept in a clean condition, free of lint, excess oil, and grease. Noncombustible agents should be used for cleaning trucks. Low flash point (below 100 deg. F.) solvents shall not be used. High flash point (at or above 100 deg. F.) solvents may be used.

**Fueling Safety**

- 1) Fuel tanks shall not be filled while the engine is running. Spillage shall be avoided.
- 2) Spillage of oil or fuel shall be carefully washed away or completely evaporated and the fuel tank cap replaced before restarting engine.
- 3) No truck shall be operated with a leak in the fuel system until the leak has been corrected.
- 4) Open flames shall not be used for checking electrolyte level in storage batteries or gasoline level in fuel tanks.

**Safe Operation Procedure for Charging LPG Tank**

- 1) No Smoking.
- 2) Move LPG FORKLIFT outside for refueling.
- 3) Turn off FORKLIFT.
- 4) LPG tanks will be removed in the following order:
  - 1 Shut off service valve

- 2 Disconnect tank from hose
- 3 Unbuckle and remove tank from bracket
- 5) LPG tanks will be replaced in the following order:
  - 4 Place tank in bracket and re-buckle
  - 5 Reconnect hose to tank and tighten firmly
  - 6 Open valve slowly and assure proper seal

- **HEAVY CONSTRUCTION EQUIPMENT**

Pacific Coast Drilling believes that equipment in good condition improves safety and saves time and money. The company will invest the resources necessary to outfit the company with the right equipment.

- 1) Tower cranes must be inspected daily. In performing erection dismantling and operation of the Tower Crane all equipment shall be inspected daily.
- 2) Repairs cannot be made to powered equipment until workers are protected from movement of the equipment or its parts.
- 3) ROPs and seat belts are required for equipment with a brake horsepower rating above 20.
- 4) No crane is to be operated with wheels or tracks off the ground unless properly bearing on outriggers.
- 5) Do not operate a crane without a signal person if the point of operation is not in full and direct view.
- 6) Never operate equipment unless you are authorized and qualified.
- 7) Never leave running equipment unattended.
- 8) Never allow co-employees to ride or hang on equipment.
- 9) Never stand under a backhoe, crane boom or other load.
- 10) When operating a forklift-working platform, a shield must cover the gears and chains of the lift.
- 11) Always make sure blades, buckets, rippers or other moving parts are lowered when equipment is parked or unattended.
- 12) Always wear your safety belts while operating your equipment.
- 13) All equipment will be locked and master switches turned off, before leaving overnight or on weekends.
- 14) When backing up equipment, if you cannot see behind you, get assistance.
- 15) Always look behind you before engaging clutch or reverse lever.
- 16) Do not attempt to service, repair or adjust equipment unless you are properly trained and/or certified to do so.

- 17) Tractors, bulldozers, scrapers and carryalls cannot be operated where there is a possibility of overturning in dangerous areas like deep fills, cut banks, and steep slopes.
- 18) Observers must be used when the equipment operator cannot spot the load.
- 19) Cranes must be level before hoisting work begins.
- 20) Uniform crane hand signals must be used.
- 21) Supervisors must know the weight of all loads to be hoisted, especially when a load approaches the maximum capacity of the crane.
- 22) Always be cautious and observant when operating large equipment.

- **CRANE & HOISTS – GENERAL SAFETY**

Many types of crane, hoists, and rigging devices are used at Pacific Coast Drilling Co., Inc for lifting and moving materials. It is our company policy to maintain a safe workplace for all employees, therefore; only qualified and licensed individuals will be permitted to operate these devices.

**Supervisors are responsible for:**

- 1) Making sure that employees under their supervision receive the required training and are certified and licensed to operate the cranes and hoists they are assigned to.
- 2) Ensuring that hoisting equipment is inspected and tested monthly by a responsible individual and that rigging equipment is inspected annually.

**Crane & Hoist Operators are responsible for:**

- 1) Operating hoisting equipment safely.
- 2) Conducting visual inspections and functional testing before using the equipment.
- 3) Selecting and using the appropriate rigging equipment.
- 4) Having a valid operator's license on their person while operating cranes or hoists.
- 5) Participating in all required training.
- 6) Attending all safety meetings conducted at the job site.

**Engineering/Maintenance/Operations Department is responsible for:**

- 1) Performing annual maintenance and inspection of all cranes and hoists that are not covered by a program with maintenance responsibility
- 2) Conducting periodic and special load tests of cranes and hoists.
- 3) Maintaining written records of inspections and tests, and providing copies of all inspections and test results to facility managers.

- 4) Inspecting and load testing cranes and hoists following modification or extensive repairs.
- 5) Scheduling a non-destructive test and inspection for crane and hoist hooks at the time of the periodic load test, and testing and inspecting before use new replacement hooks and other hooks suspected of having been overloaded. The evaluation, inspection, and testing may include, but are not limited to visual, dye penetrate, and magnetic particle techniques.
- 6) Maintaining all manuals for cranes and hoists in a central file for reference.

**Engineering/Maintenance/Operations Department is responsible for:**

- 1) Conducting training for all Crane & Hoist Operators
- 2) Periodically verifying monthly test and inspection reports.
- 3) Interpreting crane and hoist safety rules and standards.

- **CRANE & HOISTS – GENERAL SAFETY - CONTINUED**

**General Safety Practices**

- 1) Never stand or walk under a load, whether it is moving or stationary.
- 2) Always warn others of moving or approaching overhead loads.
- 3) Never attempt to distract signal persons or operators of the overhead equipment while they are performing their jobs.
- 4) Always obey warning signs, especially those that are posted in critical areas.

**Operator's - General Safety Practices**

- 1) Always check the equipment before operation. Complete a visual and functional test before beginning work at each shift.
- 2) Never operate a crane that is unsafe.
- 3) Do not attempt any activity that would divert your attention while operating the equipment.
- 4) Respond to signals only from the person who is directing the lift, or any appointed signal person.
- 5) Never permit an unauthorized person to operate the equipment or give signals.
- 6) Make sure that the signal persons are in direct and clear view.
- 7) Always obey a stop signal, regardless of who gives it.
- 8) Never carry a load over other workers.
- 9) Never allow anyone to ride on the load or hooks.
- 10) If a load appears to be slung improperly, lower it and have it adjusted.

- 11) Make sure that the rated load capacity of a crane, individual hoist, or any sling or fitting is not exceeded. Know the weight of the object being lifted.
- 12) Avoid side pulls. These can cause the hoist rope to slip out of the drum groove, damaging the rope, or destabilizing the crane or hoist.
- 13) To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated, and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.
- 14) Never attempt to work on the equipment, unless authorized and properly trained on applicable Lockout/Blockout procedures.

- **CRANES & HOISTS – HANDLING LOADS**

A crane, derrick, or hoist shall not be loaded beyond the rated capacity or safe working load (whichever is smaller), except for test purposes. In all operations where the weight of the load being handled is unknown and could approach the rated capacity, there shall be a qualified person assigned to determine the magnitude of the load, unless the crane or derrick is equipped with a load-weighing device. The operator cannot make any lift under these conditions until informed of such weight by the qualified person assigned to the operation being performed.

**Attaching the load:**

- 1) The load must be attached to the hook by means of slings or other suitable and effective means that shall be properly rigged to insure the safe handling of the load.
- 2) Slings must be freed of kinks or twists before use.
- 3) Baskets, tubs, skips, or similar containers used for hoisting bulk materials must be loaded so as not to exceed their safe carrying capacity.
- 4) The hoist rope cannot be wrapped around the load.

**The individual directing the lift is responsible for:**

- 1) Making sure the load is secured and balanced in the sling or lifting device before it is lifted more than a few inches.

**Before starting to hoist:**

- 1) The hoist rope cannot be kinked.
- 2) Multiple part lines cannot be twisted.

- 3) The hook must be positioned over the load in such a manner as to prevent swinging of the load when lifted.
- 4) If there is slack in the rope, the rope must be properly seated on the drum and in the sheaves.

**During hoisting:**

- 1) There can be no sudden acceleration or deceleration of the moving load.
- 2) Inadvertent contact with obstructions must be prevented.

**Holding the load:**

- 1) When a load of any kind is to be suspended for any considerable time, the drum holding mechanism must be used in addition to the brake that must also be applied.
- 2) Cranes, hoists, or derricks cannot be left unattended while the load is suspended, unless the load is suspended over water, a barricaded area, or is blocked up or otherwise supported from below during repairs or emergency.

• **CRANES & HOISTS – HANDLING LOADS - CONTINUED**

- 3) Side loading of booms must be limited to freely suspended load, and booms cannot be used for dragging loads sideways unless the boom is specifically designed and constructed to withstand such side loading.
- 4) When a rotating crane is positioned to operate in areas where persons may be caught between rotating parts of the crane and outside obstructions, or parts of rotating machine deck and non-rotating parts of crane, those danger areas must be barricaded or other positive means must be taken to prevent traffic and workers, except the operator, from entering such areas while the crane is operating.
- 5) No one shall bypass or disconnect any load limiting device in order to exceed the manufacturers rating.

- **HOISTS**

Hoists are so common we take them for granted even though they are susceptible to damage, breakage and failure that could severely injure employees and damage valuable property. It is important to select, maintain, and use this equipment in a way that will reduce the risk of mishap.

- 1) Select the appropriate hoist to lift the weight, taking into consideration the space available to maneuver the load.
- 2) Initiate an inspection program for hoists, ropes, slings, chains, cables, and other equipment. This program must meet the requirements of OSHA and the equipment manufacture. If equipment is damaged or inoperable, remove from service and tag it out, i.e., place a tag on the equipment stating the date it went out of service, what is wrong, and that it should not be used until repaired.
- 3) Permit only authorized and qualified personnel to use such equipment. Users should be trained to:
  - a. Know all hoist operations
  - b. Know standard hoist signals
  - c. Use personal protective equipment such as hard hats, gloves, and steel-toe shoes
  - d. Inspect all equipment
  - e. Report any defective equipment to supervisors
  - f. Always check that the capacity of the hoist is adequate for the load to be lifted
  - g. Survey the route of the load to ensure there are no obstructions
  - h. Examine the load for defective pallets and ropes before lifting

- i. Lift the load only when it is seated, balanced, the hoist is centered over the load, and the area is clear of personnel
  - j. Inspect, clean, and store all equipment after the job is done
- 4) Supervisors of hoist operations should:
  - k. Ensure that defective equipment is repaired or replaced
  - l. Record inspection, repair, and maintenance data
- 5) Permit only authorized and qualified personnel to perform maintenance work on all equipment.

- **LIFT TRUCKS (FORKLIFTS) – ELEVATING EMPLOYEES**

Following are required safety standards for elevating employees using an industrial truck (forklift).

- 1) The platform must be of sufficient size, but not less than 24" x 24".
- 2) The platform must be secured to the forks or mast to prevent tipping, slipping or falling.
- 3) The platform must meet guardrail and toe board requirements. If the nature of work prohibits the use of guardrails, proper fall protection procedures and equipment must be used.
- 4) The platform floor cannot have spaces or holes greater than one inch and the floor must have a slip resistant surface.
- 5) An operator must be in the control position when employees are on the elevated platform.
- 6) Before elevating personnel, employees shall be instructed to:
  - Use a securely attached safety platform.
  - Make sure the lifting mechanism is operating smoothly.
  - Make sure that the mast is vertical. The mast cannot be tilted forward or rearward while persons are elevated.
  - Place truck in neutral and set parking brake.

- Lift and lower smoothly and with caution.
- Watch for overhead obstructions.
- Keep hands and feet clear of controls other than those in use.
- Never travel with personnel on the work platform other than to make minor movements for final positioning of the platform.

- **AERIAL WORK PLATFORMS**

Manlifts and scissor lifts (Aerial Work Platforms), if used correctly, provide quick and safe access to work areas that under normal circumstances would be difficult to reach.

Before operating an Aerial Lift Platform, always read and follow the manufacturer's safety and operation manual. This information must be kept with the rig.

General safety requirements include:

- 1) Only trained and authorized employees are permitted to operate aerial lifts.
- 2) Before each shift, operators are required to perform a safety inspection that includes both a visual check and a function test.
- 3) Boom, basket, and platform load limits specified by the manufacturer cannot be exceeded.
- 4) When elevating workers with the vehicle stationary, the braking systems must be set.
- 5) The platform can only be elevated when it is on a firm, level surface.
- 6) Before performing the lift, the area must be checked for overhead

obstructions.

- 7) A guardrail or other structure around its upper periphery must be 42 inches high (+/- 3 inches), with a midrail. (Chains or the equivalent may be substituted where they give equivalent protection.) Where the guardrail is less than 39 inches high, an approved personal fall protection system must be used.
  - 8) The work platform must have toe boards at the sides and ends that cannot be less than 3 ½ inches high.
  - 9) Belting off to an adjacent pole, structure, or equipment while working from an aerial device is not allowed.
  - 10) Aerial baskets or platforms cannot be supported by adjacent structure(s) when occupied by employees while in an elevated position.
  - 11) The minimum width of the platform cannot be less than 16 inches.
  - 12) The platform must be equipped with a mechanical parking brake that will hold the unit securely on any slope it is capable of climbing. The brake should be checked before performing the lift.
  - 13) When working out of an elevated aerial device, employees must be secured to the boom, basket, or tub of the aerial device using body harness equipment with safety strap or lanyard, or other acceptable means of fall protection.
    - a) Safety belts/Body belts are prohibited for use in personal fall arrest systems, but may be used as part of a fall restraint or positioning device system.
    - b) Safety belts/body belts used as part of a positioning device system shall be rigged such that an employee cannot free fall more than 2 feet.
    - c) A body harness may be used in a personal fall restraint, positioning or fall arrest system. The lanyard must be rigged to limit maximum arresting force on an employee to 1,800 pounds and prevent collision with other levels or objects. Free fall must be limited to a maximum of 6 feet.
- **AERIAL WORK PLATFORMS - CONTINUED**
    - 14) Climbing on the edge of a basket or work platform railing of aerial lift equipment, or using ladders or other objects cannot be placed on top of platforms to gain greater height.
    - 15) Always maintain a safe distance from debris piles, drop-offs, and floor openings.
    - 16) Employee cannot work on units when exposed to high winds, storms, or when they are covered with ice (unless provisions have been made to ensure the safety of the employees)
    - 17) When working in areas where moving vehicles are present, the work area must be marked with warnings such as flags, roped off areas or other effective means of traffic control shall be provide.

- 18) Unstable objects (i.e. boxes, loose tools, debris) must not be allowed to accumulate on the work level.
- 19) Pin-on platforms must be securely pinned to the boom or boom extension. Employees on elevated pin-on platforms must be secured to the boom by a safety harness and lanyard.
- 20) An aerial device truck can not be moved when the boom is elevated in a working position and occupied by workers, except under the following conditions:
  - 1 The equipment is specifically designed for this type of operation
  - 2 All controls and signaling devices are tested and are in good operating condition
  - 3 An effective communication system must be maintained at all times between the basket or platform operator and where applicable, the equipment operator.
  - 4 The route to be traveled is surveyed immediately prior to the work trip, checking for overhead obstructions, traffic, holes in the pavement, ground or shoulder, ditches, slopes, etc. for areas other than paved. The survey must be made on foot.
  - 5 The speed cannot exceed 3 mph.
  - 6 There is only 1 employee permitted in the basket.
  - 7 Both the driver and/or the elevated employee have been specifically trained for this type of work in accordance with the manufacturer's recommendations.
  - 8 Lower level controls must not be operated unless permission has been obtained from the employee in the device, except in the case of an emergency.
  - 9 Before moving an aerial device for travel, the boom(s) shall be inspected to see that it is properly cradled and outriggers are in stowed position.
  - 10 An employee, while in an elevated aerial device, must be secured to the boom, basket or tub of an aerial device through the use of a safety belt, body belt or safety harness equipped with safety strap or lanyard.

- **CRANE / LIFTING PERSONNEL IN WORKBOX**

A workbox must not be used if the work can be conducted in any other manner. The use of scaffold, elevated work platform, swinging stage, etc must be considered first. If these methods are not considered practical and the work is of short duration, then the use of a workbox may be considered with management's

approval required.

- 1) Only trained and authorized employees are permitted to perform aerial lifts.
- 2) Mobile cranes of a capacity less than 10 tons should not be used for lifting personnel.
- 3) The crane must be fitted with a safety hook
- 4) The crane must be fitted with a dead-man control to produce self-centering and automatic brake engagement.
- 5) The crane drive mechanism must be able to be locked into the drive-up and drive-down mode. Free fall of the workbox is not allowed.
- 6) Outriggers must be set at maximum extension (when applicable).
- 7) The operator must make sure the workbox and lifting gear are in good condition before use.
- 8) Load lines must be capable of supporting, without failure, at least 7-times the maximum intended load. If using rotation resistant rope, the lines must be capable of supporting without failure at least 10-times the maximum intended load.
- 9) The operator must remain at the controls when the workbox is occupied.
- 10) The workbox must clearly have posted the weight and its rated load capacity.
- 11) The total weight of the loaded workbox and related rigging cannot exceed 50% of the rated capacity for the radius and configuration of the crane.
- 12) One person in the workbox must be qualified to give crane signals.
- 13) The workbox cannot be lifted in dangerous weather conditions (i.e. windy).
- 14) A trial lift with the unoccupied workbox (loaded to the anticipated lift-weight) must be performed. The workbox and rigging must be proof tested to 125% of the rated capacity by holding it in a suspended position for 5 minutes with the test load evenly distributed. After completion of the trial lift, a visual inspection must be performed. Any defects found during inspections must be corrected before hoisting personnel. Personnel hoisting cannot be performed until the proof testing requirements are satisfied.
- 15) Before the lift, a meeting must be held by the crane operator to include the signal person, and other intended occupant(s) of the workbox to review the appropriate procedures to be followed.

- **CONCRETE TILT-UP ERECTION**

- 5.1 General**

The most important phase during construction of a tilt-up building is erection of the wall panels. It is incumbent upon designers and builders to plan and re-plan, directing their efforts to ensure that this important phase of tilt-up construction is performed safely and efficiently. Since there must be a close, cooperative, relationship between the panel contractor and erection subcontractor during the early days of the project, it is advisable to select an erection subcontractor during the early days of the project. The erection subcontractor and crew should be well experienced in tilt-up as panel tilting and handling is very specialized. This chapter highlights some of the major points that the panel contractor and erection subcontractor should address.

- 5.2 Prior to Construction**

- 5.2.1 Crane Section**

Crane selection should not be looked upon as merely routing. General rules for sizing the crane state that the crane capacity should be adequate for handling the heaviest panel including weight of the rigging gear. However, in the final analysis not only panel weight, but also the crane's position relative to the panel must be considered. The following questions must be answered before final determination of crane size can be established:

1. How far must the crane reach to lift the panel?
2. How far will the crane have to travel with the panel?
3. How far will the crane have to reach to set the panel?

The crane that is finally selected for the project should be properly certified. Many, if not all states have standards with which erection subcontractors must comply. It is a prudent panel contractor that makes certain they have available at the jobsite documentation attesting to the crane's certification. They should also obtain from the erection subcontractor a certificate of insurance.

- **CONCRETE TILT-UP ERECTION - CONTINUED**

- **5.3 Prior to Erection Day**

- **5.3.1 Site Inspection**

After panels are cast and during curing, the panel contractor, erection subcontractor, and tilt-up hardware supplier should again walk the site. Terrain upon which the crane will travel should be inspected and corrections noted.

- **5.3.2 Panel Preparation**

Panel preparation must be checked. Are inserts properly located as shown in erection manual and are they clean? Check all inserts with lift hardware. Are strongbacks properly installed? Has proper strength of concrete been attained? Check concrete cylinder test. Strength of concrete noted in the erection manual refers to concrete strength at time of lift and not the 28-day strength.

- **5.3.3 Crane Entrance and Exit**

Entrance and exit ramps should be checked. Entrance ramp should be built up so the crane descends slightly down onto the slab, not crawling up onto it. Exit ramp should be constructed in the same manner. On some buildings, architectural openings are large enough for the crane to exit. Do not let the crane's weight bear at the extreme edge of the slab. This is of particular importance if the crane is walking out with the added weight of the closure panel.

- **5.3.4 Work Platform**

Blockouts over interior column footings should not be broken out before the lift, particularly in rainy weather. Water under the slab could make the subgrade weak.

- **5.3.5 Equipment**

The panel contractor and erection subcontractor must itemize the rigging and equipment that will be needed for proper and safe lifting. The erection manual supplied by the erection accessory vendor or the erection plans will specify all the types of rigging configuration and cable lengths for the project. These details should be rigidly adhered to since they are an integral part of the erection stress calculations. Panel contractor should also make a list of required tools. They should include a compressor, drills, wrenches, expansion anchors, a bolt-on lift plate, ladders, and miscellaneous hand tools. A minimum of two sets of lift hardware should be on the job. It is prudent to anticipate material needs for last minute repairs.

- **CONCRETE TILT-UP ERECTION - CONTINUED**

- 5.3.6 Crew

Erection subcontractor's minimum crew should consist of the crane operator, rigger foreman, two journeyman riggers and welders if required. Carpenters and laborers from the panel contractor's workforce, primarily to handle braces, should augment this crew. In areas where no crane erection subcontractors are available, the minimum crew should be a crane operator and driver, foreman and four to five laborers. Exception: stacked panels require an additional two to three laborers and welders if required. A properly staffed and well-coordinated erection crew is the key to successful lifting. The crane operator must be a skilled journeyman, experienced in handling tilt-up panels. He must be able to control three motions of his crane: Hoist, swing, and boom hoist. It is normal to use all three of these functions simultaneously.

- 5.4 Safety Meeting**

- 5.4.1 General

A safety meeting with the erection crew is held before any lifting starts. Personnel are told to never place themselves under the panel while it is being tilted or on the blind side of the panel when the crane is traveling with it. Personnel must never be placed between the crane and panel. A conscientious crane contractor will not allow play or unnecessary talking. A standard part of the safety meeting, which is usually conducted by the rigger foreman, should contain comments about the need to remain alert with each person depending on the other. The crew should be reminded that safety is everyone's responsibility and that hard hats are required.

It is advisable for the erection subcontractor to create a checklist to use during this safety meeting to be certain everything is covered. A cautious crane contractor will have crew members sign the checklist.

- 5.4.1.1 Rigger Foreman

The rigger foreman should be clearly identified at the meeting. This individual will be the one the crane operator will be looking to for all signals. The rigger foreman must

be experienced in handling panels and be knowledgeable of the precise set of hand and arm signals that will communicate his desires to the crane operator. Verbal instructions are almost impossible due to the noise level in the operator's cab.

A competent rigger foreman will create and maintain a confident atmosphere during the lift and must remain alert to guard against over confidence and not allow the crew to become careless.

- **CONCRETE TILT-UP ERECTION - CONTINUED**

- 5.4.1.2 Demonstration

- During this meeting the rigger foreman should demonstrate use of the lifting hardware, bracing hardware and proper use of any tools and equipment that are to be used.

- 5.4.1.3 Teams

- At this time, the crew is often broken up into teams for handling bracing, rigging, and hardware attachment. Each individual's function and responsibility is clearly defined. The panel contractor should furnish a person whose responsibility it is to clean the floor slab as soon as the crane has cleared the area. Regardless of how good a contractor's housekeeping is before the lift, there is always a certain amount of debris left behind. This individual should also make certain that all leftover form nails are pulled from the slab.

## **5.5 During Lift**

- 5.5.1 Precautions

- The panel contractor should provide a clean working area with all obstacles removed. The panel should be cleaned of all debris and loose tools. Blow away all standing water from around the perimeter of the panels and remove any water that might be pooled in panel openings. Standing water prevents air from entering under the panel and creates extra loading needed to break the bond. A 40-ton panel will easily move in a slight breeze when hanging from a crane.

- Panel erection should be accomplished in one continuous and smooth rotating motion to the vertical position. The bottom of the

panel should not be dragged on the casting bed or ground during the rotating operation. The panel should not be swung while the bottom of the panel is in contact with the casting bed.

When the crane is walking with the panel most crew members will be looking up at the panel and rigging. The rigger foreman must be alert to all obstacles in the path of the crane and crew.

It is the rigger foreman's responsibility to make certain all personnel, not directly connected with the panel lifting be clear of the lifting area.

#### 5.5.1.1 Special Shapes or Rigging

Extra precaution should be taken when lifting panels with special shapes or special rigging. The erection manual should be consulted for cautionary notes as to how a panel might act during lifting, and to again verify the rigging and insert locations. If possible, the tilt-up hardware supplier should be on the jobsite the first day.

- **CONCRETE TILT-UP ERECTION - CONTINUED**

#### 5.5.2 Inspection

Panels should be inspected before the lift for any reinforcing steel and/or ledgers that may be projecting beyond the panel edges that will create interference when the panel is being plumbed next to a previously erected panel. This happens most often at corners.

After all attachments are made to the panel and as the rigging is being raised to take the slack out of the cables, but prior to initial loading of the inserts, all rigging gear must be inspected for proper alignment and to be free of snags. If non-swivel type sheaves are used, make certain the sheaves are properly aligned. Reattach hardware when cable twisting is present and check winch brake before panel clears slab.

#### 5.5.3 Sticking Panels

Be alert for panels that may be stuck to the casting surface. Under such conditions loads transferred to the pick-up inserts could be more than doubled, causing possible insert withdraw. Carefully positioned wedges pry bars can be used to help release the panel. As cables are being tensioned, they will invariably try to twist and possibly rotate the lifting hardware causing side loading on the hardware bale. The rigger foreman should be consistently alert for the condition and if it does happen, should halt the lift and realign the hardware.

#### 5.5.4 Braces

Braces are usually attached to the panel before lifting. Caution must be taken to be certain that the braces will not be trapped by the rigging when the panel is in its final upright position and braces are ready to be swung out and attached to the floor.

### 5.6 Plumbing Panels

#### 5.6.1 Precautions

Be alert when plumbing panels to their final upright position. Caution must be taken to make certain the panel being plumbed does not strike a previously erected panel. All personnel should be cleared of those critical areas around a panel when plumbing is being done. If a panel being plumbed is to be a closure panel, measurements should be taken before the lifting to make certain it will fit.

#### 5.6.2 With Crane

Tilt up panels should be as plumb as possible before attaching the bracing at the floor point. Temporary out-of-plumbness should not exceed 4 inches. All commercially available pipe braces have threaded adjusting units that allow for some in and out adjustment after they are attached. It is generally more practical to “Fine Tune” the panel plumbness with pipe braces after the lift is completed.

- **CONCRETE TILT-UP ERECTION - CONTINUED**

#### 5.6.2.1 Special Conditions

There are two commonly occurring conditions that dictate that panels be perfectly plumb prior to releasing the crane:

1. If the panel is going to support an adjacent spandrel or lintel panel, then the panel should be in an accurate final position to prevent having to readjust it later when it is supporting another panel;
2. If the bracing design calls for a sub-support system of knee, lateral and end or cross bracing, then the panel should be accurately placed.

It is recommended that panels requiring sub-support systems not be re-plumbed later as the brace sub-support system, if not removed, must at least be loosened to adjust the main brace, placing the panel in a dangerous position.

### 5.7 Bracing

### 5.7.1 General

Do not release the crane load if bracing does not appear adequate. Crane loads should be released slowly, keeping an eye on the panel and bracing for an unusual activity. It is desirable that all bracing be complete before releasing the crane, that is all knee, lateral bracing, if required, be in place. This is not always possible. Often the crane's position near the panel prevents the lateral bracing from being attached. Once the crane is clear of the area the panel contractor must complete the lateral and end bracing, and be no more than one panel behind the lift with this phase of the bracing. All bracing should be completed on all erected panels at the end of the workday.

### 5.8 Closure Panel

Be alert with the closure panel. It is generally a blind pick and is usually handled while moving down a ramp. It is usually a filler panel and should be measured for fit before lifting.

- **TOWER CRANE ERECTION**

- 1) Erection of a tower crane can only be performed as recommended by and under the supervision of a certifying agent and/or factory approved manufacturer's technician.
- 2) Employees engaged in the erection of tower cranes and the inspection maintenance or repair related to such erection, when working at elevations 30 feet or greater over ground or other surfaces is required to use fall protection. *Note: When performing work other than connecting, fall protection must be used at elevations greater than 15 feet.*
- 3) Guys, braces, and other supports must be used as necessary to prevent damage or collapse of the equipment during the erection procedures.
- 4) The unbraced, freestanding portion of the mast between the boon and the top

support position cannot exceed in height the distance recommended by the certified agent.

- 5) When it is required that the mast be secured in the shaft way of a structure, the structural members to which it is secured must be adequate to safely sustain all anticipated loads including vibration.
- 6) Where the vertical load of the crane assembly is supported by the edges of floor openings of a structure, measures must be taken to prevent structural damage of such support.
- 7) When the mast sections are raised to a new position, steps must be taken to prevent damage or collapse of the crane assembly including vertical slippage of the mast unit.
- 8) The load limit device must be in effective operation and shall not be readjusted to handle loads greater than those specified by the certified agent.

- **TOWER CRANE DISMANTLING**

The dismantling procedure of a Tower Crane is usually the reverse of the assembly operation. However, because of the heights involved and interference of the structure that the crane was used to build, the dismantling operation is more critical. It must be carried out by a skilled crew, competent supervision and under the direction of the crane manufacturer or his agent.

- I. Pre-Dismantling:

- A. Identify Tower Crane type and procedures for dismantling. Meet with

Manufacture's representative.

1. Freestanding, top climbing, inside climbing or traveling
2. Know weight of every major component of this model crane
3. Identify special tool requirements, hydraulic wrenches and pullers, impact wrenches, rigging, safety equipment, etc.

B. Site inspection to verify access and safe working area:

1. Mobile crane – mobilization and working access
2. Lay down area for Tower Crane parts and loading area
3. Establish safe working zone with barricades, caution tapes and flag personnel as required

II. Dismantling:

A. Safety Meeting – prior to start of any dismantling operation:

1. Foreman, responsible for directing all work, is clearly identified.
2. Tower Crane manufacturer's representative is introduced. His technical direction will be adhered to by dismantling crew.
3. Foreman conducts full safety meeting with all attendees signing Pacific Coast Drilling Co., Inc meeting form.
4. Major Topics of Safety Meeting:
  - a. Sequence of dismantling operation
  - b. Elevated work rules, fall protection, hard hats, clothing
  - c. Load control with tag lines
  - d. Hand or radio signaling between crew and mobile crane
  - e. Tie off around the perimeter of a building, open area, and on floats. When working on any structure where a fall of seven and one-half feet or more is possible, it is mandatory you wear a safety harness with a lanyard attached to a safety cable or other secure structure.

• **TOWER CRANE DISMANTLING - CONTINUED**

B. Tools and Equipment:

1. Know your tools. Inspect and take care of your tools. Do not use defective tools.
2. Keep work area clean. Keep loose items off floors and walking areas.
3. Do not get jammed. Keep your fingers and your feet away from

moving objects. Plan in advance where you should be to avoid possible jamming and be there.

4. When pulling or prying, be sure you are positioned to safely react to a sudden release of pressure and or movement of the object to your body.
5. Use goggles, protect your eyes when exposed to any flying matter, when burning or exposed to welding flashes.
6. Take time to lift properly. Have secure footings, knees bent, back straight, firm hold, and lift gradually with legs. On heavy objects, work as a team.
7. Ropes, slings, and shackles must be used within their rated capacities and checked for defects daily.
8. Do not stand, walk, or work beneath suspended loads. Stay at the ends of the loads.
9. When walking, watch for obstacles and open holes.
10. Report all injuries to your foreman, no matter how small they seem.

C. Tools and Equipment:

1. Follow direction of manufacture's representative technician.
2. Keep away from moving parts of climbing sections. Only trained manufacturer technicians are to operate any of the climbing sections.
3. Always verify that climbing pawls are positioned properly before extending or retracting hydraulic climbing ram.
4. Only the foreman will direct the climbing crew and crane operator, under the technical direction of the manufacturer's technician. Work as a team.
5. Verify that the balancing weight is proper and follow the manufacturer's representative technician's direction for balancing of Tower Crane.
6. Verify with crane operator and manufacturer's representative technicians that the crane is locked out of service before starting climb.
7. Know safety rules and regulations and obey them. Report any unsafe conditions, tools, equipment, or person to your foreman.

## Fall Protection Program

This fall protection program has been developed to meet the standards of Cal/OSHA, Title 8, Chapter 4. Construction Safety Orders.

Pacific Coast Drilling Co., Inc is dedicated to providing a safe workplace for all employees. This company has developed this program with the safety of all employees in mind. All employees are encouraged to take an active roll in the continued development of a safe workplace. Suggestions for improvements are openly solicited; supervisors will address all comments.

Within the following program Pacific Coast Drilling has:

- 1) Developed a fall protection program (both general and site specific as necessary)
- 2) Provided proper personal fall protection equipment
- 3) Trained supervisors to “Competent Person” status
- 4) Provided for training of all employees
- 5) Provided for inspection of equipment prior to each use
- 6) Provided for documented, semi-annual inspections of all equipment

The following information, with special emphasis on considerations, which most frequently involve this company, is the basis for this fall protection program.

Included are examples of this company’s fall analysis considerations and fall protection site-specific considerations.

This company’s on site supervisors have been trained in all facets of fall protection that are pertinent to this company’s activities and have met the criteria to be acknowledged as “competent persons.”

As defined by Cal/OSHA, a competent person is an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

## **WHAT IS FALL PROTECTION?**

Warning Lines, Guardrails, Perimeter Cables, Safety Nets, Walls, Fences,  
Floors, Platforms, Buckets, Scaffolds, Planking, Personal Fall Protection Equipment

**IF IT IS NOT CONTINUOUS PROTECTION – IT IS NOT FALL PROTECTION!**

### **■ FALL PROTECTION – DO’S, DON’TS AND FACTS ■**

- 1 Effective 1/1/98:
  - ✓ Body Belts are not acceptable as part of personal fall arrest system. The use of a body belt is only acceptable for positioning.
  - ✓ Only locking type snap hooks can be used.

- 2 Fall Protection is required when working at or above 7 ½ feet
- 3 Anchorage points must be capable of supporting at least 5,000 lbs
- 4 Personal fall arrest equipment must bring an employee to a complete stop and limit the maximum deceleration distance an employee travels to 3.5 feet
- 5 A shock-absorbing lanyard will stretch 3 ½ feet to slow a fall. Remember this when calculating the fall distance.
- 6 The shorter the tie-off, the shorter the fall. Always use the shortest possible lanyard. Tie-off above your head.
- 7 Avoid the pendulum effect – Tie-off directly overhead. When you tie-off to the side, you may swing into the side surfaces or obstructions during a fall.
- 8 Look out for sharp beams – Never wrap your lanyard around a beam or sharp edge. Sharp edges could cut them because of the tremendous forces generated during a fall. Use a connecting strap or carabiner.
- 9 Make sure the anchor point meets the 5000 lb. anchor point (or a safety factor of 2) requirement. Rule of thumb when selecting an anchor point – Will it hold up a pickup truck?
- 10 Wear a full-body harness whenever possible – Snug, but not binding. Your belt should fit so the center grommets are used most often (don't punch additional holes) – The chest strap should be in your mid chest area.
- 11 Lanyards are to be secured at shoulder blade height, limiting the fall distance to a maximum of 4 feet

## **PERSONAL FALL ARREST, FALL RESTRAINT, AND POSITIONING DEVICES (§1670)**

- (a) Approved **Personal Fall Arrest, Personal Fall Restraint** or **Positioning Device** systems shall be worn by those employees whose work exposes them to falling in excess of 7 1/2 feet from the perimeter of a structure, unprotected sides and edges, leading edges, through shaft ways and openings, sloped roof surfaces steeper than 7:12, or other sloped surfaces steeper than 40 degrees not otherwise adequately protected under the provisions of these Orders.

NOTE: (1) Requirements relating to fall protection for employees working at elevated locations on poles, towers and other structures are provided in Section 2940.6(b) and (c) of the High Voltage Electrical Safety Orders. (2) Requirements relating to fall protection for employees working on poles, towers, or similar structures are provided in Section 8615(g) of the Telecommunications Safety

Orders.

- (b) **PERSONAL FALL ARREST SYSTEMS** and their use shall comply with the provisions set forth below. Effective January 1, 1998, except as permitted in subsections (c) and (d), body belts shall not be used as part of a personal fall arrest system.
- (1) On suspended scaffolds or similar work platforms with horizontal lifelines that may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.
  - (2) Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
  - (3) Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
  - (4) Except as provided in Section 1670(b)(5), when vertical lifelines are used, each employee shall be attached to a separate lifeline.
  - (5) During the construction of elevator shafts, two employees may be attached to the same lifeline in the hoistway, provided both employees are working atop a false car that is equipped with guardrails; the strength of the lifeline is 10,000 pounds [5,000 pounds per employee attached]; and all other criteria specified in this section for lifelines have been met.
  - (6) Lifelines shall be protected against being cut or abraded.
  - (7) Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
  - (8) Self-retracting lifelines and lanyards which do not limit free fall distance to 2 feet or less, ripstitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
  - (9) Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses shall be made from synthetic fibers except for when they are used in conjunction with hot work where the lanyard may be exposed to damage from heat or flame.

**PERSONAL FALL ARREST SYSTEMS (§1670) - CONTINUED**

- (10) Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as follows:
  - (A) as part of a complete personal fall arrest system which maintains a safety factor of at least two; and
  - (B) under the supervision of a qualified person.

- (11) Personal fall arrest systems, when stopping a fall, shall:
- (A) limit maximum arresting force on an employee to 900 pounds when used with a body belt;
  - (B) limit maximum arresting force on an employee to 1,800 pounds when used with a body harness;
  - (C) be rigged such that an employee can neither free fall more than 4 feet, nor contact any lower level;
  - (D) bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet; and
  - (E) have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet, or the free fall distance permitted by the system, whichever is less.
- (12) The attachment point of the body belt shall be located in the center of the wearer's back. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
- (13) Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.
- (14) Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
- (15) The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.
- (16) Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
- (17) Body belts shall be at least one and five-eighths (1 5/8) inches wide.
- (18) Personal fall arrest systems shall not be attached to guardrails, nor shall they be attached to hoists except as specified in these Orders unless the guardrail is capable of safely supporting the load.
- (19) When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the working level or working area.

**PERSONAL FALL ARREST SYSTEMS (§1670) - CONTINUED**

- (20) Each personal fall arrest system shall be inspected not less than twice annually by a competent person in accordance with the manufacturer's recommendations. The date of each inspection shall be documented.

(c) **POSITIONING DEVICE SYSTEMS**

Positioning device systems and their use shall conform to the following provisions:

- (1) Positioning devices shall be rigged such that an employee cannot free fall more than 2 feet.
- (2) Positioning device systems shall be inspected prior to each use for wear, damage, and other deterioration, and defective components shall be removed from service.
- (3) Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.
- (4) The use of non-locking snaphooks shall be prohibited after January 1, 1998.
- (5) Anchorage points for positioning device systems shall be capable of supporting two times the intended load or 3,000 pounds, whichever is greater.

(d) **PERSONAL FALL RESTRAINT**

- (1) Body belts or harnesses may be used for personal fall restraint.
  - (2) Body belts shall be at least one and five-eighths (1-5/8) inches wide.
  - (3) Anchorage points used for fall restraint shall be capable of supporting 4 times the intended load.
  - (4) Restraint protection shall be rigged to allow the movement of employees only as far as the sides of the working level or working area.
- (e) Where practicable the anchor end of the lanyard shall be secured at a level not lower than the employee's waist, limiting the fall distance to a maximum of 4 feet.
- (f) Lanyards shall be secured to a substantial member of the structure or to securely rigged lines, using energy absorbing devices or methods.
- (g) All fall arresting, descent control, and rescue equipment shall be approved as defined in Sections 1504 and 1505 and used in accordance with the manufacturer's recommendations.
- (h) If an employee's duties require horizontal movement, rigging shall be provided so that the attached lanyard will slide along with the employee. Such rigging shall be provided for all suspended staging, outdoor advertising sign platforms, floats, and all other catwalks, or walkways 7 1/2 feet or more above the ground or level beneath.

NOTE: For additional fall protection requirements during steel erection operations, see Article 29.

- (i) Any lanyard, safety belt, or drop line 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.

NOTE: For the purpose of this subsection, "in-service loading" shall mean loading equivalent to that received in a drop test.

**PERSONAL FALL ARREST SYSTEMS (§1670) - CONTINUED**

- (j) Lifelines and anchorages shall be capable of supporting a minimum dead weight of 5400 pounds.

EXCEPTION: Retractable lanyards, controlled descent and rescue devices provided they are approved as defined in Sections 1504 and 1505.

- (k) Lifelines subject to excessive fraying or rock damage shall be protected and shall have a wire rope center. Seriously worn or damaged rope shall be promptly removed from service.
- (l) All safety belts, harnesses and lanyards placed in service or purchased on or before February 1, 1997, shall be labeled as meeting the requirements contained in ANSI A10.14-1975, Requirements for Safety Belts, Harnesses, Lanyards, Lifelines and Drop Lines for Construction and Industrial Use.
- (m) All personal fall arrest, personal fall restraint and positioning device systems purchased or placed in service after February 1, 1997, shall be labeled as meeting the requirements contained in ANSI A10.14-1991 American National Standard for Construction and Demolition Use, or ANSI Z359.1-1992 American National Standard Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components.

## **EQUIPMENT INSPECTION:**

- 1 Personal fall arrest systems must be inspected before each use for wear, damage and other deterioration. Defective components must be tagged “DO NOT USE” and removed from service.
- 2 Each personal fall arrest system must be inspected not less than twice annually by a competent person in accordance with the manufacture’s recommendations. The date of each inspection must be documented.

## **ANCHORING PROCEDURES:**

### **Anchor Points:**

- 3 Should be directly above the worker
- 4 Easily Accessible
- 5 Capable of supporting 5000 pounds per worker
- 6 High enough so that no lower level is struck should a fall occur

### **Anchoring Devices**

- 7 Carabiner: Used to connect retractable lifelines and vertical drop lines to an overhead anchor point
- 8 Cross-Arm Strap: Designed to wrap around beams to eliminate the dangerous practice of wrapping lanyards around sharp beams.
- 9 Horizontal Lifeline: Permanent and temporary anchoring point, usually a steel cable.
- 10 Beam Trolley: Trolley used to freely move on overhead I-Beams. This ensures that the anchor point remains directly overhead.

## **POST-FALL RECOVERY**

- 1 If a post-fall recovery is needed, the following emergency measures should be activated to protect both the fall victim and intended rescuers.
- 2 Communicate with the fall victim and establish the level of consciousness and evaluate injuries, ***and***
- 3 Call emergency units, ambulance, fire-rescue. Do not hesitate to contact any all emergency facilities able to respond in order to trigger immediate response.
- 4 Comfort and monitor the victim continually.
- 5 Appoint a qualified person to take charge of the operation's overall safety. This person should be capable of evaluating the overall situation and identifying any actions that may be necessary to gain control of the job site.

### **Medical Considerations:**

- 1 Do not attempt to move the fall victim, unless necessary. If necessary, evaluate and stabilize the victim first. Head, neck and back injuries can be compounded if a victim is moved incorrectly.
- 2 Unless the victim's airway is obstructed, it is most efficient to lower the victim to within 3 to 4 feet of the ground and then administer first aid during a lowering rescue.
- 3 If the post-fall subject has been suspended in a full-body harness for more than 15 minutes, the rescue team should be aware of the possibility of delayed shock, due to the fact while hanging in the harness, circulation to legs may be cut-off. Lactic acid and other chemicals begin to build up as blood pools in the legs. The sudden release of pressure from the harness straps causing the blood and chemical build-ups to surge through the body, prompting a physical reaction that could lead to delayed shock symptoms. The rescued subject should be placed in a prone position and monitored closely.

## **SPECIAL CONDITIONS - §1671.1. FALL PROTECTION PLAN**

(a) This section applies to all construction operations when it can be shown that the use of conventional fall protection is impractical or creates a greater hazard.

(1) The fall protection plan shall be prepared by a qualified person and developed specifically for the site where the construction work is being performed and the plan must be maintained up to date. The plan shall document the identity of the qualified person.

NOTE: The employer need only develop a single site fall protection plan for sites where the construction operations are essentially identical.

(2) Any changes to the fall protection plan shall be approved by a qualified person. The identity of the qualified person shall be documented.

(3) A copy of the fall protection plan with all approved changes shall be maintained at the job site.

(4) The implementation of the fall protection plan shall be under the supervision of a competent person. The plan shall document the identity of the competent person.

(5) The fall protection plan shall document the reasons why the use of conventional fall protection systems (guardrails, personal fall arrest systems, or safety nets) are infeasible or why their use would create a greater hazard.

(6) The fall protection plan shall include a written discussion of other measures that will be taken to reduce or eliminate the fall hazard for workers who cannot be provided with protection provided by conventional fall protection systems. For example, the employer shall discuss the extent to which scaffolds, ladders, or vehicle mounted work platforms can be used to provide a safer working surface and thereby reduce the hazard of falling.

(7) The fall protection plan shall identify each location where conventional fall protection methods cannot be used. These locations shall then be classified as controlled access zones and the employer must comply with the criteria in Section 1671.2(a).

(8) Where no other alternative measure (i.e. scaffolds, ladders, vehicle mounted work platforms, etc.) has been implemented, the employer shall implement a safety monitoring system in conformance with Section 1671.2(b).

(9) The fall protection plan must include a statement which provides the name or other method of identification for each employee (i.e., job title) who is designated to work in controlled access zones. No other employees may enter

controlled access zones.

- (10) In the event an employee falls, or some other related, serious incident occurs (e.g., a near miss), the employer shall investigate the circumstances of the fall or other incident to determine if the fall protection plan needs to be changed (e.g., new practices, procedures, or training) and shall implement those changes to prevent similar types of falls or incidents.

**Fall Hazard Analysis Checklist  
Safety Meeting Report**

Date \_\_\_\_\_ Job Name/# \_\_\_\_\_ Foreman \_\_\_\_\_

- Identify Hazard Areas (i.e. unguarded edges, open holes, any work over 7 ½ feet above a safe work surface)
- Identify activities to be performed in Hazard Areas (Vertical and Horizontal, i.e. vertical: hoist from street to 8<sup>th</sup> floor opening, horizontal: roll from 8<sup>th</sup> floor to opening to interior)
- Prescribe personal fall protection (i.e. full body harness with shock absorbing lanyard)
- Identify anchor points, 5,000# cap. or twice anticipated maximum potential load (i.e. beams, columns)
- Train employees in proper use of equipment (i.e. “O” ring at shoulder blade height centered on back, proper fit of harness)
- Inspect all fall protection equipment (i.e. hooks, lanyards, harnesses, “O” rings)
- Identify rescue equipment available on site (i.e. ladders, forklift, boom truck, phone access (911), individual responsibilities)
- Comments/Questions:

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This checklist is not intended to restrict fall hazard considerations in any way. All employees are encouraged to participate in Fall Hazard Safety Meetings.

PRESENT AT MEETING:

PRINT NAME / SIGN


# Statements, Forms and Checklists

Statements, Forms and Checklists found under this section have been designed to assist with ensuring compliance with Cal/OSHA required elements of the IIPP, in addition to making sure procedures implemented are communicated to all employees.

Key employees responsible for job site activity are responsible for making sure that the respective forms are completed, and that a copy is provided to management for recordkeeping purposes.

The goal of Pacific Coast Drilling Co., Inc is to make sure that the company IIPP is effective in reducing, and when possible eliminating, safety hazards faced by employees and the general public at the workplace.

**CODE OF SAFE PRACTICES**  
**– ACKNOWLEDGEMENT OF RECEIPT –**

I have read and understand the Code of Safe Practices implemented by Pacific Coast Drilling Co., Inc and agree to abide by the established guidelines.

I have been advised of the following programs that are available for my review:

- Injury and Illness Prevention Program
- Hazard Communication Program
- Emergency Action Plan
- Fire Prevention Plan

I have also been advised of my right to view records relating to potentially toxic materials or harmful physical agents. I will be provided with information by means of Material Safety Data Sheets (MSDS), and/or equivalent training and documentation that is designed for informing employees on how to use hazardous substances safely.

I understand that Pacific Coast Drilling Co., Inc uses designated medical facilities for the treatment of work related injuries. I have been provided with information regarding my rights under workers' compensation law. In the event an injury occurs, I understand that I am required to immediately notify management or my supervisor.

I have been advised that in accordance with Cal/OSHA requirements, Pacific Coast Drilling Co., Inc has a disciplinary policy in place to enforce compliance with safety rules. I understand that any violation(s) on my part or anyone working under my direct supervision will be grounds for disciplinary action and/or cause for discharge. A written warning will be processed for each violation of the established Code of Safe Practices.

I agree to actively participate in the efforts established to maintain a safe and healthy workplace. I understand my right to refuse to perform work that would violate any occupational safety or health standard, without jeopardizing my employment.

**Employee Name (Print):** \_\_\_\_\_

**Employee Signature:** \_\_\_\_\_ Date \_\_\_\_\_

**Witnessed by:** \_\_\_\_\_ Date \_\_\_\_\_

## **NOTICE OF SAFETY INFRACTION**

To enforce employee compliance with established safety rules, Cal/OSHA requires that disciplinary procedures be implemented to respond to safety and health violations.

Because Pacific Coast Drilling Co., Inc considers the safety of our employees to be very important, it is our policy to strictly enforce company safety rules. Infractions of safety rules will result in the following:

1 <sup>st</sup> Infraction	Written Warning
2 <sup>nd</sup> Infraction	Written Warning w/Probation Status
3 <sup>rd</sup> Infraction	Suspension

A willful violation that threatens the employee's life, or the life of another individual, may be cause for immediate termination of employment, regardless of the number of prior warnings.

(Name) \_\_\_\_\_ was  
observed working in the  
following unsafe manner(s) on \_\_\_\_\_, contrary to company safety rules:

\_\_\_\_\_  
\_\_\_\_\_

**This is the:**

1st       2nd       3<sup>rd</sup>       4<sup>th</sup>       Other

**Status of prior action(s):** \_\_\_\_\_

**Action taken because of this violation will consist of:**

\_\_\_\_\_

**The above notice of violation has been reviewed with me, and I:**

- Agree with the findings of the safety violation
- Disagree with the findings of the safety violation, because:

\_\_\_\_\_

**Employee Signature:** \_\_\_\_\_ Date \_\_\_\_\_

**Supervisor Signature:** \_\_\_\_\_ Date \_\_\_\_\_

**Management Signature:** \_\_\_\_\_ Date \_\_\_\_\_

## TOOLBOX SAFETY MEETING REPORT

Date \_\_\_\_\_ Job Name/# \_\_\_\_\_ Foreman \_\_\_\_\_

- |  |                                  |
|--|----------------------------------|
| Field 1: [ ]Intro. Riggers                       | Item 1: [ ]Electrical Lines      |
| Field 2: [ ]Determine Aligners                   | Item 2: [ ]Fire Potential        |
| Field 3: [ ]Determine Bracemen                   | Item 3: [ ]Overhead Loads        |
| Field 4: [ ]Brace Handling                       | Item 4: [ ]Fall Protection       |
| Field 5: [ ]Bracing Procedure                    | Item 5: [ ]Eye Protection        |
| Field 6: [ ]Avoiding Pinch Point                 | Item 6: [ ]Ventilation           |
| Field 7: [ ]Trip Hazards                         | Item 7: [ ]Lifting Techniques    |
| Field 8: [ ]Rigging Concerns                     | Item 8: [ ]Hard Hat, Glove, Boot |
| Field 9: [ ]Do Not Over Re-Act                   | Item 9: [ ]Ladder Safety         |
| Field 10: [ ]Do Not Run                          | Item 10: [ ]Tag Lines            |
| Field 11: [ ]Rolling Outriggers                  |                                  |
| Field 12: [ ]Housekeeping                        |                                  |
| Field 13: [ ]Visual Signal Contact               |                                  |
| Field 14: [ ]Comments/Questions                  |                                  |
| Field 15: [ ]Additional safety topics discussed: | _____                            |

**PRESENT AT MEETING:**

PRINT NAME / SIGN

_____	_____
_____	_____
_____	_____
_____	_____

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Topics Labeled “Field 1 – 14” are to be addressed on all Concrete Tilt-Up Projects

Topics Labeled “Item 1 –10” are potential concerns on any project

This checklist is not intended to limit or restrict discussion of any topic that may be appropriate to address specific safety concerns at the project. Document all subjects discussed.

## **EMPLOYEE SAFETY INFORMATION FORM**

This form can be used by employees who wish to make a safety suggestion, or report an unsafe workplace condition or practice.

Description of Unsafe Condition or Practice:

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Causes or Other Contributing Factors:

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Employee’s Suggestion for Improving Safety:

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Has this Matter Been Reported to the Area Supervisor:  Yes  No

Employee Name (Optional): \_\_\_\_\_

Job Site: \_\_\_\_\_ Date: \_\_\_\_\_

**ACTION**  
**(For Office Use Only)**



- 14. Floors are clear of all debris and slip hazards
- 15. Electrical cords are in good condition
- 16. Ladders are in good condition
- 17. No smoking rules are enforced in restricted areas
- 18. Waste receptacles are being used and emptied when necessary


\*Items requiring attention/correction must be documented on the Hazard Identification & Correction Form

## HAZARD IDENTIFICATION & CORRECTION FORM

**Date:** \_\_\_\_\_ **Name/Title:** \_\_\_\_\_

**Job Site/Workplace:** \_\_\_\_\_

Item/Area Inspected (Identify any hazards) Correction(s) Made	Sati sfa ctor y	Dat e Cor rect ed	Ne eds Att enti on	Tar get Dat e for Cor rect ion


## SUPERVISOR'S REPORT OF ACCIDENT/EXPOSURE

**Employee's Name:** \_\_\_\_\_ **Position:** \_\_\_\_\_

**Date & Time of Accident:** \_\_\_\_\_ **Location:** \_\_\_\_\_

**Date & Time employee reported incident/exposure:** \_\_\_\_\_

**Task(s) being performed when accident/exposure occurred:** \_\_\_\_\_

**Witnesses?/Provide names:** \_\_\_\_\_

**Accident resulted in:**     Injury         Fatality         Property Damage

**1<sup>st</sup> Aid Provided?**         Yes         No        **Referred to Doctor?**     Yes         No

**Describe Injury(s):** \_\_\_\_\_

**Describe how the accident/exposure occurred:** \_\_\_\_\_

What actions, events or conditions possibly contributed to this accident/exposure? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Could anything have been done to prevent the accident/exposure? If yes, explain: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Any exposure to 3<sup>rd</sup> Party (i.e. subcontractor, product, other employer)? If yes, provide details:

\_\_\_\_\_

Additional Comments: \_\_\_\_\_

Supervisor's Name: \_\_\_\_\_ Date: \_\_\_\_\_

Any person who makes or causes to be made any knowingly false or fraudulent materials statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.

## EMPLOYEE'S REPORT OF ACCIDENT/EXPOSURE

Employee's Name: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: \_\_\_\_\_

Date & Time of Accident: \_\_\_\_\_ Location: \_\_\_\_\_

Date & Time accident/exposure was reported: \_\_\_\_\_

Task(s) being performed when accident/exposure occurred: \_\_\_\_\_

\_\_\_\_\_

Witnesses?/Provide names: \_\_\_\_\_

\_\_\_\_\_

1<sup>st</sup> Aid Provided?  Yes  No Referred to Doctor?  Yes  No

Describe Injury(s): \_\_\_\_\_

\_\_\_\_\_

Name of Doctor/Medical Facility: \_\_\_\_\_

Date(s) treatment obtained and results: \_\_\_\_\_

Describe how the accident/exposure occurred: \_\_\_\_\_

\_\_\_\_\_

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**What actions, events or conditions possibly contributed to this accident/exposure?** \_\_\_\_\_

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**Could anything have been done to prevent the accident/exposure? If yes, explain:** \_\_\_\_\_

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**Additional Comments:** \_\_\_\_\_  
**Employee's Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Any person who makes or causes to be made any knowingly false or fraudulent materials statement or material representation for the purpose of obtaining or denying workers' compensation benefits or payments is guilty of a felony.