

# HEALTH & SAFETY PLAN

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## **SECTION 1: MANAGEMENT COMMITMENT AND EMPLOYEE INVOLVEMENT**

The Occupational Safety and Health Act of 1970 clearly states the common goal of safe and healthful working conditions. The safety and health of our employees, and all employees on our work sites continues to be the first consideration in the operations of this business.

It is RC Andersen's belief that our people are our most important asset and the preservation of employee safety and health must remain a constant consideration in every phase of our business. We will offer the resources necessary to manage or control safety and health hazards on each worksite.

Safety and health in our business must be a part of every operation. Without question it is every employee's responsibility at all levels, from management and supervision of RC Andersen, to management, supervision, foremen and all on-site workers of RC Andersen's subcontractors.

It is the intent of this company to comply with all laws. To do this we must constantly be aware of conditions in all work areas that can produce injuries. No worker is required to perform a job or task he or she knows is not safe or healthful. Cooperation in detecting hazards and, in turn, controlling them is a condition of continued employment on RC Andersen's job sites.

The personal safety and health of each employee of this company, and the employees of our subcontractors, is of primary importance. The prevention of occupationally-induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity whenever necessary. To the greatest degree possible, management will provide all mechanical and physical facilities required for personal safety and health in keeping with the highest standards.

We will maintain a safety and health program conforming to the best practices of organizations of this type. To be successful, this program will embody the proper attitudes toward injury and illness prevention on the part of superintendents, supervisors or foremen, and workers. On multi-employer worksites, it also requires cooperation in all safety and health matters from all subcontractors' management, and the foremen and workforce of each subcontractor. Only through such a cooperative effort can a safety program in the best interest of all be established and preserved.

Our objective is a safety and health program that will reduce the number of injuries and illnesses to an absolute minimum, not merely in keeping with, but surpassing, the best experience of operations similar to ours. Our goal is zero accidents and injuries.

Our safety and health program includes:

- A program of safety and health inspections to identify and eliminate unsafe working conditions or practices, to control health hazards, and to comply fully with the safety and health standards for each trade.
- Developing and enforcing safety and health rules for each project and requiring training or orienting all site workers in these requirements, including good safety and health practices, as a condition of their continued employment on each project.

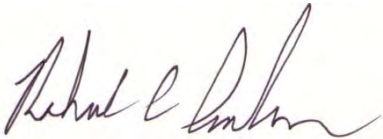
- Ensuring all subcontractors provide the necessary personal protective equipment for their workforce, and instructions for its use and care.
- Investigating, promptly and thoroughly, every accident to find out what caused it and to correct the problem so that it won't happen again.

RC Andersen recognizes that the responsibilities for safety and health are shared:

- RC Andersen accepts responsibility for leadership of the safety and health program for its effectiveness and improvement, and for providing safe conditions.
- RC Andersen's superintendents are responsible for developing the proper attitudes toward safety and health in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the safety and health of all personnel involved, including themselves.
- All subcontractors' foremen and personnel are responsible for compliance with all rules and regulations and for continuously practicing safety while performing their duties.

**PRODUCTION IS NOT SO URGENT THAT WE CANNOT TAKE TIME TO DO OUR WORK SAFELY.**

**RC ANDERSEN LLC**

A handwritten signature in dark ink, appearing to read "Robert C. Andersen", written over a horizontal line.

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**Robert C. Andersen, CEO**

## **SECTION 2 - WORKSITE ANALYSIS/JOB HAZARD ANALYSIS**

It is the responsibility of RC Andersen's supervisory personnel, along with the supervisory personnel of all subcontractors, to know what items, substances or practices that may hurt or injure each trades job-site personnel. A worksite analysis to examine all worksite conditions to identify and eliminate existing or potential hazards must be performed on a regular and timely basis or as conditions change on the job by subcontractors performing the work in conjunction with the project superintendent and/or the project safety superintendent. A Job Hazard Analysis outline form and instructions are included in Appendix C. A Job Hazard Analysis is to be provided by all subcontractors to RC Andersen supervisory personnel daily.

### **What is a job hazard analysis?**

A job hazard analysis is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, uncontrolled hazards are identified, steps must be taken to eliminate or reduce them to an acceptable risk level.

### **What jobs/tasks are appropriate for a job hazard analysis?**

A job hazard analysis can be conducted on many tasks on the jobsite. Priority should go to the following types of jobs:

- Jobs with the highest injury or illness rates;
- Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents;
- Jobs in which one simple human error could lead to a severe accident or injury;
- Jobs that are new to the operation or have undergone changes in processes and procedures; and
- Jobs complex enough to require written instructions.

### **How are hazards corrected?**

After reviewing the list of hazards with the appropriate subcontractor/trade, consider what control methods will eliminate or reduce them. The most effective controls are engineering controls that physically change the work environment to prevent employee exposure to the hazard. The more reliable or less likely a hazard control can be circumvented, the better. If this is not feasible, administrative controls may be appropriate. This may involve changing how employees do their jobs.

### **When should a job hazard analysis be reviewed?**

Periodically reviewing the job hazard analysis ensures that it remains current and continues to help reduce workplace accidents and injuries. Even if the job has not changed, it is possible that during the review process hazards that were not identified in the initial analysis will be identified. It is particularly important to review the job hazard analysis if an illness or injury occurs on a specific job. Based on the circumstances, it may be determined that there is a need to change the job procedure to prevent similar incidents in the future. If an employee's failure to follow proper job procedures results in a "close call," discuss the situation with all employees who perform the job and remind them of proper procedures. Any time a job hazard analysis is revised, it is important to train all employees affected by the changes in the new job methods, procedures, or protective measures adopted.



## **SECTION 3 - HAZARD PREVENTION AND CONTROL**

The core of an effective field operations safety and health program is hazard identification and control. Periodic daily inspections and procedures for correction and control provide methods of identifying existing or potential hazards in the workplace, and eliminating or controlling them. The hazard control system provides a basis for developing safe work procedures, and injury and illness prevention training. If hazards occur or recur, this reflects a breakdown in the hazard control system.

This written safety and health program establishes procedures and responsibilities for the identification and correction of workplace hazards. The following activities will be used by this company to identify and control workplace hazards:

- Field Operation Inspections by Superintendents
- Field Operation Inspections by Safety Inspector
- Accident Investigation

### **A. Field Operation Safety Inspections**

Safety inspections of the field operation will occur periodically every day, when conditions change, or when a new process or procedure is implemented and the inspections will be documented daily. These inspections should focus on the identification and correction of potential safety, health and fire hazards. Superintendents should use the daily site inspection worksheet (See Appendix A) when conducting field operation safety inspections. Any safety deficiencies noted during inspections will result in a safety warning to the offending subcontractor(s).

In addition, the "safe work procedures" in Section II of this program will be reviewed by personnel conducting safety inspections of the field operation.

As part of this safety and health program, the site superintendent for every RC Andersen LLC field operations will provide site orientation training for all first time workers to the site for the duration of the project and receive written confirmation from oriented workers that they understand the rules and regulations of the project and will abide by them while on the project.

### **B. Accident Investigation**

All accidents will be investigated to determine causal factors and prevent future recurrences of similar accidents. A written report of investigation findings will be prepared by the injured employee's supervisor or foreman and submitted to RC Andersen LLC' superintendent for review. The superintendent will then fill out RC Andersen LLC's Accident Reports for further causal investigation and remediation. Forward all reports to the project manager for review and distribution. Written reports for accidents resulting in fatalities or serious injuries will also be submitted to company attorneys.

Whenever an accident occurs, the supervisor or foreman of the injured worker(s) should provide RC Andersen LLC as soon as possible (no longer than 24 hours) a written account of the accident and provide any appropriate documentation, i.e., hospital release form, Workers Compensation claim form, incident report, police report, etc. when available.

All witnesses should be interviewed privately as soon as possible after the accident. If possible, RC Andersen's superintendent should interview the worker(s) at the scene of the accident so that events leading up to the accident can be re-enacted.

Photographs should be taken as soon as possible after the accident and include the time and date taken.

Client notification of an accident, incident or any event that triggers the need for emergency first responders to the site, including ambulance, police, and/or fire brigade will be made within 2 hours of event per the directions included in Appendix F, Accident Investigations.



# HAZARD PREVENTION AND CONTROL - SAFE WORK PROCEDURES

## *Introduction*

The management of RC Andersen LLC, Inc. recognizes that construction work is often hazardous. Therefore, in a continuous effort to minimize injuries and illnesses associated with construction activities, the following safe work procedures will be implemented and enforced on all company projects.

These safe work procedures are designed to comply with the general requirements of OSHA 29 CFR Part 1926 regulations for the construction industry. Many of these work procedures have specific training requirements (e.g., competent persons, qualified persons, licensed persons, certified persons, etc.) that are necessary to comply with OSHA regulations.

If detailed safety and health standards and compliance information for specific activities like blasting, asbestos abatement, tunneling or confined space high hazard entry is required, contact the Safety Superintendent / Safety Inspector to receive assistance.



## Chapter 1

### Personal Protective Equipment

All field operation employees, RC Andersen's and Subcontractors, are required to have the appropriate personal protective equipment (PPE) as specified by OSHA regulations cited in 29 CFR 1926 Subpart E, 1926.95 through 1926.107 to control or eliminate hazardous exposures that may cause injury or illness. Personal protective equipment includes all clothing and other work accessories designed to create a barrier against workplace hazards. Selection of the proper type of personal protective equipment is important for protecting employees from workplace hazards. In an effort to minimize accidents resulting in injuries and illnesses, RC Andersen's superintendent and subcontractor supervisors/foremen must implement and enforce the following personal protective equipment safe work procedures on all company construction projects. Note, all personal protective equipment is to be supplied by each subcontractor for their own personnel. RC Andersen will have spare personal protective equipment in the job site trailer if necessary. **RC Andersen requires hi-visibility clothing, and/or safety vest or hi-visibility outerwear, weather dependent, at all times while onsite.**

#### A. Head Protection

Head injuries are caused by falling or flying objects, or by bumping the head against a fixed object. Head protection must resist penetration and absorb the shock of a blow. Standards for protective hard hats are contained in ANSI Requirements for Industrial Head Protection, Z89.1-1969, and ANSI Requirements for Industrial Protective Helmets for Electrical Workers, Z89.2- 1971 as referenced by 29 CFR 1926.100.

1. All subcontractors, employees and visitors are required to wear protective helmets (hard hats) while on RC Andersen LLC, Inc. projects. Protective hard hats must be worn to protect subcontractors, employees and visitors from potential head injury caused from impact, falling or flying objects, or electrical shock and burns. **There are no exceptions to this requirement.**
2. Employees should not use paint or harsh cleaning materials on their hard hats. Some paints and cleaning materials may damage the shell and reduce protection by physically weakening it or negating electrical resistance.
3. Hard hat shells should be cleaned by dipping them in hot water containing mild detergent for at least one minute. Shells can then be scrubbed and rinsed in clear hot water. After rinsing, the shell should be carefully inspected for any signs of damage.
4. All components; shells, suspensions, headbands, sweatbands, and any other accessories, should be visually inspected daily by the employee for sign of dents, cracks, penetrations, or any other damage that may reduce the protection originally provided.
5. If damage is suspected, hard hats must be turned in and a new one must be issued.
6. Employees should never store or carry their hard hats on the rear-window shelf of an automobile, since sunlight and extreme heat may adversely affect the degree of protection provided by the helmet.

## **B. Hearing Protection**

During some operations it is not feasible to reduce the noise levels or duration of employee exposure to levels specified in Table D-2, Permissible Noise Exposures, of OSHA 29 CFR 1926. Exposure to high noise levels can cause hearing loss or impairment. It can also create physical and psychological stress. **There is no cure for noise-induced hearing loss.** Subcontractors and RC Andersen personnel working in excessively noisy areas must wear ear protection. Ear protection devices inserted in the ear must be fitted or determined individually by the **competent person** supervising that employee. Earmuffs or plugs shall be used for operations where the employee is exposed to excessive noise levels for extended periods of time. Cotton is not an acceptable substitute for prescribed hearing protection.

Additional information on a hearing conservation program can be found in 29 CFR 1910.95 - Occupational Noise Exposure.

## **C. Eye and Face Protection**

Eye and face protection is required wherever there is a reasonable probability of preventable injury. Design, construction, testing, and use of eye and face protection must be in accordance with ANSI Z87.1-1968 as referenced in 29 CFR 1926.102. Eye and face protectors must meet the following requirements:

- Provide adequate protection against hazards for which they are designed.
- Be reasonably comfortable when worn under the designated conditions.
- Fit snugly and not unduly interfere with movements of the wearer.
- Be durable.
- Be capable of being disinfected.
- Be easily cleanable and maintained in clean and good condition.

All subcontractors' employees must use appropriate eye and face protection equipment for any operations which present potential eye or face injury from physical, chemical, or radiation agents. The designated eye and face protection shall be worn at all times while in the construction work area.

Subcontractor's employees must wear full face shields, along with safety glasses that are equipped with side shields whenever involved in grinding, chipping, or where flying particles create hazards to the eyes and face.

Subcontractor's employees are required to keep eye and face protection equipment clean and in good repair. Use of eye and face equipment with structural or optical defects is prohibited.

Safety glasses, safety goggles, or prescriptive eye wear that do not comply with ANSI-287.1-1968 are not authorized eye protection on any company construction project.

#### **D. Foot Protection**

Foot and leg injuries from falling or rolling objects, sharp objects, molten metal, hot surfaces, and wet slippery surfaces can be prevented through the use of appropriate foot guards, safety shoes, or boots and leggings. The following safety practices will be implemented and enforced on all company projects.

1. All employees, subcontractors and visitors are required to wear construction grade foot protection appropriate for their work while on all RC Andersen LLC field operations.
2. In Operations where Safety-Toe footwear are required, safety footwear must meet minimum requirements and specifications in American National Standard for men's Safety-Toe Footwear, Z41.1-1967 as referenced by 29 CFR 1910.136.
3. Safety shoes must have an impact-resistant toe. Shoes with metatarsal guards are recommended to provide additional protection to the foot.
4. Employees engaged in roofing, paving or any other operation that exposes them to hot surfaces are required to wear heat-resistant soled shoes.
5. Leggings must be worn when welding to protect the worker's lower leg and feet from sparks.

#### **E. Respiratory Protection**

Dust masks with a protection rate of N95 or greater are mandatory on all projects where harmful dust is present and for trades that generate such dust, i.e., masonry, concrete drilling, blasting or as deemed necessary by the site superintendent. On all RC Andersen LLC projects requiring respiratory protective devices other than dust masks, a Site Environmental Safety Officer, provided by the Project Client/Developer, will be the competent person with sole responsibility for overseeing the site specific respiratory protection program. RC Andersen's superintendents will be attentive to the Environmental Safety Officers scope of responsibility and will acknowledge the Environmental Officer's responsibility for that area of work.

#### **F. Fall Protection PPE**

In order to access high and low places on field operations, a variety of equipment may be used such as ladders, scaffolding, suspended platforms, aerial lifts, and stairways. The use of these access systems often present fall hazards. In addition, employees may be exposed to falls while working on elevated structures, climbing onto and off of equipment, and even while walking by falling through holes or by slipping or tripping.

Fall protection must be provided by subcontractors to protect their workers when they are exposed to fall hazards of 6 feet or more. This includes employees falling to a lower level, into dangerous equipment, and being struck by falling objects.

## **Major Fall Protection Systems**

*Personal Fall Arrest System* - The three main parts of a personal fall arrest system are the harness, the lanyard/lifeline, and a suitable anchorage. The anchorage point(s) must be capable of supporting 5000 lbs. or two times the maximum load on an engineered system. These systems must be set up so that workers do not fall further than 6 feet, nor contact the lower level. Note: The use of body belts for fall arrest is not allowed after January 1, 1998.

*Guardrail Systems* - Guardrail systems are comprised of a top rail (42 in.), mid-rail, and toe board. Guardrail systems can be made of various materials, so long as it can withstand a force of 200 pounds. Guardrail systems must be smooth to protect workers from punctures or lacerations and to prevent clothing or PPE from snagging.

*Safety Nets* - Safety nets need to be provided for all work areas where the use of scaffolds, catch platforms, temporary floors, or a personal fall arrest system is impractical. Safety nets must extend at least 8 feet (depending on the fall hazard height) beyond the edge of the surface where employees are exposed. Nets shall be hung no more than 30 feet (9.1 m) below the work surface with sufficient clearance to prevent user's contact with the surfaces or structures below. Safety nets must be impact load tested prior to commencing operations.

*Protection from Falling Objects* - When toe boards are used as protection of falling objects they must be erected along the sides and ends of overhead walking/working surfaces, must be 3½ inches in height and cannot have any openings greater than 1 inch. When canopies are used for falling object protection they must be strong enough to prevent collapse and to prevent penetration by any objects that may fall onto them.

In an effort to prevent falls on our field operations, the minimum fall protection requirements on every project will include:

1. All fall protection systems must meet the requirements of Part 1926, Subpart M. Fall protection requirements specific to working on scaffolds and ladders, and in steel erection, are covered under their related subparts.
2. For situations where lifelines are interrupted, double lanyards are necessary to ensure that the worker is continuously protected from falling by attaching one lanyard ahead of the discontinuity prior to unhooking the trailing lanyard.
3. Where scaffolds are necessary to provide temporary access to work areas, they must be in compliance with 1926.451. Personal fall arrest systems are required to protect workers during installation and removal of the railings, and in situations where physical restrictions preclude installation of a standard railing.
4. Fall protection is required for each employee that is exposed to a fall hazard from open sides or ends of walking/working surfaces, holes, ramps, runways, or other walkways. In no case shall a height of 6 ft. (1.8m) remain unprotected.
5. All workers in approved personnel aerial lifts must use a personal fall arrest system meeting the criteria of subpart M, with the lanyard attached to the boom or basket.

6. Instances in which it is impossible to provide fall protection for workers are rare. Where an individual worker must rig the fall protection system, and it cannot be accomplished from an aerial lift or by tying off to the existing structure, momentary exposure to a fall hazard may be unavoidable. It is essential that adequate planning of construction procedures minimize such occurrence of unprotected exposure to fall hazards. It is equally essential that the fall protection systems used actually enhance safety, rather than creating a secondary hazard.
7. All workers must receive training on the nature of the fall hazards at the site and how to avoid falls. Employees should be trained in and be familiar with the fall protection system in use and must wear the proper equipment when necessary. Subcontractors may be asked to provide verification of training.





## Chapter 2

### Occupational Health and Environmental Controls

All operations in this section to be in accordance with 29 CFR 1926 OSHA, Subpart D, 1926.50 through 1926.66 including:

#### A. Medical Services

1. Provisions for prompt off-site medical attention will be made prior to commencement of the project. Names and locations of nearest medical facilities must be posted.
2. First-aid supplies will be readily available to all employees working on the project. These supplies must be checked periodically to ensure that expended items are replaced.
3. Suitable facilities for quick drenching or flushing of the eyes and body will be provided within the work area whenever the eyes or body of any person may be exposed to injurious corrosive materials.
4. It should be noted that, while the bloodborne pathogens standard does not apply to construction work, as defined in 29 CFR 1910.12(b), it does apply to employees performing maintenance activities who experience occupational exposure to blood or other potentially infectious materials. RC Andersen does not provide maintenance activities and depend on the subcontractors that do provide maintenance to establish a Bloodborne pathogen program for their own employees.

#### B. Sanitation

1. No employee is required to perform work under unsanitary conditions. Adequate supplies of potable water shall be provided at the field operation. Containers used for drinking water will be clearly marked and not used for any other purpose.
2. Outlets for non-potable water (i.e., firefighting purposes) are not to be used by employees for drinking, washing, or cooking purposes.
3. All construction projects will have an adequate number of toilets on the field operation. According to OSHA standards the following minimum requirements must be met:

20 or less workers - 1 toilet

20 or more workers - 1 toilet seat and 1 urinal per 40 workers

200 or more workers - 1 toilet seat and 1 urinal per 50 workers

It is RC Andersen LLC's policy to provide 1 toilet per 10 workers: and a separate, locked unit for female employees if requested.

Washing facilities will be provided in near proximity to the field operation for employees engaged in the application of paints, coating, herbicides, insecticides or other operations where contaminants may be harmful to the employees.

### C. **Occupational Noise Exposure**

Administrative or engineering controls will be utilized for sound levels exceeding the permissible noise exposures listed below. If such controls are not effective in reducing sound levels to within the levels specified in the table, personal protective equipment will be provided by subcontractors to each affected employee (See Personal Protective Equipment Section). Affected subcontractors will participate in a continuing hearing conservation program. This program will be in accordance with 29 CFR 1910.95 and include the following requirements:

- **Monitoring Program** A monitoring program will be developed and implemented whenever information indicates that an employee's exposure may equal or exceed an 8-hour time-weighted average of 85 decibels. A sampling strategy will be designed to identify employees for inclusion into the hearing conservation program while enabling the proper selection of hearing protection. Trained company personnel or contracted services will perform this monitoring.
- **Employee Notification** Employee's exposed at or above an 8-hour time-weighted average of 85 decibels will be notified of the results of the monitoring.
- **Observation of Monitoring** Affected employees or their representatives will have the opportunity to observe any noise measurements.
- **Audiometric Testing Program** Audiometric testing will be available, at no cost, to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85 decibels. These tests will be performed by a licensed or certified audiologist, otolaryngologist, or other physician or technician certified by the Council of Accreditation in Occupational Hearing Conservation.

NOTE: All noise monitoring and audiometric testing records **MUST** be retained as part of employees' medical records.

### **PERMISSIBLE NOISE EXPOSURES**

<u>Duration per day, (hours)</u>	<u>Sound level dBA</u>
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

#### **D. Ionizing Radiation**

Ionizing radiation is electromagnetic radiation that interacts with gases, liquids, or solids to produce ions. There are five major types: alpha, beta, X (or X ray), gamma, and neutrons. In an effort to minimize injury or illness associated with exposure to ionizing radiation, the following safety practices will be implemented and enforced at all construction projects.

1. Ionizing radiation sources will not be employed except as specifically required by contract or client.
2. Any activity involving the use of radioactive materials or x-rays must be performed by **competent persons** specifically trained in the proper and safe operation of such equipment, including but not limited to using nuclear densification devices that use radiation to measure thickness or density of concrete.
3. In the case of materials used under NRC Commission license, only persons actually licensed, or **competent persons** under the direction and supervision of the licensee will perform such work.
4. Specific exposure monitoring, personnel monitoring, warning signs, etc. must be used where activities necessitate compliance with the Standards for Protection Against Radiation in 10 CFR 20. In these special circumstances the Company Safety Director will specify the necessary requirements.

#### **E. Non-ionizing Radiation**

Non-ionizing radiation is a form of electromagnetic radiation which has varying effects on the body, depending largely on the particular wavelength of the radiation involved. In an effort to minimize injuries or illness associated with non-ionizing radiation, the following safety practices will be implemented and enforced at all company construction projects:

1. All mercury vapor/metal halide lamps used in the application of temporary lighting must utilize Type “T” self-extinguishing bulbs.
2. Employees should never install, adjust, or operate laser equipment unless they have received training and are qualified. Laser equipment operator qualifications must be in the operator's possession at all times.
3. All areas where lasers are used must have standard laser warning placards posted. Directing laser beams at other individuals is prohibited.
4. Personal Protective Equipment, if required, shall be utilized. (Check instrument evaluation/operation manual)
5. Laser beams should never be directed at other employees.
6. Laser should be turned off when left unattended for a substantial period of time.

## **F. Gases, Vapors, Fumes, Dusts, and Mists**

Administrative or engineering controls will be implemented whenever feasible to prevent exposure of employees to inhalation, ingestion, skin absorption, or contact with air contaminants. If such controls are not feasible to achieve full compliance, each subcontractor will provide employees with the appropriate type protective equipment to prevent exposure. Any equipment and technical measures used for this purpose will be approved prior to each particular use by the project safety and health representative, competent industrial hygienist or other technically qualified person designated by the company.

1. Local exhaust ventilation should be used as an engineering control method to prevent employee exposure to hazardous substances or concentrations of dusts, fumes, mists, vapors, or gases.
2. Local exhaust ventilation must remain in operation continually during all operations which it is designed to serve. If the employee remains in the contaminated zone, the exhaust system must continue operating until cessation of said operations.

## **G. Illumination**

All construction areas, ramps, runways, corridors, offices, shops, and storage areas must be lighted to a minimum illumination intensity of 5 foot candles.

## **H. Asbestos**

Asbestos is a widely used, mineral-based material that is resistant to heat and corrosive chemicals. Asbestos fibers enter the body by inhalation of airborne particles or by ingestion where they can become embedded in the tissues of the respiratory or digestive system. Exposure to asbestos can cause numerous disabling or fatal diseases. Wherever workers are or may become exposed to asbestos containing materials, practices and procedures provided under the supervision of a designated Site Environmental Safety Officer will be implemented and enforced in accordance with 29 CFR 1926.58 or State OSHA requirements. This includes:

1. Conducting monitoring by an outside agency to determine accurate airborne concentrations of asbestos, tremolite, anthophyllite, actinolite or a combination of these minerals prior to commencing work on any project where employees may be exposed. No employee will be exposed to an airborne concentration of asbestos in excess of 0.2 fibers per cubic centimeter of air as an eight (8) hour time-weighted average (TWA) or an airborne concentration of 1.0 fibers per cubic centimeter of air as averaged over a 30 minute sampling period.
2. Utilizing one or any combination of the following control methods to achieve compliance and reduce employee exposure to within the permissible exposure limits:
  - Local exhaust ventilation equipped with High Efficiency Particulate Air (HEPA) filter dust collection systems.
  - General ventilation systems.
  - Vacuum cleaners equipped with HEPA filters.
  - Enclosure or isolation of asbestos dust-producing processes.
  - Use of wet methods, wetting agents, or removal encapsulants.
  - Prompt disposal of asbestos-containing wastes in leak tight containers.

3. Any work area where asbestos exposure is anticipated, regardless of exposure level, shall be established as a "regulated area" per 1926.58's requirements for such areas.
4. The use of high-speed abrasive disc saws equipped with appropriate engineering controls. Employees are prohibited from using high-speed disc saws not equipped with appropriate engineering controls.
5. The use of compressed air to remove asbestos-containing materials is prohibited, unless the compressed air is used in conjunction with an enclosed ventilation system.
6. The use of respirators are required during the following: (1) while feasible engineering and work practice controls are being installed or implemented; (2) during maintenance and repair activities, or other activities where engineering and work practice controls are not feasible; (3) if feasible engineering and work practice controls are insufficient to reduce employee exposure to or below the exposure limits; and (4) in emergencies.
7. The changing of respirator filters whenever an increase in breathing resistance is detected.
8. Washing of face and respirator facepiece whenever necessary to prevent skin irritation.
9. Employees wearing negative-pressure respirators must have quantitative or qualitative fit tests at the time of initial fitting and at least every 6 months.
10. The donning of protective clothing such as coveralls or similar full-body clothing, head coverings, gloves, and foot coverings, or other protective equipment when exposed to airborne concentrations of asbestos that exceed the permissible exposure limits (TWA and/or excursion limit).
11. Asbestos-contaminated work clothing must be removed in change rooms and placed and stored in closed, labeled containers that prevent dispersion of the asbestos into the ambient environment.
12. That all contaminated clothing and equipment taken out of change rooms or the workplace for cleaning, maintenance, or disposal must be transported in sealed and labeled impermeable bags, or other closed impermeable containers.
13. Establishment of decontamination areas for asbestos removal, demolition, and renovation operations. Each decontamination area will consist of an equipment room, shower area, and clean room in series. The clean room will be equipped with a locker or appropriate storage container for each employee. The equipment room must be supplied with impermeable, labeled bags and containers for the containment and disposal of asbestos-contaminated protective clothing and equipment. Where feasible, shower facilities will be contiguous both to the equipment room and the clean change room. Employees must enter and exit at the regulated area through the decontamination area.
14. All employees exposed to airborne concentrations of asbestos at or above the action level and/or excursion limit must receive training prior to or at the time of initial assignment and at least annually thereafter. Only training provided by an EPA or EPA-approved staff agency accredited training provider under the EPA Asbestos Hazard Emergency Response Act, 40 CFR 763 regulation will be accepted.
15. Vacuuming equipment must be equipped with HEPA filters when used for asbestos-containing materials.

16. Asbestos waste, scrap, debris, bags, containers, equipment, and asbestos contaminated clothing consigned for disposal must be collected and disposed of in sealed, labeled, impermeable bags or other closed, labeled impermeable containers.
17. All employees who wear, or will be required to wear, negative-pressure respirators and who will or may be exposed to airborne concentrations of asbestos at or above the action level must participate in a medical monitoring program (See Chapter 6).
18. All employees must have an examination, under the supervision of a licensed physician, which includes medical work history and a physical examination. These examinations will be made available annually. All medical monitoring results must be retained for 30 years.

## **I. Lead**

Lead is a cumulative poison that can affect the kidneys, liver, and brain, leading to seizures, coma, and death. Lead poisoning can occur from acute or chronic exposures and cause either temporary or permanent damage. It may be absorbed into your body by inhalation (breathing) and ingestion (eating). Very small amounts of lead that may be unintentionally ingested via eating, drinking, or smoking on the job can be harmful. Good personal hygiene is essential on any project where lead based materials are present.

It is very important that all employees follow the proper precautions when working with lead. The following safety precautions must be adhered to and monitored by a designated Site Environmental Safety Officer, while working with lead on any RC Andersen LLC project:

- Use the exhaust ventilation system, where provided.
- Use the correct, clean respirator
- Keep the worksite clean.
- Use only a HEPA vacuum or wet cleaning method when removing lead dust.
- Never use compressed air for cleaning.
- Eat, drink, or smoke in areas outside of the work area and after washing up.
- Keep all lunch boxes and coffee cups away from the work area.
- Wash hands and face before eating, drinking, or smoking.
- Use protective clothing.
- Keep street clothes separate from work clothes.
- Never wear contaminated clothes home. Leave the field operation, shower and change into clean clothes so that you don't carry any lead contamination home.

**J.     Silica**

THE SILICA PORTION OF THIS HASP WAS UPDATED TO REFLECT REVISIONS TO 29CFR 1926.1153(g) PUT IN EFFECT ON 09/23/17. THE REVISED SILICA PORTION OF THIS HASP IS NOW LOCATED IN CHAPTER 23.

**K.     Hazard Communication**

Construction projects sometime require the use of materials and chemicals that may be hazardous, if not handled properly. Employees must be aware of the identity and toxic or other hazardous properties of the chemicals. Therefore, in an effort to promote and maintain field operations that are free from controllable safety and health hazards, the company has implemented following the Globally Harmonized System of Chemical Classification through the Hazard Communication Program in accordance with 29 CFR 1926.59, to protect our employees. A copy of this plan is included in Appendix G. Components of this written program include:

- Organizational Responsibilities
- Designation of a Program Manager/Coordinator
- Chemical Inventory List (field operation specific)
- Safety Data Sheets (SDS) (formerly Material Safety Data Sheets, MSDS) for chemicals on site
- Container Labeling Policy
- Employee Information and Training
- Emergency Procedures

All employees will receive training on the Hazard Communication Program prior to working on any field operation. Active employee participation is required. A copy of the written hazard communication program follows. This written program (including the chemical inventory list, and MSDS file) will be available at each project for review by any interested party.





## Chapter 3

### Fire Protection and Prevention

Fire on construction projects is a constant hazard that can cause loss of life, equipment and material. To assist with preventing fires on construction projects and to comply with 29 CFR 1926 OSHA Subpart F 1926.150 through 1226.155, a written Fire Protection and Prevention Plan has been developed: A copy of the plan is provided in Appendix D, and will also be posted on all jobsites. All site personnel must comply with the following safe work procedures:

#### A. **Fire Protection**

1. Access to all available firefighting equipment will be maintained at all times.
2. Firefighting equipment will be inspected periodically and maintained in operating condition. Defective or exhausted equipment must be replaced immediately.
3. All firefighting equipment will be conspicuously located at each field operation.
4. Fire extinguisher, rated not less than 2A, will be provided for each 3,000 square feet of the protected work area. Travel distance from any point of the protected area to the nearest fire extinguisher must not exceed 100 feet. One 55-gallon open drum of water with two fire pails may be substituted for a fire extinguisher having a 2A rating.
5. Extinguisher and water drums exposed to freezing conditions will be protected from freezing.
6. Do not remove or tamper with fire extinguishers installed on equipment or vehicles or in other locations unless authorized to do so or in case of fire. If an extinguisher is used it must be recharged or replaced with another fully charged extinguisher.

### TYPES OF FIRES

- **Class A** (wood, paper, trash) - use water or foam extinguisher.
- **Class B** (flammable liquids, gas, oil, paints, grease) - use foam, CO2 or dry chemical extinguisher.
- **Class C** (electrical) - use CO2 or dry chemical extinguisher.
- **Class D** (combustible metals) - use dry powder extinguisher only.

#### B. **Fire Prevention**

1. A site specific fire prevention plan is utilized on all RC Andersen LLC projects, see plan in Appendix D.

**C. Flammable and Combustible Liquids**

1. Explosive liquids, such as gasoline, will not be used as cleaning agents. Use only approved cleaning agents.
2. Store gasoline and similar combustible liquids in approved and labeled containers in well ventilated areas free from heat sources.
3. Handling of all flammable liquids by hand containers will be in approved type safety containers with spring closing covers and flame arrestors.
4. Approved wooden or metal storage cabinets must be labeled in conspicuous lettering: "Flammable-Keep Fire Away."
5. Never store more than 60 gallons of flammable or 120 gallons of combustible liquids in any one approved storage cabinet.
6. Storage of containers shall not exceed 1,100 gallons in any one pile or area. Separate piles or groups of containers by a 5-foot clearance. Never place a pile or group within 20 feet of a building. A 12-foot wide access way must be provided within 200 feet of each container pile to permit approach of fire control apparatus.

## Chapter 4

### Signs, Signals, and Barricades

Construction activities at the field operation may present several potential hazards to workers. The use of signs, signals and barricades is essential to make employees aware that an immediate or potential hazard exists. Therefore, the following safe work procedures for signs, signals, and barricades will be implemented and enforced on each RC Andersen LLC construction project in accordance with 29 CFR 1926 OSHA Subpart G, 1926.200 through 1926.203.

#### A. Accident Prevention Signs/Tags

**Danger Signs** will be used wherever an immediate hazard (i.e., electrical conductor) exists. The danger signs must have red as the predominant color in the upper panel and a white lower panel for additional sign wording.

**Caution Signs** will be used to warn against potential hazards or to caution against unsafe practices. The caution signs must have yellow as the predominant color with a black upper panel (yellow lettering of "caution" on the upper panel) and a yellow lower panel for additional sign wording.

**Exit Signs**, when required, will be in legible red letters, not less than 6 inches high, on a white field.

**Safety Instruction Signs**, when used, must be white with a green upper panel and white lettering to convey the principal message. Any additional wording must be in black lettering on the white background.

**Directional Signals** must be white with a black panel and a white directional symbol. Any additional wording must be in black lettering on the white background.

**Traffic Signs** must be posted at points of hazards in all construction areas. All traffic control signs or devices must conform to ANSI D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.

**Accident Prevention Tags** will be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc.

**Out of Order Tags** will be used to designate equipment which requires repair or maintenance. Equipment with such a tag may not be used until the tag is removed.

Additional rules, not specifically prescribed in this section, are contained in ANSI Z35.1-1968, Specifications for Accident Prevention Signs and Z35.2-1968, Specifications for Accident Prevention Tags.

#### B. Signaling

1. Flagmen or other appropriate traffic controls must be provided by subcontractors for operations where signs, signals, and barricades do not provide the necessary protection on or adjacent to a highway or street.
2. Signaling directions must conform to ANSI D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.

3. Red flags, at least 18 inches square, or sign paddles must be used by flagmen when hand signaling.
4. Flagmen are required to wear a red or orange reflectorized warning vest while flagging.
5. Required signs and symbols must be visible at all times when work is being done, and removed promptly when the hazard no longer exists.

**C. Barricades**

1. Barricades, which may include berms, are required for field operation roadways presenting a hazard to motorized equipment or vehicles.
2. Barricades must conform to sections in ANSI D6.1-1971 relating to barricades.

## Chapter 5

### Materials Handling, Storage, Use and Disposal

Materials handling accounts for 40% of lost-time incidents that occur in the construction industry. These injuries are often a result of inadequate planning, administrative, and/or engineering approaches. Therefore, in an effort to reduce workplace injuries, the following safe work procedures will be implemented and enforced at all RC Andersen LLC construction projects according to regulations in 29 CFR 1926 OSHA Subpart H, 1926.250 through 1926.252.

#### **A. General Storage Requirements**

1. Stack, rack, block, interlock, or otherwise secure all materials and supplies to prevent sliding, falling or collapse.
2. Post the maximum safe load limits for floors within buildings and structures in a conspicuous location. Never exceed the maximum safe load limit.
3. Keep aisles and passageways clear to provide for the free and safe movement of material handling equipment and employees.
4. Use ramps, blocking, or grading when a difference in road or working levels exist to ensure the safe movement of vehicles between the two levels.
5. Do not place material within 6 feet of any hoistway or floor opening inside buildings under construction, nor within 10 feet of an exterior wall which does not extend above the material being stored.
6. Stack bagged materials by stepping back the layers and cross-keying the bags at least every 10 bags high.
7. Do not store materials on scaffolds or runways in excess of supplies needed for immediate operations.
8. Remove all nails from used lumber prior to stacking.
9. Stack lumber on level and solidly supported sills.
10. Do not stack lumber higher than 20 feet (16 feet if handled manually).
11. Stack and block structural steel, poles, pipe, bar stock, and other cylindrical materials, unless racked, so as to prevent spreading or tilting.
12. Attach handles or holders to the load to reduce the possibility of pinching or smashing fingers.
13. Avoid stacking non-compatible materials in the same pile.
14. A job site Hazard Communication Program, included in Appendix G, lists requirements for the safe storage of liquids and includes a container labeling policy.

## **B. Materials Handling**

1. Do not attempt to lift or move a load that is too heavy for one person – get help!
2. When working with materials stored in silos, hoppers, tanks or similar storage areas, confined spaces may exist. Follow the procedures outlined in Chapter 22.
3. Attach handles or holders to the load to reduce the possibility of pinching or smashing fingers.
4. Wear protective gloves and clothing (i.e., aprons), if necessary, when handling loads with sharp or rough edges.
5. When pulling or prying objects, be sure you are properly positioned.
6. Riding loads, slings, the ball, crane hook or other material hoisting equipment is prohibited except in an emergency.

## **C. Training**

Employees of subcontractors on site are required to receive instruction on proper materials handling practices during weekly "tool-box" meetings so that they are aware of the following types of injuries associated with manual handling of materials:

- Strains and sprains from lifting loads improperly, or from carrying loads that are too heavy or large;
- Fractures and bruises caused by dropping or flying materials, or getting hands caught in pinch points; and
- Cuts and abrasions caused by falling materials which have been improperly stored, or by cutting securing devices incorrectly.

## **D. Engineering Controls**

Engineering controls should be used, if feasible, to redesign the job so that the lifting task becomes less hazardous. This includes reducing the size or weight of the object lifted, changing the height of a pallet or shelf, or installing a mechanical lifting aid.

## Chapter 6

### Hand and Power Tools

Tools are such a common part of construction work that it is difficult to remember that they may pose hazards. In the process of removing or avoiding the hazards, workers must learn to recognize the hazards associated with the different types of tools and the safety precautions necessary to prevent injury from those hazards. Therefore, in an effort to minimize accidents resulting from the use of hand and power operated hand tools, superintendents will implement and enforce the following safe work procedures on all construction field operations in accordance with all regulations of 29 CFR 1926 OSHA Subpart I, 1926.300 through 1926.307 including:

#### **A. General Requirements For All Subcontractors**

1. Do not use broken, defective, burned or mushroomed tools. Report defective tools to your supervisor/foreman and turn tool in for replacement.
2. Always use the proper tool and equipment for any task you may be assigned to do. For example: do not use a wrench as a hammer or a screwdriver as a chisel.
3. Do not leave tools on scaffolds, ladders or any overhead working surfaces. Racks, bins, hooks, or other suitable storage space should be provided and arranged to permit convenient arrangement of tools.
4. Do not strike two hardened steel surfaces together; i.e., two hammers or a hammer and hardened steel shafts, bearings, etc.
5. The practice of throwing tools from one location to another, from one employee to another, or dropping them to lower levels, is prohibited. When necessary to pass tools or material under the above conditions, suitable containers and/or ropes will be used.
6. Wooden tool handles will be sound, smooth, and in good condition and securely fastened to the tool.
7. Sharp-edged or pointed tools should never be carried in employee's pockets.
8. Only non-sparking tools will be used in locations where sources of ignition may cause a fire or explosion.
9. Tools requiring heat treating should be tempered, formed, dressed, and sharpened by workmen experienced in these operations.
10. Tools designed to accommodate guards must be equipped with such guards when in use.
11. All rotating, reciprocating or moving parts of equipment (belts, gears, shafts, flyheads, etc.) must be guarded to prevent contact by employees using such equipment. Guarding must meet requirements set forth in ANSI B15.1-1953.

12. All hand-held power tools (e.g., circular saws, chain saws, and percussion tools) without a positive accessory holding means must be equipped with a constant pressure switch that will shut off the power when pressure is released.
13. A positive "on-off" control must be provided on all hand-held powered:
  - Platen sanders, grinders with wheels 2-inch diameter or less; and
  - Routers, planers, laminate trimmers, nibblers, shears, scroll saws, and jigsaws with blade shanks one-fourth of an inch wide or less.
14. A momentary contact "on-off" control must be provided on all hand-held powered drills, tapers, fasteners drivers, horizontal, vertical and angle grinders with wheels greater than 2 inches in diameter.

## **B. Electric Tools**

Electric tools present several dangers to the user; the most serious is the possibility of electrocution. Only assigned, qualified operators will operate power tools, powder-actuated tools or air driven tools. The following safe work procedures will be implemented by the subcontractors and enforced at all RC Andersen LLC construction projects.

1. Tools must have either a three-wire cord with ground and be grounded, double insulated, or powered by a low-voltage isolation transformer. A Ground Fault Circuit Interrupter (GFCI) must be used or the tool must be double-insulated to prevent the worker from electrical shock hazards.
2. Never remove the third prong from the plug.
3. Electric tools should be operated within their design limitations.
4. Gloves, protective eyewear and safety footwear are recommended during use of electric tools.
5. When not in use, tools should be stored in a dry place.
6. Electric tools should not be used in damp or wet locations.
7. Work areas should be well lighted.

## **C. Powered Abrasive Wheel Tools**

1. Power abrasive wheel tools present a special safety problem because they may throw off flying fragments. Only assigned, qualified operators will operate powered abrasive wheel tools. The following safe work procedures will be implemented by subcontractors and enforced at all RC Andersen LLC construction projects.



2. Portable grinding tools need to be equipped with safety guards to protect workers from flying fragments as well as the moving wheel surface.
3. Inspect and sound- or ring-test abrasive wheels prior to mounting to ensure that there are free from cracks or defects. Also check to ensure that the abrasive wheel RPM rating is appropriate for the tool.
4. When using a powered grinder:
  - Always use eye protection and a face shield.
  - Turn off the power when not in use.
  - Never clamp a hand-held grinder in a vise.
5. To prevent the wheel from cracking, the user should ensure that it fits freely on the spindle.
6. Never stand directly in front of the wheel during start-up because there is always a possibility that the wheel may disintegrate (explode) when accelerating to full speed.

#### **D. Pneumatic Tools**

Pneumatic tools are powered by compressed air and include chippers, drills, hammers, and sanders. Only assigned, qualified operators will operate air driven tools. The following safe work procedures will be implemented by subcontractors and enforced at all RC Andersen LLC construction projects.

1. Pneumatic tools that shoot nails, rivets, or staples, and operate at pressures more than 100 pounds per square inch, must be equipped with a special device to keep fasteners from being ejected unless the muzzle is pressed against the work surface.
2. Eye protection is required and face protection recommended for employees working with pneumatic tools.
3. Hearing protection is required when working with noisy tools such as jackhammers.
4. When using pneumatic tools, check to see that they are fastened securely to the hose to prevent them from becoming disconnected. All hoses exceeding ½ inch inside diameter must have a safety device at the supply source or branch line to reduce pressure in the event of hose failure.
5. Airless spray guns that atomize paints and fluids at high pressures (1,000 pounds or more per square inch) will be equipped with automatic or visual manual safety devices that will prevent pulling the trigger until the safety device is manually released.
6. Workers operating a jackhammer are required to wear safety glasses, shoes and hearing protection.
7. Compressed air guns should never be pointed toward anyone.
8. A safety clip or retainer must be installed to prevent attachments from being unintentionally shot from the barrel of the tool.

## **E. Liquid-Fuel Tools**

Liquid-fuel tools are usually powered by gasoline. Vapors that can burn or explode and give off dangerous exhaust fumes are the most serious hazards associated with liquid-fuel tools. Only assigned, qualified operators will operate liquid-fueled tools. The following safe work procedures will be implemented by subcontractors and enforced at all RC Andersen LLC construction projects.

1. Only handle, transport, and store gas or fuel in approved flammable liquid containers.
2. Before refilling the tank for a fuel-powered tool, the user must shut down the engine and allow it to cool to prevent accidental ignition of hazardous vapors.
3. Effective ventilation and/or personal protective equipment is necessary when using a fuel-powered tool inside a closed area. Fire extinguisher must be readily available in the work area.

## **F. Powder-Actuated Tools**

Powder-actuated tools operate like a loaded gun and should be treated with the same respect and precautions. Only assigned, qualified operators will operate powder actuated tools. The following safe work procedures will be implemented by subcontractors and enforced at all RC Andersen LLC construction projects.

1. All powder-actuated tools must meet ANSI A10.3 requirements for design, operation and maintenance.
2. Never use powder-actuated tools in an explosive or flammable atmosphere.
3. Before using a powder-actuated tool, the worker should inspect it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions.
4. Never point the tool at anyone.
5. Do not load a tool unless it is to be used immediately. Never leave a loaded tool unattended, especially where it would be available to unauthorized persons.
6. Suitable eye and face protection is essential when using a powder actuated tool.
7. In case of misfire, the operator should hold the tool in the operating position for at least 30 seconds, and then attempt to operate the tool for a second time. If the tool misfires again, wait another 30 seconds (still holding the tool in the operating position) and then proceed to remove the explosive load from the tool in strict accordance with the manufacturer's instructions.
8. If the tool develops a defect during use it should be tagged and taken out of service immediately until it is properly repaired.
9. Warning signs should be posted within the area of operation of any powder-actuated tool.
10. Powder-actuated tool operators must be qualified and carry a card certifying this fact at all times. Failure to comply with any or all safety procedures governing the use of powder-actuated tools will be sufficient cause for the immediate revocation of the operator's card and dismissal from the jobsite.

## **Chapter 7**

### **Welding and Cutting**

Welding and cutting operations present various safety and health hazards. Health hazards due to inhalation of toxic fumes can cause illness to employees. Safety hazards such as fire may result in fatalities, serious injuries, and/or property damage. Therefore, in an effort to eliminate or reduce the hazards associated with welding and cutting operations the following safe work procedures will be implemented by subcontractors and enforced at all RC Andersen LLC projects in accordance with all regulations of 29 CFR 1926 OSHA Subpart J, 1926.350 through 1926.354 including:

#### **A. General Requirements For Subcontractors**

1. Following RC Andersen's Hot Work Permit Program and filling out a Hot Work Permit is mandatory for all welding and cutting operations. See Appendix L attached to this Health and Safety Plan for Hot Work Permit Program, Cadmium Awareness Program and Hexavalent Chromium Awareness Program.
2. Only qualified welders are authorized to do any welding, heating or cutting.
3. Inspect your work area for fire hazards and proper ventilation before welding or cutting.
4. Keep a fire extinguisher next to your welding operation at all times.
5. Avoid welding or cutting sparks and hot slag. Be alert to hot surfaces and avoid touching metal surfaces until they have cooled.
6. Place compressed gas cylinders in an upright position and secure in place to prevent dropping or falling. Handle with extreme care and do not store near any sources of heat.
7. Keep all compressed gas cylinders separate from oxygen tanks by a minimum of 20' or store on welding cart using a steel separator fire rated for a minimum of ½ hour.
8. Remove any combustibles when welding or cutting must be done. If removal is not feasible, cover combustibles with a noncombustible material. When welding near any combustible material, another employee must be posted to serve as a fire watch. Make sure this person has a fire extinguisher available and keep him/her in the area after welding/cutting is completed until all danger of fire is past.
9. When working in the vicinity of welding operations, wear approved goggles and avoid looking directly at the flash as serious flash burns could result.
10. When opening valves on tanks that have regulators installed, be sure the pressure adjustment screw is all the way out and do not stand in front of the regulator. An internal failure could rupture the regulator and cause the adjustment screw to become a missile.

**B. Gas Welding and Cutting**

1. Only qualified or competent subcontractors may perform gas welding and/or cutting operations on RC Andersen LLC construction project in accordance with the following guidelines:
  - When transporting, moving, and storing compressed gas cylinders, always ensure that the valve protection cap is in place and secured.
  - Secure cylinders on a cradle, sling board, or pallet when hoisting. Never hoist or transport by means of magnet or choker slings.
  - Move cylinders by tilting and rolling them on their bottom edges. Do not allow cylinders to be dropped, struck, or come into contact with other cylinders violently.
  - Secure cylinders in an upright (vertical) position when transporting by powered vehicles.
  - Do not hoist cylinders by lifting on the valve protection caps.
  - Do not use bars under valves or valve protection caps to pry cylinders loose when frozen. Use warm, not boiling, water to thaw cylinders loose.
  - Remove regulators and secure valve protection caps prior to moving cylinders, unless cylinders are firmly secured on a special carrier intended for transport.
  - Close the cylinder valve when work is finished, when cylinders are empty, or when cylinders are moved at any time.
  - Secure compressed gas cylinders in an upright position (vertical) except when cylinders are actually being hoisted or carried.

**C. Arc Welding and Cutting**

1. Only qualified or competent subcontractors may perform gas welding and/or cutting operations on RC Andersen LLC construction project in accordance with the following guidelines:
  - Subcontractors are to use only manual electrode holders which are specifically designed for arc welding and cutting.
  - All current-carrying parts passing through the portion of the holder must be fully insulated against the maximum voltage encountered to ground.
  - All arc welding and cutting cables must be completely insulated, flexible type, and capable of handling the maximum current requirements of the work in progress.
  - Report any defective equipment to your supervisor/foreman immediately and refrain from using such equipment.

2. Shield all arc welding and cutting operations, whenever feasible, by noncombustible or flameproof screens to protect employees and other persons working in the vicinity from the direct rays of the arc.

**D. Fire Prevention**

Fire extinguishing equipment must be immediately available in the work area at all times.

Never use matches or cigarette lighters. Use only friction lighters to light torches.

Never strike an arc on gas cylinders.

Move objects to be welded, cut, or heated to a designated safe location. If the objects cannot be readily moved, then all movable fire hazards in the vicinity must be taken to a safe place or otherwise protected.

Do not weld, cut or heat where the application of flammable paints, or the presence of other flammable compounds, or heavy dust concentrations creates a hazard.

Additional employees must be assigned to guard against fire while the actual welding, cutting, or heating is being performed when the operation is such that normal fire prevention precautions are not sufficient.

Prior to applying heat to a drum, container, or hollow structure, provide a vent or opening to release any built-up pressure during the application of heat.

Never cut, weld, or heat on drums, tanks, or containers that have contained flammable liquids until they have been cleaned.



## **Chapter 8**

### **Electrical**

Electricity is a serious workplace hazard that must be respected at all times. It is important to remember that even a little electric current can kill you! The best protection around electricity is distance - ample distance between you and the conductive materials. The following safe work procedures will be implemented by all mechanical subcontractors and enforced on all RC Andersen LLC construction projects in accordance with all regulations of 29 CFR 192 OSHA Subpart K, 1926.400 through 1926.449.

#### **A. General Requirements for Subcontractors**

1. Learn what electrical equipment you are authorized to use - learn what switches you can operate and what buttons you can push. Know what parts of electrical systems you can work on and what jobs must be performed by qualified personnel. If you are not sure, ask your supervisor/foreman.
2. When handling acid or batteries, wear face shields and protective clothing such as rubber gloves and aprons. Immediately flush any acid coming into contact with your skin. Avoid breathing acid vapors.
3. Be alert to and strictly obey all warning and danger signs around electrical apparatus. Do not close a switch that has a danger tag on it signed by or placed there by someone else.
4. Do not open any electrical enclosures. The one exception is that you may open the door on a circuit breaker panel board to operate the switches, but never open other types of electrical enclosures.
5. Do not use extension cords or any power tools or equipment when the cords are frayed, worn out or the wires are bare. Report such hazards to your supervisor/foreman or turn the equipment in for repair.
6. Report all unguarded or broken light bulbs. Do not hang lights by their cords unless the light was designed to be suspended in that manner.
7. If mercury vapor/metal halide type lamps are used for temporary lighting, the bulbs must be the self-extinguishing, Type "T" bulbs, which self-extinguish within 15 minutes of breakage. Employees should leave the immediate vicinity of any broken mercury vapor/metal halide lamp until exposure danger has receded.

#### **B. Lockout and Tagging of Equipment**

1. Equipment or circuits that are de-energized must be rendered inoperative and have tags attached at all points where such equipment or circuits can be energized.
2. Tags must have the name of the person and the date that work is being performed. The tag may only be removed by the person who placed it on the equipment.

**C. Installation Safety Requirements**

1. Live parts of electrical equipment operating at 50 volts or more must be guarded against accidental contact.
2. Entrance to rooms and other guarded locations containing exposed live parts must be marked with conspicuous warning signs forbidding unqualified persons from entering.
3. All pull boxes and breaker boxes must be labeled to indicate the equipment they switch.
4. Electric installations that are over 600 volts and that are open to unqualified persons must be made with metal-enclosed equipment or enclosed in a vault or controlled area. In addition, equipment must be marked with appropriate caution signs.
5. Conductors and equipment must be protected from overcurrent in accordance with their ability to safely conduct current and the conductors must have sufficient current carrying capacity to carry the load.
6. Fuses and circuit breakers must also be located or shielded so that employees will not be burned or otherwise injured by their operation.

**D. Safety-Related Maintenance and Environmental Considerations.**

1. All wiring components and utilization equipment in hazardous locations must be maintained in a dust-tight, dust ignition-proof, or explosion-proof condition without loose or missing screws, gaskets, threaded connections, seals, or other impairments to a tight condition.
2. Unless identified for use in the operating environment, no conductors or equipment can be located:
  - In damp or wet locations.
  - Where exposed to gases, fumes, vapors, liquids, or other agents having a deteriorating effect on the conductors or equipment.
  - Where exposed to excessive temperatures.

**E. Assured Equipment Grounding Program**

In an effort to reduce the potential of injuries caused by electric shock from commonly used temporary 120 volt power systems, one or more **competent persons** will be designated by each subcontractor to implement and enforce the following assured equipment grounding safety procedures at all construction field operations.

1. Each 120 volt extension cord, tool, piece of equipment and receptacle will be inspected and tested by the individual designated by each subcontractor:
  - Before first use;
  - Before equipment is returned to service following repairs;



- Before equipment is used after any incident which can be reasonably suspected to have caused damage; and
  - Every three months.
2. Each extension cord, tool, receptacle, and piece of equipment will be tested by a designated individual to assure:
    - A continuous ground circuit;
    - That the equipment conductors are connected properly; and
    - That there is no ground fault.
    - That the cord is "heavy duty" for construction.
  3. Each extension cord, tool or piece of equipment should be visually inspected by the user before each days use to determine signs of damage.
  4. Equipment found to be damaged or defective (frayed or damaged insulation, crushed cable, loose or missing covers or screws, and missing ground prong, etc.) will not be used until repaired.
  5. Equipment suspected to be damaged or defective should be inspected and tested prior to use.



## **Chapter 9**

### **Scaffolding**

Using scaffolds exposes workers to a number of different hazards. According to OSHA, the two predominant hazards in working on scaffolds are falling from the scaffold and being struck by a falling object while working on or below a scaffold. The falls are most commonly caused by either the planking or scaffold support structures giving way, or by falling off the edges of the work platforms.

In Subpart L of OSHA standards, 1926.450 through 1926.454, scaffolds are divided into two general classes—supported scaffolds or suspension scaffolds. A supported scaffold is “one or more platforms supported by outrigger beams, brackets, poles, legs uprights, posts, frames, or similar rigid support.” A suspension scaffold is “one or more platforms suspended by ropes or other non-rigid means. Scaffolds can only be erected, moved, dismantled, or altered under the supervision of a competent person. Such activities can only be performed by experienced and trained employees of the subcontractor erecting scaffolding and selected by the subcontractor’s competent person. Other duties of the competent person include:

- determining when and how fall protection can be provided to employees erecting and dismantling scaffolds
- determining if galvanic actions are taking place when scaffolding materials of dissimilar metals are used together.
- inspecting the inboard connections of outriggers to support structures before using suspension scaffolds.
- inspecting wire ropes on suspension scaffolds before and after every shift
- evaluating how to keep suspension scaffolds from swaying
- determining whether and how a safe means of access can be provided to scaffold erectors
- determining when the weather is too severe to work on scaffolds
- inspecting manila and synthetic ropes used as top rails and mid rails for strength requirements as frequently as necessary
- providing work skills and safety training for all employees in scaffold work.

### **General Requirements**

The general requirements for all scaffolds are covered in 1926.451 and must be implemented by subcontractors erecting scaffolding. Guidance regarding scaffold capacities, platform construction, access, use and fall protection are covered in this section. There are also generic criteria for all supported and suspended scaffolds. Some highlights of this section, including the scaffold issues most commonly cited by OSHA during inspections, include the following points:

1. Each scaffold and scaffold component must be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load applied or transmitted to it.
2. Each suspension rope, including connecting hardware, used on nonadjustable suspension scaffolds shall be capable of supporting, without failure, at least 6 times the maximum intended load applied or transmitted to that rope.
3. Scaffolds must be designed by a qualified person and shall be constructed and loaded in accordance with that design.
4. Each platform on all working levels shall be fully planked or decked between the front uprights and the guardrails at the rear of the scaffold. The front edge of all platforms shall not be more than 14 inches from the face of the work, unless employees are provided some form of fall protection. Each end of a platform, unless it is cleated or hooked, must extend over the centerline of its support at least 6 inches to ensure that the platform does not slip off its support.
5. When a supported scaffold height to base-width ratio exceeds four to one (4:1) the scaffold must be restrained from tipping by guying, tying, bracing, or equivalent means.
6. Supported scaffold poles, legs, posts, frames and uprights shall bear on base plates, mud sills or other adequate support from foundations. Footings shall be level, sound, rigid, and capable of supporting the loaded scaffold without settling or displacement.
7. Suspension scaffold outriggers must securely support the scaffold. Requirements for outrigger connections to the roof or deck, counterweights, outrigger beams, wire ropes, hoists and other suspension scaffold support devices are given in 1926.451(d).
8. When scaffold platforms are more than 2 feet **above or below** a point of access, portable ladders, hook-on ladders, stair towers (scaffold stairways/towers), stairway-type ladders (such as ladder stands), ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist or similar surface shall be used. Crossbraces shall not be used as a means of access.
9. Safe means of access for each employee erecting or dismantling a scaffold (using the devices or methods above) must be provided, where the provision of safe access is feasible and does not present a greater hazard. The subcontractors competent person must determine the feasibility and safety of providing the various means of access.
10. Scaffolds shall not be moved horizontally while employees are on them, unless the scaffolds have been specifically designed for such movement.
11. Scaffolds shall not be erected, used, dismantled, altered, or moved such that they or any conductive material handled on them might come closer to exposed and energized power lines than 10 feet plus 0.4 inches (1cm) for each 1 kilovolt (kv) of line voltage over 50 kv. For live insulated lines with less than 300 volts, the minimum distance shall be 3 feet. Where possible, electrical lines should be de-energized or moved prior to the erection and use of scaffolds near the lines.

12. Ladders shall not be used on scaffolds to increase the working level height of employees. Ladders may, under certain circumstances, be used on “large area scaffolds.” A large area scaffold is a supported scaffold erected over substantially the entire work area.
13. Each employee on a scaffold more than 6 feet above a lower level shall be protected from falling to that lower level. Guardrail and/or personal fall arrest systems must be used as a means of fall protection.
14. To the extent feasible and safe, each employee erecting or dismantling a supported scaffold must be provided fall protection. The competent person must determine the feasibility and safety of providing the fall protection during supported scaffold erection and dismantling.
15. In addition to wearing hardhats each employee on a scaffold shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toe boards, screens, or guardrails systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects. Alternatively, employees must be kept out of areas where falling objects may strike them.
16. RC Andersen LLC requires the competent person for all subcontractors using a scaffold to inspect the scaffolding daily and/or before each work shift.
17. RC Andersen LLC personnel are not permitted to operate Mobile Elevated Work Platforms or Aerial Lifts. Subcontractors on RC Andersen projects must provide trained operators per “CFR 1926.453(b)(2)(ii) Only authorized persons shall operate an aerial lift”, and, are to have training records available upon request.
18. MEWPs may be “field modified” for uses other than those intended by the manufacturer provided the modification has been certified in writing by the manufacturer.



## **Chapter 10**

### **Fall Protection**

Due to the potential hazards involved in floor and wall openings, the following safe work procedures will be implemented by all subcontractors and enforced at all RC Andersen LLC projects in accordance with all regulations in 29 CFR 1926 OSHA Subpart M, 1926.500 through 1926.503 including:

#### **General Requirements**

Guard all open-sided floors or platforms six feet or more above the adjacent floor or ground level with a top rail, mid rail, and toe board.

Ladder-way floor openings or platforms must be guarded by standard railings with toe boards on all exposed sides, except at entrance to opening, where a swinging gate allows passage through the railing.

Barricades for warning workers of hazards must be at least six feet back from the edge of the hazard and 42" high.

Hole covers must be strong enough to support possible loads, secured in place to prevent slipping, and marked "hole" or "cover".

Guard all wall openings which have a drop of more than 4 feet, and where the bottom of the opening is less than 3 feet above the working surface with a top rail, midrail, and toe board.

Do not store materials within 6 feet of floor openings or the roof edge

#### **A. Unprotected Sides And Edges.**

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 6 feet (1.8 m) or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems, or personal fall arrest systems.

#### **B. Leading Edges.**

Each employee who is constructing a leading edge 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems. Exception: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems.

#### **C. Walking/working surface.**

Each employee on a walking/working surface 6 feet (1.8 m) or more above a lower level where leading edges are under construction, but who is not engaged in the leading edge work, shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system. If a guardrail system is chosen to provide the fall protection, and a controlled access zone has already been established for leading edge work, the control line may be used in lieu of a guardrail along the edge that parallels the leading edge.

#### **D. Hoist Areas.**

Each employee in a hoist area shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems or personal fall arrest systems. If guardrail systems, [or chain, gate, or guardrail] or portions thereof, are removed to facilitate the hoisting operation (e.g., during landing of materials), and an employee must lean through the access opening or out over the edge of the access opening (to receive or guide equipment and materials, for example), that employee shall be protected from fall hazards by a personal fall arrest system.

#### **E. Holes.**

Each employee on walking/working surfaces shall be protected from falling through large holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, or guardrail systems erected around such holes. Any hole, gap or void 2 inches or more in its least dimension in a floor, roof or other walking/working surface must be covered..

Each employee on a walking/working surface shall be protected from tripping in or stepping into or through holes (including skylights) by covers.

Each employee on a walking/working surface shall be protected from objects falling through holes (including skylights) by covers.

#### **F. Formwork and Reinforcing Steel.**

Each employee on the face of formwork or reinforcing steel shall be protected from falling 6 feet (1.8 m) or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems.

#### **G. Ramps, Runways, and Other Walkways.**

Each employee on ramps, runways, and other walkways shall be protected from falling 6 feet (1.8 m) or more to lower levels by guardrail systems.

#### **H. Excavations.**

Each employee at the edge of an excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, or barricades when the excavations are not readily seen because of plant growth or other visual barrier;

Each employee at the edge of a well, pit, shaft, and similar excavation 6 feet (1.8 m) or more in depth shall be protected from falling by guardrail systems, fences, barricades, or covers.

#### **I. Dangerous Equipment.**

Each employee less than 6 feet (1.8 m) above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards.

Each employee 6 feet (1.8 m) or more above dangerous equipment shall be protected from fall hazards by guardrail systems, personal fall arrest systems, or safety net systems.



## **J. Overhand bricklaying and related work.**

Each employee performing overhand bricklaying and related work 6 feet (1.8 m) or more above lower levels, shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or shall work in a controlled access zone.

Each employee reaching more than 10 inches (25 cm) below the level of the walking/working surface on which they are working, shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system.

Note: Bricklaying operations performed on scaffolds are regulated by subpart L – Scaffolds, see Chapter 9 of this plan.

## **K. Roofing Work.**

Each employee engaged in roofing activities on low-slope roofs, with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or a combination of warning line system and guardrail system, warning line system and safety net system, or warning line system and personal fall arrest system, or warning line system and safety monitoring system. Or, on roofs 50-feet (15.25 m) or less in width the use of a safety monitoring system alone [i.e. without the warning line system] is permitted. Each employee on a steep roof with unprotected sides and edges 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems with toe boards, safety net systems, or personal fall arrest systems.

## **L. Precast Concrete Erection.**

Each employee engaged in the erection of precast concrete members (including, but not limited to the erection of wall panels, columns, beams, and floor and roof "tees") and related operations such as grouting of precast concrete members, who is 6 feet (1.8 m) or more above lower levels shall be protected from falling by guardrail systems, safety net systems, or personal fall arrest systems, unless another provision in paragraph (b) of this section provides for an alternative fall protection measure. Exception: When the employer can demonstrate that it is infeasible or creates a greater hazard to use these systems, the employer shall develop and implement a fall protection plan which meets the requirements of paragraph (k) of [1926.502](#).

## **M. Wall Openings.**

Each employee working on, at, above, or near wall openings (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet (1.8 m) or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches (1.0 m) above the walking/working surface, shall be protected from falling by the use of a guardrail system, a safety net system, or a personal fall arrest system.

## **N. Walking/Working Surfaces Not Otherwise Addressed.**

Each employee on a walking/working surface 6 feet (1.8 m) or more above lower levels shall be protected from falling by a guardrail system, safety net system, or personal fall arrest system.

## **O. Protection from Falling Objects.**

When an employee is exposed to falling objects, the employer shall have each employee wear a hard hat and shall implement one of the following measures:

Erect toe boards, screens, or guardrail systems to prevent objects from falling from higher levels; or, erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or,

Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

## Chapter 11

### Cranes, Derricks, Hoisting & Rigging

Accidents involving cranes often are caused by human actions or inaction. Therefore, RC Andersen LLC will employ only competent and careful operators who are physically and mentally fit and thoroughly trained in the safe operation of crane and rigging equipment, and the safe handling of loads. Upon employment, the crane operator must provide a copy of their Crane Operators License, or license provided through each state's Department of Labor, and a copy of their medical release along with a copy of the crane's yearly maintenance inspection results. All crane operations will satisfy the requirements of 29 CFR 1926 OSHA, Subpart N, 1926.550 through 1926.556 and will include:

#### A. General Requirements

The target goal of this company is zero crane accidents. To achieve this goal, the following safe work procedures will be implemented and enforced at all company projects:

1. Crane operators are required to comply with crane manufacturer's specifications and limitations applicable to the operation of any and all cranes, derricks, and hoists.
2. Rated load limits and recommended operating speeds, special hazard warnings, or instructions must be posted on all equipment.
3. Hand signals to crane and derrick operators must conform to the applicable ANSI standard for the type of crane being used and be posted in cab.
4. A **competent person** will inspect all machinery and equipment prior to each use, and during use, to ensure it is in safe operating condition.
5. Any defective parts must be repaired or replaced before use.
6. A **competent person** will perform an annual inspection of the hoisting machinery and provide a copy of the dates and results of inspections for each hoisting machine and piece of equipment to the site superintendent.
7. All moving parts or equipment (belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheel, etc.) must be guarded to prevent contact by employees.
8. Accessible areas within the swing radius of the rear of the rotating superstructure of the crane must be barricaded to prevent an employee from being struck or crushed by the crane.
9. Exhaust pipes must be guarded or insulated to prevent contact by employees.
10. Windows in cabs must be of safety glass, or equivalent, that introduces no visible distortions.
11. Where necessary, a ladder or steps must be provided to allow access to a cab roof.

12. Platforms and walkways must have anti-skid surfaces.
13. A fire extinguisher of 5BC rating must be accessible at all operator stations or cabs of equipment.
14. No part of a crane or load is permitted within 10 feet of electric power lines, except where electrical distribution and transmission lines have been de-energized and visibly grounded. A person will be designated to observe clearance of the equipment and provide timely warning to the crane operator.
15. No employee is permitted to work beneath a suspended load.
16. Operator's of all cranes, derricks and hoists must be certified and be able to produce his/her operator's license and or certification upon request.
17. Any crane lifts deemed critical, will require a Critical Lift Plan. A critical lift is defined as one exceeding 75% of the rated capacity of the crane, or multiple cranes in a lift, or personnel hoisting or per the below list.

A critical lift plan must be provided for critical lifts where:

- The load exceeds 75% of the crane's capacity.
- Weight of the lift exceeds 50% of the load chart rating of the equipment being used and the lift is over power lines, process equipment, piping.
- Two booms are required.
- Poles or derricks have been erected.
- Personnel are being lifted.
- Crane is traveling with load.
- Any lift in a Critical Lift Area.

Cranes will work at a safe distance from all power lines. The Occupational Safety and Health Administration (OSHA) requires that equipment be kept at least 10 feet away from power lines with voltages up to 50kV. For lines with voltages higher than 50kV, the required distance is even greater (see below). When uncertain of a power line's voltage, stay 20 feet away for voltages up to 350 kV and 50 feet away for voltages greater than 350kV. Cranes and derricks are required to take additional steps before beginning work (see OSHA Standards 29 CFR 1926.1400 effective Nov. 8, 2010). Call your local electric utility to identify the voltage of power lines before you begin working. If you witness a violation of this rule, stay away from the equipment and warn the operator to move away from the power line.

<b>FPL Power Line Voltages</b>	<b>OSHA Minimum Approach Distance* (OSHA 1926.1408 Table A)</b>
0 to 50kV	10 feet
Over 50kV to 200kV	15 feet
Over 200kV to 350kV	20 feet
Over 350kV to 500kV	25 feet
Over 500kV to 750kV	35 feet

\*Minimum distance for travel under power lines must comply with OSHA Rules.

## **Hoisting and Rigging**

A thorough annual inspection of the hoisting machinery shall be made by a competent person, or by a government or private agency recognized by the U.S. Department of Labor. Subcontractors shall maintain a record of the dates and results of inspections and rated load tests for each hoisting machine and piece of equipment; inspections will be readily available for review by RC Andersen upon request.

Any defects found will be repaired by a qualified person before the crane is used. Before a crane is placed in service for use, rope components shall be inspected by a qualified person for defects, damage and deformities and at least monthly thereafter. Certification of this inspection shall be in writing and document the date of inspection; inspector's name and signature; and be readily available for review by RC Andersen upon request.

### ***Inspection of wire rope***

Wire rope shall be taken out of service when any of the following conditions exist:

- In running ropes, 6 randomly distributed broken wires in 1 lay or 3 broken wires in one strand in one lay;
- Wear of 1/3 the original diameter of outside individual wires.
- Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure;
- Evidence of any heat damage from any cause;
- Reductions from nominal diameter of more than 1/64 inch for diameters up to and including 5/16 inch, 1/32 inch for diameters 3/8 inch to and including 1/2 inch, 3/64 inch for diameters 9/16 inch to and including 3/4 inch, 1/16 inch for diameters 7/8 inch to 1 1/8 inches inclusive, 3/32 inch for diameters 1 1/4 to 1 1/2 inches inclusive;
- In standing ropes, more than 2 broken wires in 1 lay in sections beyond end connections or more than 1 broken wire at an end connection.
- Wire rope safety factors shall be in accordance with American National Standards Institute B 30.5-1968 or SAE J959-1966.

Heavy wear and/or broken wires may occur in sections that have contact with equalizer sheaves or other sheaves (where rope travel is limited) or with saddles. Particular care shall be taken to inspect ropes at these locations.

If rope has not been used for a month or longer (i.e. due to shut down or storage of a crane on which it is installed) this rope shall be given a thorough inspection before it is used.

This inspection shall be made by a designated person who is authorized by the Subcontractor and be readily available for review by RC Andersen upon request.

This inspector shall examine rope for any kind of damage, deterioration or defect that might compromise the safety and specifications of the rope. Specific attention and care shall be given to the inspection of non-rotating rope.

Only this designated and authorized inspector shall give approval for use of this rope following satisfactory safety inspection as described above.

A written record of the inspector's certification shall be maintained by the Subcontractor and be readily available for review by RC Andersen upon request. This certification shall include the inspection date, name and signature of the inspector.

### ***Inspection of hoist chains***

Hoist chains and end connections shall be inspected daily for damage, deterioration, excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations.

Chains shall be inspected visually by the operator each day or before first use.

Chains also shall be inspected monthly for safety certification. The written certification shall include the date of inspection, name and signature of the inspector. Written certification records shall be maintained by the Subcontractor and be made available to RC Andersen upon request.

### ***Inspection of hooks and hook components***

Crane hooks and safety latches shall be visually inspected each day or at the beginning of a shift prior to use for damage, cracks or deformation.

Hooks and safety latches also shall be inspected monthly for safety certification. The written certification shall include the date of inspection, name and signature of the inspector, and the identification number of the hook that was inspected. Written certification records shall be maintained by the Subcontractor.

Hooks that have cracks or a throat opening that is greater than 15 percent in excess of normal or more than 10 degree twist from the plane of the unbent hook shall be discarded.

### ***Preventive maintenance***

Subcontractors shall implemented a preventive maintenance program to help ensure the safety of cranes, hoists, rigging and related equipment. Preventive maintenance shall be performed in accordance with manufacturer's recommendations. Each crane shall have a written record of preventive maintenance that is maintained by the Subcontractor.

### **Qualified Riggers**

All Subcontractor riggers will be qualified persons for the performance of specified hoisting activities such as during assembly/disassembly work and those that require employees to be in the fall zone to handle a load. The rigger would be considered qualified through possession of a recognized degree, certificate, or professional standing; or by extensive knowledge, training, and experience, successfully demonstrating the ability to solve/resolve problems related to rigging work and related activities.

### **Signal Persons:**

- *Qualification Requirements:*
  - *Know & understand signals*
  - *Competent in using signals*
  - *Basic understanding of crane operation*
  - *Verbal or written test plus practical test*

**B. Site Superintendent Responsibilities**

As part of RC Andersen LLC safety and health program, site superintendents are required to:

1. Develop a working knowledge of client's requirements for operating construction cranes, derricks or hoists on project property.
2. Conduct a detailed crane standards review meeting with subcontractor using crane, crane operator, and any trades affected by the movement of the crane.
3. The crane operator must provide a copy of the written annual inspection to observe compliance with established company and client crane and rigging procedures.
4. Immediately shut down any crane operations that jeopardize the safety of any field operation personnel.
5. Immediately notify the Corporate Safety Director of any crane or rigging accidents and operational problems.





## Chapter 12

### Motor Vehicles and Mechanized Equipment

General Requirement: This Company recognizes the potential hazards associated with motor vehicles and mechanized equipment on construction projects. Therefore, in an effort to minimize accidents resulting from their use, the following safety procedures will be implemented by all subcontractors and enforced on all RC Andersen LLC projects and in accordance with 29 CFR 1926 OSHA, Subpart O, 1926.600 through 1926.606.

1. All operators of motorized equipment must be certified and / or licensed for that equipment. Provide RC Andersen LLC with copy of certification or license upon request.
2. All equipment left unattended at night, adjacent to highways or construction areas, will have lights, reflectors, and/or barricades to identify location of the equipment.
3. Supervisory personnel will ensure that all machinery and equipment is inspected prior to each use to verify that it is in safe operating condition.
4. Rated load capacities and recommended rules of operation will be conspicuously posted on all equipment at the operator's station.
5. An accessible fire extinguisher of 5 BC rating or higher will be available at all operator stations.
6. When vehicles or mobile equipment are stopped or parked, the parking brake will be set. Equipment on inclines will have wheels chocked as well as the parking brake set.
7. All vehicles or combinations of vehicles will have in operable condition at least:
  - 2 headlights
  - 2 taillights
  - Brake lights
  - Audible back-up warning device
  - Seat belts properly installed and utilized
  - Appropriate number of seats for occupants
  - Service, parking and emergency brake system.
8. Operators will not use motor equipment having an obstructed rear view unless:
  - Vehicle is equipped with an audible, functioning reverse signal alarm; and
  - Vehicle is backed up only under the guidance of an observer who says that it is safe to do so.
9. Subcontractors are responsible for maintenance and repair of their equipment onsite. RC Andersen does not operate motorized equipment onsite and is therefore exempt from establishing a maintenance and repair program.



## Chapter 13

### Excavations

General Requirements. Trenching and excavation work presents a serious risk to all employees. The greatest risk, and one of primary concern, is a cave-in. Cave-in accidents are much more likely to result in worker fatalities than any other excavation-related accidents. Due to the hazards associated with excavation work, the following safe work procedures will be implemented by all site contractors and enforced at all RC Andersen LLC construction projects in accordance with 29 CFR 1926 OSHA, Subpart P, 1926.650 through 1926.652 and Appendices A through F.

1. Remove or support all surface encumbrances whenever their location creates a hazard to employees.
2. Subcontractors will call 811 to identify underground installation (e.g., sewer, utility, fuel) locations prior to opening an excavation. Contact utility companies or clients to advise on the proposed work and ask for the locations of utility underground installations prior to opening an excavation.
3. Protect, support or remove underground installations, as necessary, to safeguard employees working in open excavations.
4. Structural ramps used by employees as a means of access or egress from excavations must be designed by a **competent person**.
5. Structural ramps for access and egress of equipment must be designed by a **competent person** qualified in structural design.
6. All excavations or trenches that are four (4) feet or more in depth must have a stairway, ladder, ramp or other safe means of access and egress within twenty-five (25) feet of travel in any direction.
7. The entire area around any trench or excavation must be barricaded at all times.
8. No employees are permitted underneath loads handled by lifting or digging equipment.
9. A warning system (e.g., barricades, signals, or stop logs) must be used when mobile equipment is operated adjacent to an excavation.
10. Testing must be conducted in excavations where oxygen deficient atmospheres exist or could reasonably be expected to exist before employees are permitted to enter excavations greater than four (4) feet in depth.
11. Take adequate precautions, such as proper respiratory protection or ventilation, to prevent employee exposure to oxygen deficient and other hazardous atmospheres. Emergency rescue equipment must be readily available where hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation.
12. Never work in excavations where water has accumulated or is accumulating, unless adequate precautions have been taken to protect you against the hazards posed by water accumulation.

13. A **competent person** must:

- Monitor water removal equipment and operations
- Inspect excavations subject to runoff from heavy rains.
- Conduct daily inspections of excavations

14. A **competent person** will conduct inspections of excavations prior to the start of work and as necessary throughout each shift. Inspections must also be made after every rainstorm or other hazard increasing occurrence.

15. Trenches five (5) feet or more in depth must be shored or sloped back to the angle of repose. Any excavation in unstable soil may require shoring or sloping.

16. Backfilling and removal of trench boxes or supports shall progress together from the bottom of the trench. Jacks, supports, or braces shall be released slowly, and in unstable soil, ropes shall be used to pull out the jacks and braces from above and clear of the excavation. All personnel shall be clear of the trench.

17. Materials must be placed 2 feet or more from the edge of the excavation, including spoil piles. Precautions must be taken to prevent such materials from falling into the excavation.

## **Chapter 14**

### **Concrete and Masonry Construction**

Compliance on jobsites with RC Andersen LLC' safety requirements listed below should greatly reduce or eliminate the injuries and accidents that occur too frequently during concrete and masonry construction. All work is to be performed in accordance with 29 CFR 1926 OSHA, Subpart Q, which includes:

1. All protruding reinforcing steel, onto which employees could fall, must be guarded to eliminate the hazard of impalement.
2. Employees are prohibited from riding in concrete buckets.
3. Employees are prohibited from working under concrete buckets while the buckets are being elevated or lowered into position.
4. Employees are required to wear protective head and face equipment when applying cement, sand, and water mixtures through a pneumatic hose.
5. Employees are required to wear a positioning device or equivalent fall protection when placing or tying reinforcing steel more than six (6) feet above any working surface.
6. Only wet-cutting methods will be allowed for any brick/block/concrete cutting operations as outlined in section J "Silica", in Chapter 2.
7. All masonry scaffolding operations will comply with Scaffolding requirements.
8. All concrete operations will comply with Fall Protection requirements.
9. Employees are not permitted behind the jack during tensioning operations.
10. Signs and barriers must be erected during tensioning operations to limit employee access.



## Chapter 15

### Steel Erection

Due to the hazards associated with steel erection, the following safety procedures will be implemented by subcontractors and enforced at all RC Andersen LLC projects in accordance with all OSHA regulations in Subpart R:

1. Permanent floors must be installed so there is not more than eight (8) stories between the erection floor and the uppermost permanent floor, except when structural integrity is maintained by the design.
2. During skeleton steel erection, a tightly planked temporary floor must be maintained within two stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed.
3. During skeleton steel erection, where the requirements of the preceding paragraph cannot be met, and where scaffolds are not used, safety nets must be installed and maintained whenever the potential fall distance exceeds two (2) stories or 25 feet.
4. Safety harnesses or lifelines, and lanyards must be worn by employees during steel erection higher than 30 feet. All safety precautions for safety harnesses, lifelines and lanyards must be followed.
5. A safety railing of 1/2-inch wire rope or equivalent must be installed around the perimeter of all temporary floored buildings, approximately 42 inches high, during structural steel assembly and flagged with highly visible surveyors tape or caution tape in increments of not more than 6 feet.
6. When placing structural steel members, the load must not be released from the hoisting line until the member is secured by at least two bolts, or the equivalent, at each connection, drawn up wrench tight.
7. Before authorizing the commencement of steel erection, the controlling contractor shall ensure that the steel erector is provided with the following written notifications from appropriate testing agencies that:
  - (a) the concrete in the footings, piers and walls and the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.
  - (b) Any repairs, replacements and modifications to the anchor bolts were conducted in accordance with § 1926.755(b), which requires all anchor bolt repair must be under the approval of the project structural engineer, and, steel erector has received written notification of all anchor bolt repairs, replacements or modifications.

**Commencement of steel erection.** A steel erection contractor shall not erect steel unless it has received written notification from the testing agency that the concrete in the footings, piers and walls or the mortar in the masonry piers and walls has attained, on the basis of an appropriate ASTM standard test method of field-cured samples, either 75 percent of the intended minimum compressive design strength or sufficient strength to support the loads imposed during steel erection.

**Plumbing-up equipment.** When deemed necessary by a competent person, plumbing-up equipment shall be installed in conjunction with the steel erection process to ensure the stability of the structure.

When used, plumbing-up equipment shall be in place and properly installed before the structure is loaded with construction material such as loads of joists, bundles of decking or bundles of bridging.

Plumbing-up equipment shall be removed only with the approval of a competent person.

**Metal decking. Hoisting, landing and placing of metal decking bundles.** Bundle packaging and strapping shall not be used for hoisting unless specifically designed for that purpose. If loose items such as dunnage, flashing, or other materials are placed on the top of metal decking bundles to be hoisted, such items shall be secured to the bundles.

Metal decking bundles shall be landed on framing members so that enough support is provided to allow the bundles to be unbanded without dislodging the bundles from the supports.

At the end of the shift or when environmental or jobsite conditions require, metal decking shall be secured against displacement.

**In addition, the following regulations 1926.757 (e) must be followed during the landing and placing of loads on structure:**

(e)(1) During the construction period, the employer placing a load on steel joists shall ensure that the load is distributed so as not to exceed the carrying capacity of any steel joist.

(e)(2) Except for paragraph (e)(4) of this section, no construction loads are allowed on the steel joists until all bridging is installed and anchored and all joist-bearing ends are attached.

(e)(3) The weight of a bundle of joist bridging shall not exceed a total of 1,000 pounds (454 kg). A bundle of joist bridging shall be placed on a minimum of three steel joists that are secured at one end. The edge of the bridging bundle shall be positioned within 1 foot (.30 m) of the secured end.

(e)(4) No bundle of decking may be placed on steel joists until all bridging has been installed and anchored and all joist bearing ends attached, unless all of the following conditions are met:

(e)(4)(i) The employer has first determined from a qualified person and documented in a site-specific erection plan that the structure or portion of the structure is capable of supporting the load;

(e)(4)(ii) The bundle of decking is placed on a minimum of three steel joists;

(e)(4)(iii) The joists supporting the bundle of decking are attached at both ends;

(e)(4)(iv) At least one row of bridging is installed and anchored;

(e)(4)(v) The total weight of the bundle of decking does not exceed 4,000 pounds (1816 kg); and

(e)(4)(vi) Placement of the bundle of decking shall be in accordance with paragraph (e)(5) of this section.

(e)(5) The edge of the construction load shall be placed within 1 foot (.30 m) of the bearing surface of the joist end.

**Roof and floor holes and openings.** Metal decking at roof and floor holes and openings shall be installed as follows:

Framed metal deck openings shall have structural members turned down to allow continuous deck installation except where not allowed by structural design constraints or constructability.



Roof and floor holes and openings shall be decked over. Where large size, configuration or other structural design does not allow openings to be decked over (such as elevator shafts, stair wells, etc.) employees shall be protected from falls using fall protection guidelines in Section 3, Chapter 10 of this manual.

Metal decking holes and openings shall not be cut until immediately prior to being permanently filled with the equipment or structure needed or intended to fulfill its specific use and which meets the strength requirements of this section, or shall be immediately covered.

**Covering roof and floor openings.** Covers for roof and floor openings shall be capable of supporting, without failure, twice the weight of the employees, equipment and materials that may be imposed on the cover at any one time.

All covers shall be secured when installed to prevent accidental displacement by the wind, equipment or employees.

All covers shall be painted with high-visibility paint or shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

Smoke dome or skylight fixtures that have been installed, are not considered covers for the purpose of this section unless they meet the strength requirements of this section.

**Decking gaps around columns.** Wire mesh, exterior plywood, or equivalent, shall be installed around columns where planks or metal decking do not fit tightly. The materials used must be of sufficient strength to provide fall protection for personnel and prevent objects from falling through.

**Installation of metal decking.** Metal decking shall be laid tightly and immediately secured upon placement to prevent accidental movement or displacement.

During initial placement, metal decking panels shall be placed to ensure full support by structural members.

**Derrick floors.** A derrick floor shall be fully decked and/or planked and the steel member connections completed to support the intended floor loading.

Temporary loads placed on a derrick floor shall be distributed over the underlying support members so as to prevent local overloading of the deck material.

**Perimeter safety cables.** On multi-story structures, perimeter safety cables shall be installed at the final interior and exterior perimeters of the floors as soon as the metal decking has been installed.

**Fall Protection.** (a) Each employee engaged in a steel erection activity that is on a walking/working surface with an unprotected side or edge more than 15 feet (4.6 m) above a lower level shall be protected from fall hazards by guardrail systems, safety net systems, personal fall arrest systems, positioning device systems or fall restraint systems.

Connectors and employees working in controlled decking zones shall be protected from fall hazards as provided in paragraphs (b) and (c) of this section, respectively.

**(b) Connectors.** Each connector shall:

Be protected in accordance with paragraph (a) of this section from fall hazards of more than two stories or 30 feet (9.1 m) above a lower level, whichever is less;

Be provided, at heights over 15 and up to 30 feet above a lower level, with a personal fall arrest system, positioning device system or fall restraint system and wear the equipment necessary to be able to be tied off; or be provided with other means of protection from fall hazards.

**(c) Controlled Decking Zone (CDZ).** A controlled decking zone may be established in that area of the structure over 15 and up to 30 feet above a lower level where metal decking is initially being installed and forms the leading edge of a work area. In each CDZ, the following shall apply:

- Each employee working at the leading edge in a CDZ shall be protected from fall hazards of more than two stories or 30 feet (9.1 m), whichever is less.
- Access to a CDZ shall be limited to only those employees engaged in leading edge work.
- The boundaries of a CDZ shall be designated and clearly marked. The CDZ shall not be more than 90 feet (27.4 m) wide and 90 (27.4 m) feet deep from any leading edge. The CDZ shall be marked by the use of control lines or the equivalent.
- Each employee working in a CDZ shall have completed CDZ training.
- Unsecured decking in a CDZ shall not exceed 3,000 square feet (914.4 m<sup>2</sup>).
- Safety deck attachments shall be performed in the CDZ from the leading edge back to the control line and shall have at least two attachments for each metal decking panel.
- Final deck attachments and installation of shear connectors shall not be performed in the CDZ.

**(d) Criteria for fall protection equipment.** Guardrail systems, safety net systems, personal fall arrest systems, positioning device systems and their components shall conform to the criteria in OSHA § [1926.502](#).

Fall arrest system components shall be used in fall restraint systems and shall conform to the criteria in OSHA § [1926.502](#) body harnesses shall be used in fall restraint systems.

Perimeter safety cables shall meet the criteria for guardrail systems in OSHA § [1926.502](#)

**(e) Custody of fall protection.** Fall protection provided by the steel erector shall remain in the area where steel erection activity has been completed, to be used by other trades, only if the controlling contractor or its authorized representative:

- Has directed the steel erector to leave the fall protection in place; and
- Has inspected and accepted control and responsibility of the fall protection prior to authorizing persons other than steel erectors to work in the area.

## **Chapter 16**

### **Demolition**

All demolition operations will be performed following all regulations in 26 CFR 1926 OSHA, Subpart T, and includes:

#### **A. Preparatory Operations**

1. Prior to permitting employees to start demolition operations, an engineering survey shall be made, by a competent person, of the structure to determine the condition of the framing, floors, and walls, and possibility of unplanned collapse of any portion of the structure. Any adjacent structure where employees may be exposed shall also be similarly checked. The employer shall have in writing evidence that such a survey has been performed.
2. When employees are required to work within a structure to be demolished which has been damaged by fire, flood, explosion, or other cause, the walls or floor shall be shored or braced.
3. All electric, gas, water, steam, sewer, and other service lines shall be shut off, capped, or otherwise controlled, outside the building line before demolition work is started. In each case, any utility company which is involved shall be notified in advance.
4. If it is necessary to maintain any power, water or other utilities during demolition, such lines shall be temporarily relocated, as necessary, and protected.
5. It shall also be determined if any type of hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in any pipes, tanks, or other equipment on the property. When the presence of any such substances is apparent or suspected, testing and purging shall be performed and the hazard eliminated before demolition is started.
6. Where a hazard exists from fragmentation of glass, such hazards shall be removed.
7. Where a hazard exists to employees falling through wall openings, the opening shall be protected to a height of approximately 42 inches.
8. When debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped shall be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the projected edge of the opening above. Signs, warning of the hazard of falling materials, shall be posted at each level. Removal of barricade shall not be permitted in this lower area until debris handling ceases above.
9. All floor openings, not used as material drops, shall be covered over with material substantial enough to support the weight of any load which may be imposed. Such material shall be properly secured to prevent its accidental movement.

10. Except for the cutting of holes in floors for chutes, holes through which to drop materials, preparation of storage space, and similar necessary preparatory work, the demolition of exterior walls and floor construction shall begin at the top of the structure and proceed downward. Each story of exterior wall and floor construction shall be removed and dropped into the storage space before commencing the removal of exterior walls and floors in the story next below.
11. Employee entrances to multistory structures being demolished shall be completely protected by sidewalk sheds or canopies, or both, providing protection from the face of the building for a minimum of 8 feet. All such canopies shall be at least 2 feet wider than the building entrances or openings (1 foot wider on each side thereof), and shall be capable of sustaining a load of 150 pounds per square foot.

**B. Stairs, Passageways, and Ladders**

1. Only use stairways, passageways, and ladders designated as means of access to the structure of a building.
2. Stairs, passageways, ladders and incidental equipment must be periodically inspected and maintained in a clean and safe condition.
3. Stairwells must be properly illuminated and completely and substantially covered over at a point not less than two floors below the floor on which work is being performed.

**C. Mechanical Demolition**

Never enter any area which may be adversely affected by demolition operations when clamming is being performed, unless you are needed to perform these operations.

During demolition, a **competent person** must make continued inspections as the work progresses to detect hazards resulting from weakened or deteriorated floors, or walls, or loosened material.

## Stairways and Ladders

Stairways and ladders are a major source of injuries and fatalities among construction workers. Due to the potential hazards involved in using stairways and ladders, the following safety procedures will be implemented and enforced at all RC Andersen LLC construction projects in accordance with 29 CFR 1926 OSHA, Subpart X

### A. General Requirements

Ladders that project into passageways or doorways where they could be struck by personnel, moving equipment, or materials being handled must be protected by barricades or warning signs.

All workers must face the ladder and 3 points of contact (i.e., either both hands and one foot, or, two feet and one hand) when going up and down ladders. Materials and tools should be lowered or raised by a rope or other mechanical means.

Hold on to the railing on stairways.

The areas around the top and base of ladders must be free of tripping hazards such as loose materials, trash, and electrical cords. The same holds true for the bottom of stairways and on stairway platforms.

### B. Ladders

Ladders must be capable of supporting four times the maximum intended load.

Ladder rungs, cleats, and steps must be parallel, level, and uniformly spaced (not less than 10 inches nor more than 14 inches).

Do not tie or fasten ladders together to provide longer sections unless they are specifically designed for such use.

All stepladders must be equipped with a metal spreader or locking device.

Do not paint wooden ladders, except to stencil for identification.

Maintain ladders free from oil, grease, and other slipping hazards.

Ladders must extend at least 3 feet above the upper landing surface and be secured.

The horizontal distance for the base of the ladder should extend one foot for every four feet in vertical distance.

Wood job-made ladders must be used at an angle so that the horizontal distance is one-eighth the working length of the ladder.

Do not use ladders on slippery surfaces unless they have been properly secured or provided with slip-resistant feet.

Do not move, shift, or extend ladder while occupied.

Never stand on the top step of a stepladder.

Ladders must be inspected by a **competent person** on a periodic basis and after any occurrence that could affect their performance.

Ladders with structural defects must be tagged with "Do Not Use" or similar language and withdrawn from service until repaired.

Never use a metal ladder when working on electrical equipment or near electrical equipment where contact is possible, including changing light bulbs.

Any subcontractor's employee who uses or will use ladders or stairways will receive training by that subcontractors' **competent person** in the following areas:

- Types of fall hazards

- Correct procedures for erecting, securing, maintaining and disassembling fall protection systems

- Proper construction (man-made), use, placement, and handling

- Maximum intended load-carrying capacities

- Requirements contained within 29 CFR Subpart X

## C. **Stairways**

Stairways that will not be permanent parts of the structure must have landings of not less than 30 inches in the direction of travel.

A platform must be provided where doors or gates open directly on a stairway.

Metal pan landings and metal pan treads must be secured in place before filling with concrete or other material.

Metal pan stairs may not be used for access or egress until filled with concrete or other material.

Maintain all parts of stairways free from hazardous projections, such as protruding nails.

Eliminate slippery conditions on stairways before the stairways are used to reach other levels.

## Chapter 18

### Confined Space Entry

One of the least recognized and most dangerous hazards on a construction field operation is working in confined spaces. Entry into confined spaces without the proper precautions could result in injury and/or impairment or death due to:

An atmosphere that is flammable or explosive;

Lack of oxygen to support life;

Toxic materials that upon contact or inhalation could cause injury, illness, or death;

General safety hazards such as steam, high pressure systems, or other work area hazards.

In an effort to prevent injury or death from working in confined spaces, this company will implement and enforce the following safe work procedures for confined spaces by subcontractors on all RC Andersen LLC construction projects.

#### **A. Hazard Information and Control**

1. A confined space entry permit must be completed and signed by the authorized person prior to entry into a confined space.
2. A hazard evaluation must be conducted before any work is started in a confined space.
3. Technically competent personnel (i.e., industrial hygienist, safety specialist, etc.) must test the atmosphere within the confined space with an appropriate gas detector and approved oxygen testing equipment before employees enter.
4. If combustible gases are detected, employees are prohibited from entering the confined space until the source has been isolated and the space flushed or purged to less than 5% of the lower explosive limit.
5. If an oxygen deficient atmosphere (less than 19.5% by volume) is present, positive ventilation techniques, including fans and blowers, may be used to increase the oxygen content. If further testing indicates the atmosphere is still oxygen deficient, Self Contained Breathing Apparatus or other air supplied respiratory protection will be provided.
6. When toxic or chemical materials are detected or suspected, the following actions should be taken by a technically competent person, i.e., Industrial Hygienist, etc.:
  - Any piping that carries or may carry hazardous materials to the confined space will be isolated.
  - Empty the hazardous substance from the space until safe limits are reached.

- Provide adequate ventilation and personal protective equipment for the eyes, face, and arms if welding, burning, cutting, or heating operations which may generate toxic fumes and gases are performed.
  - Employees must wear eye and other appropriate protective equipment to prevent possible contact with corrosive materials.
7. An emergency plan of action that provides alternate life support systems and a means of escape from confined spaces must be developed and communicated to all employees engaged in work in confined spaces.
  8. Each employee entering a confined space should wear a retractable safety harness, equipped with a life-line for evacuation purposes in case of an emergency.
  9. Emergency equipment (e.g., lifelines, safety harnesses, fire extinguisher, breathing equipment, etc.) appropriate to the situation should be ready and immediately available.
  10. All persons engaged in the confined space activity must receive training in the use of the life support system, rescue system, and emergency equipment.
  11. An attendant, trained in first aid and respiration, must remain outside of the entrance to the confined space to provide assistance if needed, utilizing a planned and immediately available communications means (radio, hand signals, whistle, etc.). The attendant should never enter the confined space to attempt a rescue, until additional rescue team personnel have arrived.



## Chapter 19

### Hazardous Waste Operations and Emergency Response

**Unless a site-specific environmental HASP is provided by project owner, a LSRP, or consultants, Hazardous Waste Operations are not included.**

Hazardous waste site operations pose a multitude of safety and health hazards to workers, any one of which could result in serious injury or death. Therefore, in an effort to protect workers engaged in construction activities where 29 CFR 1910.120 regulations apply, an outside Environmental Safety Officer - **not included in this project unless otherwise noted** - will have sole responsibility for implementing a site specific hazard safety requirements, including medical monitoring, proper worker certification, training in use of PPE, etc. on all Hazmat operations.

If this project will operate under 29 CFR 1910.129, a Hazardous Waste Operations Health and Safety plan for associated construction activities will be provided per owner and/or developer consultants.



## Chapter 20

### Gas Monitor Program

#### **Purpose**

To ensure proper use and accuracy of the gas monitors, which may be used on a job site where hazardous gases may exist.

#### **Scope**

This section applies to all employees and subcontractors who will be either using a personal gas monitor, or performing work on a job site where continuous air monitoring is required.

#### **Definitions**

**Zero(fresh air) Calibration** – This is done in a clean atmosphere of 20.9% oxygen and no detectable VOC, toxic, or combustible gases. It is used to set the zero point for each sensor.

**Span Calibration** – is the set of operations that establish, under specified conditions, the relationship between the values of quantities indicated by a measuring instrument and the corresponding values realized by given standards. Note: Refer to the gas bottle label for specific values.

**Bump Testing** – Ensures that all sensors are reading accurately according to the set values of the gas being applied. Note: Refer to the gas bottle label for specific values.

**STEL** – Short Term Exposure Limit

**TWA** – Time Weighted Average

**LEL** – Lower Explosive Limit

#### **Zero Calibration**

After the gas monitor is turned on in a safe, well ventilated, clean air environment, and is in operation mode, the oxygen sensor should read 20.9%. All other sensors should read 0. If this not the case, zero calibration should be performed. Refer to the manufacturer's reference guide for proper procedure.

#### **Span Calibration**

All monitors shall be calibrated every 30 days. Refer to the manufacturer's reference guide for proper calibration procedure.

#### **Bump Testing**

All monitors shall be bump tested daily or prior to each use. Refer to the manufacturer's reference guide for proper bump testing procedure.

#### **Alarm Values**

Peak, STEL, and TWA values shall be set to meet or exceed the OHS regulations for the specific gases that are being monitored. Alarm levels for LEL's shall not exceed 10%. Alarm values shall meet site specific requirements that exceed OHS regulations.

## Chapter 21

### Heat and Cold Stress Policy

The company has developed this program to address the hazards associated with heat- and cold-related illness.

#### PREVENTING HEAT-RELATED ILLNESSES (HEAT STRESS)

##### Heat Stress

Heat stress takes place when your body's cooling system is overwhelmed. It can happen when heat combines with other factors such as:

- hard physical work;
- fatigue (not enough sleep);
- dehydration (loss of fluids); and
- certain medical conditions.

Heat stress can lead to illness or even death. The company has a duty to take every precaution reasonable in the circumstances to protect their workers.

##### Heat stress symptoms

Heat rash: itchy red skin.

Heat cramps: painful muscle cramps.

Heat exhaustion: high body temperature; weakness or feeling faint; headache, confusion or irrational behaviour; nausea or vomiting.

Heat stroke: no sweating (hot, dry skin), high body temperature, confusion, or convulsions. Get immediate medical help.

##### Precautions when working in hot, humid conditions

- Increase the frequency and length of rest breaks.
- Provide **cool drinking water** near workers and remind them to drink a cup every 1/2 hour.
- Caution workers about working in direct sunlight.
- Train workers to recognize the signs and symptoms of heat stress. Start a "buddy system" because it's unlikely people will notice their own symptoms.
- Tell workers to wear light summer clothing to allow air to move freely and sweat to evaporate. They should always wear shirts to protect themselves from direct sunlight.

##### Cold Stress

When you're cold, blood vessels in your skin, arms, and legs constrict, decreasing the blood flow to your extremities. This helps your critical organs stay warm, but your extremities are at risk for frostbite.

**Frostbite** means that your flesh freezes. Blood vessels are damaged and the reduced blood flow can lead to gangrene.

The first sign of frostbite is skin that looks waxy and feels numb. Once tissues become hard, it's a severe medical emergency.

**Wind chill** accelerates heat loss—sometimes to a dramatic extent. For example, when the air temperature is –30°C,

- with no wind, there is little danger of skin freezing;
- with 10 mph wind (a flag will be fully extended), your skin can freeze in about a minute; and
- with 20 mph wind (capable of blowing snow), your skin can freeze in 30 seconds.

When your core temperature drops, you're at risk for hypothermia. Early signs of hypothermia are shivering, blue lips and fingers, and poor coordination. Soon your breathing and heart rate slow down, and you become disoriented and confused. Hypothermia requires medical help.

### **Precautions to prevent cold stress**

- Wear several layers of clothing rather than one thick layer.
- Wear gloves if the temperature is below 60°F for sedentary work, below 39°F for light work, and below 19°F for moderate work.
- Take warm, high-calorie drinks and food.
- If your clothing gets wet at 35°F or less, change into dry clothes immediately to prevent hypothermia.
- If you feel hot, open your jacket but keep your hat and gloves on.
- Give workers warm-up and rest breaks in a heated shelter. Ensure work is conducted only within allowable exposure limits.

## **Chapter 22**

### **Disciplinary Program**

The purpose of this program is to establish a firm but fair disciplinary action policy to enforce the safety compliance system on RC Andersen projects. This document is applicable to all workers onsite.

#### **Key Responsibilities**

It is the responsibility of each person on RC Andersen projects to work in a safe and efficient manner. This safety program provides guidelines and procedures to help ensure that safe work practices are observed. In the event that any worker violates provisions of the projects safety program or works in a manner that threatens his own health and safety or the health and safety of the workers around him, he/she will be subject to disciplinary action, up to and including termination from the project.

The safety director, project managers, superintendents, and safety inspectors hold positions responsible for enforcing the safety compliance system and for issuing disciplinary action as required by this section of the safety manual.

RC Andersen is committed to safety and senior management holds all supervisory staff responsible and accountable for safety within their respective areas. Physical inspections by RC Andersen's representatives will occur on a routine schedule to ensure compliance with safety rules and policies.

#### **Procedure / Practices**

Safety is a core value and a condition of employment on RC Andersen projects. The following actions, while not complete, constitute examples of safety violations:

- Not following verbal or written safety procedures, guideline, or rules of RC Andersen or our clients.
- Horse play, failure to wear required PPE, and or abuse of PPE.
- Being under the influence of drugs or alcohol during work.
- Bringing weapons on the job site.
- Failure to report incidents or injuries.
- Attempted or actual physical force to cause injury, threatening statements, or other actions to cause an employee to feel they are at risk of injury.

For failure to abide by RC Andersen's Anti-discrimination, Anti-harassment, Anti-retaliation policy, the following procedures will be followed issuing a safety violation notice:

- The first offense will result in a verbal warning. The employee will be informed that he or she is being issued a verbal warning, and, informed of the infraction, rule, or procedure that was violated and the corrective action to be taken. Proper procedure will be discussed to clarify the situation and allow the employee to correct his behavior. The person making this verbal warning will inform the site superintendent or safety manager that this warning has been issued so a written record of the warning may be made.

- The second offense will result in a written reprimand and may include additional training. The reprimand will describe the unsafe activity or behavior that needs correction. The worker receiving the reprimand has the right to submit a written rebuttal to the reprimand. The reprimand and any rebuttal will become a part of the project safety records.
- The third offense will result in another written reprimand and punitive layoff from the project, the duration of which will be decided at the time of the disciplinary action and is to be weighed by the severity of the offense. Again, the worker may submit a written rebuttal to the reprimand. The employee must sign the reprimand or risk being removed from the jobsite. The reprimand and any rebuttal will become a part of the projects safety records.
- The fourth offense may result in the permanent termination of the offending from all RC Andersen projects.

In the case of serious safety violations, such as by-passing guarding or other unsafe activities that put the violator or other employees at serious risk of injury, the site superintendent or safety inspector may move the violator directly to the second or third warning level. If the violator's actions put him or others at risk of death or dismemberment, the superintendent or safety inspector has the option to terminate him or her from the project with no further warning.



## **CHAPTER 23**

### **SILICA EXPOSURE CONTROL PLAN UNDER 29 CFR 1926.1153(g)**

#### **Section A. Introduction**

Silica refers to the chemical compound silicon dioxide (SiO<sub>2</sub>), the most common form of which is quartz. Sand, a key component in many building products such as mortar, clay and concrete tiles or pavers, and brick, is mainly composed of silica in the form of quartz.

Silica can present a danger to construction workers when these building materials are cut, drilled or ground using powered equipment and abrasive blades, drills or other equipment, resulting in dust containing tiny particles of silica, known as respirable crystalline silica (RCS). These particles are small enough to penetrate to the gas exchange area of the lungs; larger particles cannot travel as deep into the lungs and are purged by natural actions of the body. Respirable particles remain in the lungs and cause permanent scarring of lung tissue, making breathing increasingly more difficult—an occupational disease known as silicosis that often does not manifest until many years after exposure. According to the American Lung Association, silicosis also increases the risk of other lung issues, such as tuberculosis, lung cancer and chronic bronchitis.

The U.S. Occupational Safety and Health Administration (OSHA) has published a new rule regarding worker exposure to RCS in construction that takes effect Sept. 23, 2017.

In accordance with OSHA's construction silica regulation, RC Andersen LLC has developed the following written exposure control plan to identify the hazards workers on our projects may be exposed to and the means our company has established to control those hazards, ensuring the safety of those workers and others in proximity to them. Although RCS exposures are minimal to RC Andersen employees and the risk of contracting silicosis is low, RCS is a serious danger that can cause permanent damage, and it is critical for all subcontractors, their supervisors/foremen, and workers to follow the control practices set out in this plan.

The OSHA regulation applies to all exposures to RCS in construction workplaces except those where worker exposures will remain below 25 micrograms per cubic meter of air as an eight-hour time-weighted average (TWA) under any foreseeable conditions.

#### **Section B. Scope and Description of Tasks**

Following are specific equipment and/or tasks a worker on a RC Andersen construction project may use or perform that could involve exposure to silica, quartz or sand (not necessarily RCS). These tasks were determined based on information found in manufacturers' safety data sheets (SDSs) for products being used or installed, as well as company and industry sampling of commonly encountered concrete or cementitious products.

- Stationary masonry saws
- Handheld power saws (any blade diameter)
- Handheld power saws for cutting fiber- cement board (with blade diameter of 8 inches or less)
- Walk-behind saws

- Drivable saws
- Rig-mounted core saws or drills
- Handheld and stand-mounted drills (including impact and rotary hammer drills)
- Dowel drilling rigs for concrete
- Vehicle-mounted drilling rigs for rock and concrete
- Jackhammers and handheld powered chipping tools
- Handheld grinders for mortar removal (*i.e.*, tuckpointing)
- Handheld grinders for uses other than mortar removal
- Walk-behind milling machines and floor grinders'
- Small drivable milling machines (less than half-lane)
- Large drivable milling machines (half-lane and larger)
- Crushing machines
- Heavy equipment and utility vehicles used to abrade or fracture silica- containing materials (*e.g.*, hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials
- Heavy equipment and utility vehicles for tasks such as grading and excavating but not including: demolishing, abrading, or fracturing silica- containing materials
- Abrasive, powered cutting of concrete or clay tile or pavers
- Grinding of mortar joints or masonry for counterflashing or tuck-pointing with powered tools equipped with abrasive blades
- Removal and installation of asphalt roofing products such as built-up, polymer-modified bitumen and shingle roof systems
- Removal or installation of gravel surfacing material on roof systems
- Drilling or screwing into concrete, masonry or mortar for installation of termination bars, fasteners or other accessories

With subcontractor input RC Andersen's management and superintendents will review this list of tasks and supplement or revise it to properly describe tasks that may involve silica, quartz or sand or could result in exposure to RCS. This review will use industry sources of silica information, established sampling and testing, and government agency and third-party research and publications to determine additional sources of RCS exposure that initially may not have been identified.

Prior to the start of any silica generating tasks, subcontractor company supervisors/foremen, and RC Andersen safety staff will analyze the tasks to be performed and determine whether any of those tasks fall into one of the categories listed above or might involve an exposure to RCS that has not been identified previously. In performing the hazard analysis, a preliminary determination also will be made by company superintendent and safety staff regarding any possible exposure to RCS from sources outside our company's control as well as potential exposures to third parties who may be affected by project operations. Hazards identified will be addressed by subcontractor personnel, RC Andersen company staff in consultation with third-party entities if applicable, and procedures to control those hazards will be incorporated into this plan.

Any identified task that exposes—or reasonably is expected to expose— project workers to RCS at or above the action level requires RC Andersen superintendent, subcontractor company supervisors/foremen and safety personnel to assess the nature of the exposure by air monitoring or objective data comparison sufficient to characterize the exposure.

## Section C. Limiting Worker Exposures to RCS

Although most tasks performed by workers at RC Andersen LLC projects will not expose workers to harmful levels of RCS, categories of tasks described by OSHA in Table 1 of 29 CFR §1926.1153(c)(1) may be performed on this site by workers. As a guideline example, when workers are using hand-held power saws or hand-held grinders for mortar removal, as described in 29 CFR §1926.1153(c)(1)(ii) and (c)(1)(xi), respectively, workers will follow the engineering and work practice control methods and wear the required respiratory protection described in each provision as applicable unless such controls are not feasible.

1. If, while performing tasks described in paragraph A, workers do not fully implement the engineering controls, work practices and respiratory protection described in Table 1, RC Andersen in conjunction with the effected subcontractor will ensure no worker is exposed to RCS in an amount that exceeds the permissible exposure limit (PEL) of 50 micrograms per cubic meter of air as an eight-hour TWA. In addition, RC Andersen's subcontractor may analyze air monitoring data or objective data sufficient to accurately characterize worker exposures to RCS.

Alternatively, RC Andersen's subcontractor may perform initial monitoring to assess the eight-hour TWA exposure for each worker on the basis of one or more personal breathing zone air samples that reflect the exposures of workers on each shift, for each job classification, in each work area. Where several workers perform the same tasks on the same shift and in the same work area, the subcontractor will sample a representative fraction of these workers to meet this requirement. In representative sampling, the subcontractor will sample the worker(s) who are expected to have the highest exposure to RCS. If initial monitoring indicates worker exposures are below the action level, monitoring will be discontinued for those workers whose exposures are represented by such monitoring.

Reassessment of exposures: RC Andersen may request their subcontractor reassess exposures whenever a change in the production, process, control equipment, personnel or work practices may reasonably be expected to result in new or additional exposures at or above the action level or when we have any reason to believe new or additional exposures at or above the action level have occurred.

Methods of sample analysis: RC Andersen's subcontractors will ensure all samples taken to satisfy the monitoring requirements are evaluated by a laboratory that analyzes air samples for RCS in accordance with the procedures in Appendix A of 29 CFR §1926.1153. Worker notification of assessment results: Within five working days after completing an exposure assessment, RC Andersen's subcontractor will individually notify each affected worker in writing of the results of the assessment or post the results in an appropriate location accessible to all affected workers. Whenever an exposure assessment indicates that a worker exposure is above the PEL, RC Andersen's subcontractor will describe in the written notification the corrective action being taken to reduce worker exposure to or below the PEL.

Observation of monitoring: Where air monitoring is performed to comply with the requirements of this section, RC Andersen's subcontractors will provide affected workers or their designated representatives an opportunity to observe any monitoring of worker exposure to RCS. When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, the subcontractors will provide the observer with protective clothing and equipment at no cost and ensure the observer uses such clothing and equipment.

2. Procedures described in paragraph B also will be applied to tasks not listed in Table 1 of 29 CFR §1926.1153(c)(1) that may involve exposure to silica, quartz or sand as determined by information found in applicable manufacturers' SDSs for products found in the workplace.

**3. Methods of compliance:**

Engineering and work practice controls: RC Andersen project supervisory personnel will ensure subcontractor personnel use engineering and work practice controls to reduce and maintain worker exposure to RCS at or below the PEL unless it is demonstrated such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce worker exposure to or below the PEL, they will nonetheless be used to reduce worker exposure to the lowest feasible level and supplement them with the use of respiratory protection that complies with the requirements of paragraph E below.

**4. Respiratory protection, general:**

Where respiratory protection is required for our subcontractors under our company program or 29 CFR §1926.1153, subcontractors will provide each worker an appropriate respirator that complies with the requirements of this paragraph and 29 CFR §1910.134. Respiratory protection is required.

- Where specified by Table 1 of 29 CFR §1926.1153
- For tasks not listed in Table 1 or where the engineering controls, work practices and respiratory protection described in Table 1 are not fully and properly implemented:
- Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls
- Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible
- During tasks for which our company has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

Respiratory protection program: Where respirator use is required by 29 CFR §1926.1153, our company's respiratory protection program developed under 29 CFR §1910.134 will be applicable for RC Andersen personnel. Subcontractors will follow their own respiratory protection program.

**Section D. Housekeeping Measures**

On RC Andersen construction projects, compressed air may not be used to clean worker clothing or surfaces if it could contribute to worker exposure to RCS. It may be used if no other method is feasible or if a ventilation system is used to capture the resulting dust cloud.

- The use of leaf or debris blowers or dry sweeping or brushing of areas soiled by abrasive powered cutting or grinding of materials containing silica must be avoided if wet sweeping or HEPA-filtered vacuuming could be safely used to clean the areas.

- Leaf or debris blowers may be required to clean roof surfaces if wet sweeping or HEPA-filtered vacuuming is not feasible on certain job sites for one or more of the following reasons :
  - Slip, trip or fall hazards are created by wet surfaces
  - Slip, trip or fall hazards are created by equipment power cords or hoses
  - The new roof tile that has been installed will be permanently stained by such action
  - Water intrusion may damage other building elements

In instances where wet sweeping or HEPA-filtered vacuuming is determined to be infeasible, RC Andersen LLC subcontractor’s workers will wear disposable particulate respirators (filtering facepieces or dust masks) with a minimum assigned protection factor of 10 (APF 10) to reduce or eliminate potential exposure to RCS. The filtering facepiece must be worn during the cleaning operation and for such time thereafter until the dust cloud dissipates.

### **Section E. Procedures to Restrict Access to RCS Work Areas**

On projects where potential exposure to RCS exists, RC Andersen LLC workers and subcontractors will take the following steps to limit exposure to co-workers and third parties:

- Only company workers needed to perform tasks in the area where potential exposure to RCS may occur will be permitted in that specific area of the project.
- On projects where third parties may have shared access to roofing areas where exposure to RCS may exist, company workers will use warning lines and place signage to control third parties’ access to those areas. If, because of the nature of the access, such as a common stairwell or exterior scaffold stairway, third parties can be denied access to the roof area, company workers will post the above signage on the roof level entry door or access point to restrict third party entry to the roof.

### **Section F. Designation of RCS Competent Persons and Inspection Protocol**

The following employees of RC Andersen LLC are designated “competent persons” for purposes of the OSHA silica regulation by virtue of each individual’s knowledge of the hazards related to exposure to RCS, the control methods our company employs to control those hazards, and the authority granted to each to take corrective measures to reduce or eliminate RCS hazards to RC Andersen’s and subcontractors workers.

All RC Andersen Superintendents

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Any one or all listed competent persons for RCS may inspect our job sites on a regular basis to assess the tasks being performed and the equipment and materials in place to ensure proper implementation of our company’s

written RCS exposure control plan. The competent person will note any deficiencies in the plan's implementation and discuss any required revisions with supervisory personnel. If any deficiency is significant enough to immediately affect the health and safety of company workers or others, the competent person has complete authority to stop work until the issue can be resolved. During the inspection process, the competent person also will be responsible for identifying exposures to RCS that may arise from unforeseen activity being performed by third-party entities unrelated to our company work. The competent person immediately will notify company superintendents and management to determine the necessity of action to protect exposed company workers. This may require outreach to those third-party entities as well as establishing additional protocols to maintain the safety of our workers.

## **Section G. Description of Company RCS (Respirable Crystalline Silica) Training and Information**

A dated, written record of all inspections hereunder, with a specific notation as to remedial action taken, if any, will be made by the subcontractor's competent person. The hazards related to RCS have been included in company hazard communication training under 29 CFR §1910.1200 for RC Andersen personnel: subcontractors are responsible for training their own personnel. In addition, for all project site personnel and subcontractor workers, specific project orientation training is used to relate to current workers and new hires and may focus on the following:

- Specific health hazards associated with RCS, including cancer dangers, lung or respiratory dangers, and immune system and kidney effects
- Concrete cutting, grinding, etc. and other common tasks that could result in RCS exposure
- Specific measures, including engineering controls, work practices and respirator use, that RC Andersen has implemented on the project to protect all workers from RCS exposure
- The provisions of the OSHA construction RCS regulation
- The names of RCS competent persons designated under Section 6 of this plan

The above module will be supplemented on a regular basis with RCS-specific toolbox talks; manufacturer or supplier materials addressing equipment, tools and products as they become available; OSHA training materials such as Quick Cards; and training offered by building owners, general contractors, and engineers or architects on specific projects.

## **Section H. Description of Medical Surveillance for RCS Exposures**

The medical surveillance provisions that RC Andersen's subcontractors must implement on RC Andersen construction projects for RCS exposures is based on the requirements of 29 CFR §1926.1153(h) and will include the following:

- RC Andersen LLC will make medical surveillance available at no cost to any RC Andersen worker required to use a respirator under 29 CFR §1926.1153 for 30 days or more per year. All RC Andersen subcontractors will make medical surveillance available at no cost to their workers required to use a respirator under 28 CFR §1926.1153 for 30 days or more per year.

- All medical exams required under this provision of the plan must be conducted by a physician or other licensed health care professional (PLHCP) as defined in 29 CFR §1926.1153(b).
- An initial, baseline medical examination will be made available to a worker within 30 days after an initial assignment unless the worker has had a similar examination within the past three years. The examination must consist of the following:
  - a) A medical work history with emphasis on past, present and anticipated exposures to RCS, dust and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease; history of tuberculosis; and smoking status and history
  - b) A physical examination with special emphasis on the respiratory system.
  - c) A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration either recorded on film [no less than 14 x 17 inches and no more than 16 x 17 inches] or digital radiography systems), interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH- certified B Reader).
  - d) A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV<sub>1</sub>) and FEV<sub>1</sub>/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course
  - e) Testing for latent tuberculosis infection
  - f) Any other tests deemed appropriate by the PLHCP
- Periodic examinations will be made available by our company every three years or more frequently as recommended by the PLHCP for affected employees. Examinations will include the elements described in (c) above.
- Additional protocols for information to be provided to the PLHCP, the PLHCP's written medical report to an employee and the PLHCP's written medical opinion to our company will follow 29 CFR §1926.1153(h)(4), (5) and (6).
- If the PLHCP's written medical opinion indicates an employee should be examined by a specialist, our company will make available a medical examination by a specialist within 30 days after receiving the PLHCP's written opinion. Our company will ensure the examining specialist is provided with all the information the company is obligated to provide to the PLHCP in accordance with 29 CFR §1926.1153(h)(4). Our company will ensure the specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report shall meet the requirements of 29 CFR §1926.1153(h)(5) except paragraph (h)(5)(iv). Our company will obtain a written opinion from the specialist within 30 days of the medical examination. The written opinion shall meet the requirements of 29 CFR §1926.1153(h)(6) except paragraph (h)(6)(i)(B) and (ii)(B).

## Section I. Recordkeeping

Records of our workers' personal breathing zone sampling to assess RCS exposure (*employee exposure records* as defined in 29 CFR §1910.1020) conducted on behalf of RC Andersen subcontractors by third parties or those conducted by their own staff will be maintained for a period of 30 years from the date of the record's initial creation. The initial record must include:

- The date of the measurement for each RCS sample taken
- The task monitored
- The sampling and analytical methods used
- The number, duration and results of the samples taken
- The identity of the laboratory that performed the analysis
- A description of any PPE worn by workers who were monitored
- The names, job classifications and social security numbers of workers sampled along with similar information for other workers present at the sampling location who performed similar tasks but were not sampled

This RCS exposure control plan is available for examination and copying by all employees who may be covered under the OSHA construction RCS regulation, their designated representatives, and officials of the U.S. Department of Labor or allied state agencies.



## **Chapter 24**

### **Respiratory Protection Plan**

#### **Introduction**

OSHA requires employers to develop programs to monitor employee exposure to potentially harmful levels of airborne contaminants. Respirators are required in atmospheres that could contain less than 19.5% or more than 23.5% oxygen, and in atmospheres that could contain dusts, fibers, mists, fumes, gases, or vapors at harmful concentrations. Any employer using a hazardous material that requires a respirator as a protective device in accordance with the Safety Data Sheets is also covered. Additional requirements apply to confined spaces and specific contaminants such as asbestos, cotton dust, and regulated carcinogens.

This program includes:

- company policy
- respirator selection
- respirator testing and assignment
- training procedures
- recordkeeping procedures

#### **Employers Covered**

Every employer that requires employees to wear respirators must have a Respiratory Protection Plan. In general, respiratory protection equipment is to be used only when it is impractical to use engineering and administrative controls to reduce employee exposure to acceptable levels, during installation of engineering controls, or in emergencies.

#### **Policy**

RC Andersen LLC is committed to maintaining an injury and illness free workplace, and is making every effort to protect our employees from harmful airborne substances.

Whenever it is feasible to do so, we accomplish this through engineering controls such as ventilation or substitution with a less harmful substance, and through administrative controls limiting the duration of exposure. When these methods are not adequate, or if the exposures are brief and intermittent, or simply to minimize employee exposure to airborne substances, we provide respirators to allow employees to breathe safely in potentially hazardous environments.

We recognize that respirators have limitations and their successful use is dependent on an effective respiratory protection program. Our Respiratory Protection Plan is designed to: identify, evaluate, and control exposure to respiratory hazards; select and provide the appropriate respirators; and coordinate all aspects required for proper use, care, and maintenance of the equipment. Accomplishing these goals requires a cooperative effort on the part of employees and of management

## **RESPONSIBILITY**

Management will provide leadership by example and demonstrate interest by ensuring that adequate resources are available for effective implementation of our Respiratory Protection Plan.

We expect all employees to work conscientiously to carry out our Respiratory Protection Plan, which is an element of our Injury and Illness Prevention Plan. To reinforce our commitment we have assigned Christine Castellano as the plan administrator who has the authority and responsibility for overall management and administration of our Respiratory Protection Plan, which consists of the following:

- preparing, evaluating, and modifying the written respiratory protection plan
- identifying, locating, and maintaining ongoing surveillance and evaluation of airborne exposures
- selecting respirators
- assigning medical screening for potential respirator users
- assigning respirator fit testing
- training
- recordkeeping

## **PLAN ELEMENTS**

### **Plan Administration**

Our Respiratory Protection Plan begins with this written plan describing the procedures that we practice. Just as our business is dynamic and needs periodic review, so does our respiratory protection program. Suggestions and comments from employees about exposure conditions, respirators, personal health changes, and training issues will be addressed promptly.

### **Workplace Exposure Assessment and Ongoing Surveillance**

Our first task in the workplace is an exposure assessment to identify harmful airborne contaminants, their extent and magnitude, and how to control them.

This requires a person who is professionally trained to evaluate the processes and procedures and to conduct exposure monitoring. Consequently, we will seek advice and assistance from our workers' compensation insurance carrier, an industrial hygiene consulting firm or a third-party safety consulting firm to complete the exposure assessment.

### **Respirator Selection**

In those instances where engineering and administrative means do not achieve the desired control, or in the case of an emergency, respirators must be worn. Different types of respirators are available for a variety of applications, and we must ensure that the proper NIOSH/MSHA-approved respirator is selected and used for the kind of work being performed and hazards involved.

When respirator selection is complex, we will seek professional assistance. Note, SCBA or supplied-air respirators are not authorized on RC Andersen projects.

### **Evaluating Respirator Wearer Health Status**

Even with appropriate equipment and adequate training provided, an employee's health status must be considered before allowing respirator use. The wearer's physical and medical condition, duration and difficulty of the tasks, toxicity of the contaminant, and type of respirator all affect an employee's ability to wear a respirator while working. Also, respirators are uncomfortable and may reduce the wearer's field of vision. Therefore it is prudent for us to evaluate the employee's physical ability to work while wearing a respirator. Construction work or work with lead, asbestos, cotton dust, and certain carcinogens makes this evaluation mandatory.

Each respirator wearer will fill out the OSHA Respirator Medical Evaluation Questionnaire and be given a medical evaluation to determine eligibility and receive authorization to wear a respirator. Medical evaluations will be updated on an annual basis.

### **Respirator Fit Testing and Assignment**

After the appropriate type of respirator is selected and the employee's ability to work while wearing a respirator is certified, a qualitative fit test will be conducted to choose the best fitting face-piece and determine the specific brand, model, and size for each employee.

Quantitative fit testing numerically measures the face-piece fit and is the preferred alternative to qualitative fitting. Although it requires specialized equipment and trained personnel, some exposures, for example asbestos, require a quantitative fit test.

### **Training**

Once the employee is fitted with the correct respirator for the task, RC Andersen will ensure he/she is thoroughly trained in the need, use, limitations, inspection, fit checks, maintenance, and storage of the equipment.

Detailed instructions for use and care of the respirator are provided by the manufacturer with the equipment, and this information is to be used in the training. The form Respirator User Training and Education is a guide and record of the training received.

### **Recordkeeping**

Each major component of the program will be documented to: verify that each activity has occurred; evaluate the success of the program; and satisfy regulatory requirements.

These records include the written program, exposure determination, respirator selection, physical status evaluation, fit testing and respirator assignment, training form, and program assessment.

## RESPIRATOR USER TRAINING AND EDUCATION

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1. The respirator user will be instructed in the nature of the hazards for which the respiratory protection is being provided, and informed of possible consequences that may occur if exposed to the hazard without adequate protection. Health hazard guidelines are contained in the training program and Safety Data Sheets. The respirator user will also be made aware that every reasonable effort is being made to reduce or eliminate the hazard.
2. Instruction will cover the respirator's capabilities and limitations, and the function and possible malfunction of each part of the respirator.
3. The respirator user will be instructed in his/her responsibility for equipment inspection prior to use. Appropriate points of inspection will be included. Each respirator user will use his/her respirator during this part of the training, and learn how to obtain replacement parts or new equipment.
4. Instruction will be given on donning methods, proper fitting, and adjustment of the equipment.
5. Instruction and training will cover proper respirator storage, cleaning and maintenance, and methods to assure adequate fit and function of the respirator each time it is donned.

### Training Record

**Employee Name:** \_\_\_\_\_

**Project:** \_\_\_\_\_

**Respirator Type:** \_\_\_\_\_

**Use:** \_\_\_\_\_

**Employee Initial:** \_\_\_\_\_

**Trainer's Signature:** \_\_\_\_\_

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

## Chapter 25

### Multi-Employer Field Operations

Each subcontractor on all RC Andersen LLC projects must provide their corporate safety program and, if required, a site specific plan before working on any project. Whenever RC Andersen LLC is responsible for supervising and controlling all construction work performed on a multi-employer construction project, the following safety practices will be implemented and enforced.

#### A. **Project Safety and Health Requirements**

1. A site-specific Safety and Health Plan which includes a description of the responsibilities and authority of all levels of supervision will be provided for all projects.
2. All subcontractors are responsible for developing, implementing, monitoring and enforcing their own safety and health program, and provide RC Andersen LLC with a copy of same.
3. RC Andersen LLC' Superintendent will have final authority and responsibility for overall project safety and must:
  - a. Conduct Weekly Safety meetings and include foremen, shop stewards and or any interested site personnel. Written documentation of these meetings will be distributed to all trades and posted on site.
  - b. Monitor implementation of safety and health programs;
  - c. Maintain accurate and complete accident, injury and illness records;
  - d. Require subcontractors' immediate and complete correction or abatement of all hazardous conditions and compliance with OSHA 1910/1926, and any applicable state OSHA regulations;
  - e. Confirm that Competent Persons are designated by subcontractors and are trained and qualified for all tasks requiring a competent person.
  - f. Monitor regularly for potentially hazardous conditions; document on Daily Safety Inspection Worksheet, see Appendix A.
  - g. Immediately notify the responsible subcontractor of any conditions/acts that may cause illness or injury to workers; and
  - h. Maintain a Project Safety and Health Record/Log by documenting the daily occurrences related to the project safety and health program including:
    - (i) All injury, illness and accidents for the entire project with sub-records of same on each contractor;
    - (ii) A current list of all Senior Sub-Contractor Supervisors/Foreman
    - (iii) The status of safety-related permits.
4. Written reports describing noncompliance with safety and health standards, project safety and health programs and hazardous conditions must be submitted by the Site Superintendent to the offending subcontractor and/or RC Andersen LLC' Project Manager or Safety Director.
5. Subcontractors who have established a pattern of noncompliance with the project safety and health program and/or laws and regulations must develop a Special Safety and Health Plan which details procedures for correcting and preventing future occurrences of noncompliance. This plan must be approved and monitored by the Site Superintendent.

6. If a contractor fails to correct hazardous conditions, or continues to place employees in hazardous conditions, the Site Superintendent must notify the project manager and the safety director for corrective action. Where imminent danger situations exist, the Site Superintendent will take appropriate action such as suspending operations in the affected area.
7. Critical structures or complex processes that require planning, design, inspection and/or supervision by a licensed professional will be determined by the Project Manager.
8. Supervisors/Foremen and employees of all Sub Contractors on site not complying with the Site Safety and Health program are subject to removal as outlined in Section I.

**B. Sub-Contractor Requirements**

1. Subcontractors are required to hold their own weekly “Tool-Box” meetings and attend RC Andersen LLC Weekly Foremen Safety Meetings while on site.
2. Each sub-contractor must designate an individual who has final authority and responsibility for the Sub Contractor's Safety and Health Program.
3. The Sub Contractor's designated individual must:
  - Ensure compliance with this standard and correction or abatement of all hazardous conditions;
  - Determine whether any work being performed by the company requires planning, design, inspection and/or supervision by a licensed professional;
  - Conduct daily inspections of their own workforce, and document and correct all observed or potentially hazardous conditions and noncompliance. Report and document all injuries, illnesses and accidents; investigate and implement measures to prevent recurrence.
4. The sub-contractor's designated individual must stop hazardous work and notify the Site Superintendent of all hazardous conditions that are not within the control of the sub-contractor.
5. Sub-contractors are prohibited from working until the designated individual or designated representative is present on the project.

**C. Construction Process Plan/Hazard Analysis**

A Construction Process Plan (Hazard Analysis) will be developed to describe the construction sequence and procedures including temporary structures shoring and bracing to be followed for the safe construction of the project. A checklist identifying various hazards and the procedures used to eliminate the hazards and the responsible parties will be provided and discussed at the Site Safety Meetings. See Hazard Analysis Section 2 for details and see Appendix C for outline.

#### **D. Pre-Work Planning**

Each sub-contractor must conduct a physical survey of the field operation, prior to the start of work, and make a survey of the work to be performed by reviewing the drawings and conducting discussions with one or more of the following:

- The Client
- Engineer
- General Contractor
- Construction Manager

A hazard analysis will be conducted and implemented at the initiation of the construction project and for critical stages of work to describe potential hazards and actions required to provide a safe and healthful workplace.

All affected sub-contractors will meet to coordinate and assign responsibility for all items identified in the hazard analysis.

#### **E. Emergency Plan**

The Site Superintendent or Safety Inspector will be provided a project-specific emergency plan and communication system that describes procedures to be followed in the event of serious injuries, fatalities, structural failures and other emergencies. This emergency plan will be submitted by the Safety Department after review and approval, and will be reviewed in depth at weekly safety meetings and posted in job office and through-out project once enclosed. See Appendix H for Emergency Action Plan, and Appendix I for Emergency Plan Poster which must be displayed in the trailer and throughout structure once enclosed.

#### **F. Permit System**

Where required by the Construction Process Plan, the Site Superintendent will issue permits to contractors authorizing work to be performed on/in:

- Hot Work
- Confined spaces
- Hazardous conditions designated by the Site Superintendent

#### **G. Notification**

Each employee and their supervisor/foreman will be provided with a summary of the Project Safety and Health Plan and safe work practices prior to beginning work on the project. In addition, all project safety regulations will be thoroughly discussed at Weekly Safety Meetings.

#### **H. Training**

Sub-contractors are responsible for the safety and health training of their employees. RC Andersen LLC employees assigned to supervisory positions will receive training on how to carry out the safety and health responsibilities of the positions to which they are assigned and as outlined in Chapter 2.

Each supervisory employee will receive training in safety and health requirements that includes, but is not limited to, the following:

- New Hire Orientation
- Job Specific Training
- Site-Specific Training
- Safety Meetings

## **I.     Orientation**

All first time workers to all RC Andersen LLC projects must see site superintendent for site orientation.

All workers on every RC Andersen LLC project will sign site orientation sheet as acceptance of all rules outlined.  
(see Appendix E )



## **SECTION 4 - TRAINING**

### **TRAINING AND EDUCATION**

All RC Andersen superintendents, assistant superintendents and interns will receive on-going safety education and training. The following safety education and training practices will be implemented and enforced at all company field operations.

#### **A. Project Safety Orientation Training**

All workers on RC Andersen projects, or, RC Andersen employees who are transferred from another project, must receive project specific safety orientation training. This training provides each worker the basic information about the project-specific safety and health plan, federal and state OSHA standards, and other applicable safety rules and regulations. Orientation training is mandatory for each worker prior to starting on a construction project. The Superintendent/Safety Inspector will provide training access and maintain a file documenting all workers who attend project safety orientations. The project safety orientation program will introduce new workers to:

- The construction project and the workers' role within it
- Hazard Communication requirements
- Emergency procedures
- Where/How/When to find first aid stations, fire extinguishers, etc.
- Site-specific hazards
- Safety and Health responsibilities
- Reporting of injuries and hazardous conditions
- Use of personal protective equipment
- Tool handling and storage
- Review of safety and health rules applicable to the job

#### **B. Superintendent Training**

Each RC Andersen LLC superintendents' priority will be accident prevention for the subcontractors he/she supervises. Therefore, all RC Andersen LLC superintendents shall receive training, at a minimum OSHA's 10-Hour Construction Safety, so that they have a sound theoretical and practical understanding of the following:

- 1) The four leading areas of accident causes and the abatement of those concerns.
- 2) The site-specific safety program
- 3) OH&S Act and construction regulations
- 4) OSHA Hazard Communication standard
- 5) Site emergency response plan
- 6) Accident and injury reporting and investigation procedures
- 7) Hazard assessment, and topics appropriate for toolbox talks
- 8) OSHA record keeping requirements
- 9) Communication techniques

In addition to the training requirements described above, site superintendents will receive additional training on, but not limited to, the following topics:

- Implementation and monitoring of a construction safety program
- Field operation safety planning
- Subcontractor requirements for safety documentation
- OSHA record keeping requirements

Finally, during their first year of employment RC Andersen's field personnel will satisfy the requirements of OSHA's 30-Hour Construction Safety training.

### **C. Safety Bulletin Board**

A safety bulletin board will be located on each field operation where it will be visible to all employees. If a bulletin board is not feasible, post the following in a designated "Safety News" area. The bulletin board or news area will contain information such as:

- safety meeting dates and times
- OSHA 300 Form (February through April of each year)
- safety inspection findings
- emergency phone numbers
- Hospital/clinic locations
- (additional items may be posted with the site superintendents approval)

### **D. Weekly Safety Meetings/Subcontractor Toolbox Meetings**

Safety meetings will be held weekly on site, with documented minutes kept onsite. All safety concerns are to be addressed at the weekly safety meeting, including coordination and cooperation among the trades, responsibility for abatement and scheduling. These weekly meetings should not exceed 15 minutes. Active employee participation and a question-and-answer session are recommended during each meeting.

Meetings may also be scheduled whenever new operations are introduced into the workplace to ensure that all employees are familiar with the safe job procedures and requirements for performing the job safely.

In addition, each subcontractor on every RC Andersen LLC project will conduct weekly work group sessions, also known as toolbox meetings, immediately prior to start of work. These toolbox meetings may be held more frequently depending on the circumstances (i.e., fatality, injury, new operations, etc.) The Subcontractor's Management will provide appropriate materials (handouts, audio/visual aids, etc.) to discussion leaders or foremen in advance of each meeting. RC Andersen LLC will also supply tool box materials upon request. Subcontractor attendance at toolbox meetings must be recorded, and a copy must be forwarded to the site superintendent weekly.

# Daily Safety Inspection

Mar 31, 2021, ID #36

## REPORT DETAILS

Description

Created by Safety Andersen

Status Draft

Last update Mar 31, 2021 2:49 PM

Last updated by Safety Andersen

*This is a sample.*

*Daily Safety Inspections are done in PlanGrid.  
Sections that are not relevant to this project will  
be deleted from the PlanGrid Inspection Form.*

### 1. HOUSEKEEPING / FIRST AID / SANITATION

1.1 Subcontractors are keeping their work areas clean, orderly, and free of excess trash and debris

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

1.2 Exits, Stairwells and Walkways are clear

- ☐ Satisfactory
- ☐ Action Required

1.3 Adequate trash receptacles are provided and maintained

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

1.4 Potable water is available

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

1.5 First Aid Kits are accessible

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

## 2. EMPLOYEE OBSERVATION / PPE

2.1 Hard Hats are being worn

- ☐ Satisfactory
- ☐ Action Required

2.2 Proper Eye Protection worn for tasks requiring eye protection

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

2.3 Hearing Protection used around high noise sources

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

2.4 Dust Masks / Respirators being worn as required per task

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

2.5 Reflective vests / high visibility clothing is worn

- ☐ Satisfactory

## 00 RCA TEMPLATES

☐ Action Required

2.6 Construction appropriate footwear is being worn

☐ Satisfactory

☐ Action Required

2.7 Gloves / Hand Protection is being worn as required by tasks

☐ Satisfactory

☐ Action Required

☐ Not Applicable

### 3. COVID-19

3.1 Adequate number of handwashing/sanitizing stations provided and maintained

☐ Satisfactory

☐ Action Required

☐ Not Applicable

3.2 Face Coverings are being worn at all times per Covid-19 protocol

☐ Satisfactory

☐ Action Required

### 4. FALL PROTECTION AND PERIMETER PROTECTION

4.1 Anyone working 6' or more above a lower level is protected by guardrails, safety nets, or personal fall arrest system

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.2 Workers exposed to fall hazards are tied off

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.3 Perimeter roof protection installed and maintained throughout

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.4 Materials are stored away from edge

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.5 Workers below are protected from falling objects

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.6 Controlled access zones are established with physical barriers and proper signage

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.7 Holes / Openings larger than 2" are covered or barricaded

☐ Satisfactory

☐ Action Required

☐ Not Applicable

4.8 Barricades are installed and maintained throughout the site

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 5. LADDERS & STAIRS

5.1 Ladders are being used for their intended purpose

☐ Satisfactory

☐ Action Required

☐ Not Applicable

5.2 Ladders tied off and extend 3' above landing

☐ Satisfactory

☐ Action Required

☐ Not Applicable

5.3 Proper access / egress provided to upper / lower working levels

☐ Satisfactory

☐ Action Required

☐ Not Applicable

5.4 Step ladders used in fully open position

☐ Satisfactory

☐ Action Required

☐ Not Applicable

5.5 Top two rungs of step ladders are not being used

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

## 6. SCAFFOLDING

6.1 Scaffolding inspected daily and scaffold tags in place by contractor / subcontractor providing scaffolding system and written inspection available for review daily.

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

6.2 Proper access provided and not blocked

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

6.3 Workers below protected from falling objects

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

6.4 Guardrails, mid rails, and toe boards are in place as required

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable



## 7. FIRE PROTECTION

7.1 Fire Extinguishers are available, inspected and tagged

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

7.2 Once building is enclosed, Fire Extinguishers are provided for every 3000 sq. ft. of building space, not to exceed 100' travel distance to nearest extinguisher.

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

7.3 No Smoking signs are posted and enforced near flammables

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

7.4 Proper fuel cans (spring loaded hinges to arrest flashback) are being utilized. No plastic fuel cans.

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

7.5 Hot Work Permits are utilized for all hot work operations and fire watch provided as required.

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

7.6 Welding and burning gas cylinders stored upright and secured.

- ☐ Satisfactory

## 00 RCA TEMPLATES

☐ Action Required

☐ Not Applicable

7.7 Gas cylinders are not stored in building overnight, and are secured and separated as required

☐ Satisfactory

☐ Action Required

☐ Not Applicable

7.8 Fire Prevention Plan has been communicated to subcontractors.

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 8. TOOLS

8.1 Proper guards are in place and maintained

☐ Satisfactory

☐ Action Required

☐ Not Applicable

8.2 Power tools are grounded or double insulated

☐ Satisfactory

☐ Action Required

☐ Not Applicable

8.3 Tools are being used for their intended purpose

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 9. ELECTRICAL POWER (GFCI, ELECTRICAL CORDS / POWER LINES / LIGHTING)

9.1 Lights provided throughout the project (minimum; 5 foot-candles for work area, 30 foot-candles in 1st Aid areas)

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

9.2 Temp lighting is properly installed and protected

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

9.3 Lock-out/tag-out - labeled breakers. Lock-out/tag-out program is in effect

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

9.4 Laser in use signs are posted

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

9.5 Extension cords with bare wires, missing ground prongs, or are damaged taken out of service

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

9.6 Extension cords are protected with GFCI

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

## 10. LIFTS

10.1 Gates and/or chain on scissor lifts are closed

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

10.2 Fall protection is being used on Aerial Lifts

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

10.3 Tools and materials are tethered and properly secured

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

## 11. EXCAVATIONS AND TRENCHES

11.1 Excavations / Trenches greater than 5' deep are sloped, benched, shored, or boxed

- ☐ Satisfactory
- ☐ Action Required

☐ Not Applicable

11.2 Excavations / Trenches are protected ( back-filled or barricaded ) any time unattended, and overnight

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.3 Spoil Piles are placed a minimum of 2' from edge of excavation, and not at a height where there is potential for collapsing into excavation

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.4 Ladders are placed so that lateral travel distance is no more than 25' in any direction, in excavations over 4' deep

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.5 Fall Hazards 6' or greater are being minimized or fall protection utilized

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.6 Competent Person (assigned and performing inspections)

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.7 Rebar Protection is being utilized and maintained

☐ Satisfactory

☐ Action Required

☐ Not Applicable

11.8 Back up alarms are functioning on equipment

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 12. ELEVATED LEVELS AND MEZZANINES

12.1 Fall protection is installed and being maintained

☐ Satisfactory

☐ Action Required

☐ Not Applicable

12.2 Loading Zone(s) have been established with safety cables/guardrail/gate, and fall protection required signs

☐ Satisfactory

☐ Action Required

☐ Not Applicable

12.3 Subcontractors are adhering to elevated level and mezzanine rules

☐ Satisfactory

☐ Action Required

☐ Not Applicable

12.4 Loading zones are secured when unattended

☐ Satisfactory

☐ Action Required

☐ Not Applicable

12.5 Perimeter and opening protection is in place to prevent falling objects to lower level

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

### 13. CONCRETE

13.1 Concrete cutting is being done in accordance with silica regulations and outlined in Table 1. 29 CFR 1926.1153

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

13.2 Carbon Monoxide is being monitored when using internal combustion engines

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

### 14. ASBESTOS

14.1 Asbestos abatement workers are wearing disposable clothing consisting of full body coveralls and head covers

- ☐ Satisfactory
- ☐ Action Required
- ☐ Not Applicable

14.2 Plastic isolation barriers are installed between abatement area and non-asbestos areas

- ☐ Satisfactory
- ☐ Action Required

☐ Not Applicable

14.3 HEPA filter ventilation units are operating to provide an air exchange in the work area every 15 minutes

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.4 HEPA filter ventilation units are operating to provide an air exchange in the work area every 15 minutes

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.5 Warning signs are posted around the work area and at every point of potential entry

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.6 Subcontractor stored Asbestos Containing Material (ACM) at the site is wet down to prevent emissions of dust in the air

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.7 Regulated Asbestos Containing Waste (RACW) is stored in a leak tight container while wet, and kept separate from other waste

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.8 An airlock system is in place from the work area

☐ Satisfactory

☐ Action Required



☐ Not Applicable

14.9 A worker decontamination enclosure is constructed of appropriate wood framing and fully lined with a minimum of two layers of 6-mil poly plastic sheeting

☐ Satisfactory

☐ Action Required

☐ Not Applicable

14.10 A separate "Contaminated Equipment Room" has been established to store reusable footwear, hard hats and eye protection for duration of job

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 15. DEMOLITION

15.1 An engineering survey by a competent person of the structure has been conducted

☐ Satisfactory

☐ Action Required

☐ Not Applicable

15.2 All Electric, gas, water, steam, sewer and other service lines are shut off, capped or otherwise controlled outside the building line

☐ Satisfactory

☐ Action Required

☐ Not Applicable

15.3 If mechanical equipment is being used for demo, floor openings have curbs or stop logs

☐ Satisfactory

☐ Action Required

## 00 RCA TEMPLATES

☐ Not Applicable

15.4 Barricades are in place at all times for public safety and safety of demo personnel

☐ Satisfactory

☐ Action Required

☐ Not Applicable

15.5 Hazards from fragmentation of glass have been removed

☐ Satisfactory

☐ Action Required

☐ Not Applicable

15.6 Only workers necessary for the performance of clamming operations are permitted in areas which can be adversely affected by the demo operations

☐ Satisfactory

☐ Action Required

☐ Not Applicable

15.7 During demolition continuing inspections by a competent person are being made as the work progresses to detect hazards resulting from weakened or deteriorated floors or walls or loosened materials

☐ Satisfactory

☐ Action Required

☐ Not Applicable

## 16. INSPECTOR

16.1 Inspection Completed by

# RC ANDERSEN - HEALTH & SAFETY PLAN – APPENDIX B FOR TASKS/TRADES REQUIRING A COMPETENT PERSON

FOREMAN COMPLETE FOR THEIR COMPANY UPON ARRIVAL, UPDATE AS NEEDED & AT PERIODIC SAFETY MEETINGS

## COMPETENT PERSON ASSIGNMENT – (Construction & General Industry)

PROJECT NAME and #: \_\_\_\_\_ DATE: \_\_\_\_\_

1926.32(f) OSHA COMPETENT PERSON DEFINITION	<i>Competent Person: One 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 the authorization to take prompt corrective measures to eliminate them. Some standards add additional specific requirements which must be met by the competent person.</i>
29 CFR Subpart & Standard (Brief description, refer to 29 CFR for full details)	PRINT NAME & COMPANY
Subpart C – 1926.20(b)(2) JOBSITE INSPECTIONS	
Subpart D – 1926.53(b) IONIZING RADIATION	
Subpart D – 1926.55(b) INDUSTRIAL HYGIENIST Gases, Vapors, Fumes, Dusts, Mists	
Subpart D - 1926.62(e)(2)(iii) - LEAD	
Subpart E – 1926.101(b) HEARING PROTECTION FITTING	
Subpart H – 1926.251(a)(6) INSPECTIONS Rigging Equip. for Material Handling -	
Subpart J – 1926.354(a) WELDING, CUTTING, OR HEATING	
Subpart K – 1926.404(b)(1)(iii)(B) Electrical - WIRING DESIGN AND PROTECTION	
Subpart L – 1926.451 SCAFFOLDS - GENERAL REQUIREMENTS	
Subpart L – 1926.454(b) SCAFFOLDS - TRAINING REQUIREMENTS	
Subpart M – 1926.502... (d)PERSONAL FALL ARREST SYSTEMS (h)SAFETY MONITORING SYSTEMS (k)FALL PROTECTION PLAN	
Subpart M – 1926.503(a)(2) FALL PROTECTION TRAINING	
Subpart N – 1926.552(c)(15) PERSONAL HOIST INSPECTIONS AND TESTS	
Subpart P – 1926.651(c), (h), (k) SPECIFIC EXCAVATION REQUIREMENTS	
Subpart P – 1926.652 EXCAVATIONS - PROTECTIVE SYSTEMS & SOIL CLASSIFICATION	
Subpart Q – 1926.705(i) Concrete/Masonry - LIFT-SLAB CONSTRUCTION OPERATIONS	
Subpart R -1926.752(e) STEEL - SITE SPECIFIC ERECTION PLAN	
Subpart R -1926.753 STEEL ERECTION - HOISTING AND RIGGING	
Subpart R -1926.754(d) STEEL ERECTION - STRUCTURAL STEEL ASSEMBLY	

# RC ANDERSEN - HEALTH & SAFETY PLAN – APPENDIX B FOR TASKS/TRADES REQUIRING A COMPETENT PERSON

FOREMAN COMPLETE FOR THEIR COMPANY UPON ARRIVAL, UPDATE AS NEEDED & AT PERIODIC SAFETY MEETINGS

Subpart S – 1926.800 Underground Construction - INSPECTIONS, MONITORING, TESTING	
Subpart S – 1926.803(a)(1) Underground Construction - COMPRESSED AIR	
Subpart T -1926.850(a) ENGINEERING SURVEY DEMOLITION- PREPARATORY OPERATIONS,	
Subpart T – 1926.852(c) CHUTE GATE OPERATION & BACKING/LOADING OF TRUCKS	
Subpart T – 1926.859(g) INSPECTIONS DURING DEMOLITION	
Subpart U – 1926.900(k)(3)(i) BLASTING AND USE OF EXPLOSIVES	
Subpart X – 1926.1053(b)(15) LADDERS INSPECTIONS- PERIODIC & AFTER ADVERSE OCCURRENCE	
Subpart X – 1926.1060(a)(1) STAIRWAYS AND LADDERS - TRAINING	
Subpart Z – ASBESTOS - 1926.1101(e)(6) / 1926.1101(o)(1)-(4)– SUPERVISING / GENERAL, INSPECTIONS, & TRAINING	
Subpart Z – CADMIUM / 1926.1127(d)(1) IDENTIFYING PRESENCE & EXPOSED EMPLOYEES 1926.1127(f)(5)(iii) COMPLIANCE PROGRAM REVIEWS	
Subpart CC – 1926.1401(a) CRANES AND DERRICKS - DIRECT ASSEMBLY/DISASSEMBLY	
Subpart CC – 1926.1413 CRANES & DERRICKS - WIRE ROPE INSPECTIONS	
Subpart CC – 1926.1417 (e), (m), (n), (u) CRANES & DERRICKS - OPERATION	
Subpart CC – 1926.1423(g) CRANES & DERRICKS FALL PROTECTION – ANCHORAGE CRITERIA	
Subpart CC – 1926.1430(d) CRANES AND DERRICKS – SIGNAL PERSON TRAINING	
Subpart CC 1926.1431(h) and (j) Cranes & Derricks – (h)TRIAL LIFT AND INSPECTION / (j) PROOF TESTING	
Subpart CC – 1926.1432(b)(1) MULTIPLE- CRANE/DERRICK LIFTS/PLAN IMPLEMENTATION	
Subpart CC - 1926.1435 TOWER CRANES	
Subpart CC – 1926.1436((g) and (o) – Derricks (g)POST-ASSEMBLY APPROVAL AND TESTING (o) OPERATIONS SUPERVISOR	
Subpart CC – 1926.1437 FLOATING CRANES/DERRICKS AND LAND CRANES/DERRICKS ON BARGES	
GENERAL INDUSTRY	
Subpart F – 1910.66(i)(1)(iii) POWERED PLATFORMS FOR BUILDING MAINTENANCE- TRAINING IN OPERATION AND INSPECTION	
Subpart H – 1910.109 EXPLOSIVES AND BLASTING AGENTS – STORAGE, AND DETERMINATION/DISPOSAL OF MISFIRES.	
Subpart N – 1910.183 HELICOPTERS - CARGO HOOK TESTS	
Subpart N – 1910.184 SLINGS - INSPECTIONS	
Subpart R – 1910.268 PERSONAL CLIMBING EQUIPMENT INSPECTIONS. MECHANICAL EQUIP INSPECTIONS AND TESTING.	



## **Job Hazard Analysis / Pre-Task Planning Requirements**

The most critical component of the project Safety Plan is the Job Hazard Analysis (JHA) section. The JHA / PTP (Pre-Task Plan) form is a written document prepared by the sub-contractor. The sub-contractor must conduct a daily site and task assessment JHA / PTP to identify the major job steps and any potential safety or environmental hazards related to the performance of the work, implement controls for the potential hazards and identify proper personal protective equipment for the tasks. The JHA or PTP shall be discussed and communicated to subcontractor personnel on site during the daily morning JHA / PTP briefing.

A Job Hazard Analysis (JHA), sometimes referred to as Pre-Task Planning (PTP), is required on all RC Andersen projects daily. The JHA / PTP must include work tasks, identified hazards, hazard control methods (administrative, engineering, PPE), contractor's name, project ID, location, name and signature of the certifying person, hazard assessment date, and attendee names and signatures.

On each RC Andersen project, a daily Job Hazard Analysis (JHA) outlining the tasks to be performed that day, the hazards associated with each step, and measures to mitigate those hazards, and attendee list with signatures, must be provided to the site superintendent or safety officer each morning.

A sample JHA has been provided and may be shared with subcontractors missing the form.



## **APPENDIX D**

# *JOB SITE FIRE PREVENTION PLAN*

EMERGENCY:

911

NON-EMERGENCY:

Local Fire and Police department  
numbers located on Site Specific  
Contact Sheet

OSHA's Fire Prevention Plan regulation, found at 29 CFR 1910.38(b), requires RC ANDERSEN, LLC, INC. to have a written fire prevention plan (FPP). This plan applies to all operations at all our jobsites where workers may encounter a fire.

This FPP is in place at this job site to control and reduce the possibility of fire and to specify the type of equipment to use in case of fire. This plan addresses the following issues:

- Major workplace fire hazards and their proper handling and storage procedures.
- Potential ignition sources for fires and their control procedures.
- The type of fire protection equipment or systems which can control a fire involving them.

Under this plan, all site subcontractors will be informed of the plan's purpose, preferred means of reporting fires and other emergencies, types of evacuations to be used in various emergency situations, and the alarm system, if any. The plan is closely tied to our emergency action plan where procedures are described for emergency escape procedures and route assignments, procedures to account for all subcontractors after emergency evacuation has been completed, rescue and medical duties for those subcontractors who perform them. Please see the emergency action plan for this information.

This FPP communicates to all site subcontractors policies and procedures to follow when fires erupt. This written plan is available, upon request, to all site subcontractors, their designated representatives, and any OSHA officials who ask to see it.

### ***Responsibilities***

RC Andersen, LLCs' Site Supervisor is responsible for the following activities. He or she must:

1. Immediately notify the fire or police departments, in the event of a fire affecting the site.
2. Integrate the fire prevention plan with the existing general emergency plan covering the site and ensure all subcontractors are aware of the evacuation signal (a repeating 3-pulse burst from an air horn).
3. Distribute procedures for reporting a fire, the location of fire exits, and evacuation routes to each site employee at safety meetings and have posted throughout site.
4. Keep key management personnel home telephone numbers in a safe place in the field office for immediate use in the event of a fire. Distribute a copy of the list to key persons to be retained in their homes for use in communicating a fire occurring during non-work hours.
5. Decide to remain in or evacuate the workplace in the event of a fire.
6. If evacuation is deemed necessary, the supervisor ensures that:
  - All site subcontractors are notified and a head count is taken to confirm total evacuation of all subcontractors.
  - When practical, equipment is placed and locked in storage rooms for protection.
  - The project manager is contacted, informed of the action taken, and asked to assist in coordinating security protection.
  - In situations where the project manager is not available, security measures to protect records and property are arranged as necessary.

It is the intent of this company to assure that hazardous accumulations of combustible waste materials are controlled so that a fast developing fire, rapid spread of toxic smoke, or an explosion will not occur. Subcontractors are to be made aware of the hazardous properties of materials in their workplaces, and the degree of hazard each poses.

Fire prevention measures must be developed for all fire hazards found. Once subcontractors are made aware of the fire hazards in their work areas, they must be trained in the fire prevention measures developed and use them in the course of their work. For example, oil soaked rags must be treated differently than general paper trash. In addition, large accumulations of waste paper or corrugated boxes, etc., can pose a significant fire hazard.

Accumulations of materials which can cause large fires or generate dense smoke that are easily ignited or may start from spontaneous combustion, are the types of materials with which this fire prevention plan is concerned. Such combustible materials may be easily ignited by matches, welder's sparks, cigarettes and similar low level energy ignition sources. It is the intent of this company to prevent such accumulation of materials. Waste paper must be kept to a minimum and final product is stored in a safe storage area.

Fuel is used as an energy source for equipment and machinery. This fuel can be a significant fire hazard and must be monitored and controlled.

### ***Fire Protection Equipment***

Fire protection equipment, in use at this jobsite includes the following extinguishers to protect from the various types of fire hazards:

ABC, 10# dry chemical

A minimum of one fire extinguisher will be provided for every 3,000 square feet of space once the structure is enclosed, with a travel distance of no more than 100 feet between extinguishers.

### ***Maintenance of Fire Protection Equipment***

Once hazards are evaluated and equipment is installed to control them, that equipment must be monitored on a regular basis to make sure it continues to function properly. The following personnel are responsible for maintaining equipment and systems installed to prevent or control fires:

RC ANDERSEN'S FIELD SUPERINTENDENT AND / OR SAFETY DIRECTOR

These individuals follow strict guidelines for maintaining the equipment.



## ***Fire Prevention Plan Guidelines***

In an effort to minimize the threat of fire on this project the following guidelines will be strictly monitored and enforced:

- Internal combustion engine powered equipment will be located so that exhausts are away from combustible materials.
- Smoking is prohibited at or in the vicinity of operations which constitute a fire hazard. Such operations must be conspicuously posted: "No Smoking or Open Flame."
- All welding and burning operations must have a dedicated fire extinguisher at the operation.
- Combustible materials must be piled no higher than 20 feet. Depending on the stability of the material being piled, this height may be reduced.
- Keep driveways between and around combustible storage piles at least 15 feet wide and free from accumulation of rubbish, equipment or other materials.
- Portable fire extinguishing equipment, suitable for anticipated fire hazards on the field operation, must be provided at convenient, conspicuously accessible locations.
- Fire fighting equipment must be kept free from obstacles, equipment, materials and debris that could delay emergency use of such equipment. Familiarize yourself with the location and use of the project's fire fighting equipment.
- Discard and/or store all oily rags, waste, and similar combustible materials in metal containers on a daily basis.
- Storage of flammable substances on equipment or vehicles is prohibited unless such unit has adequate storage area designed for such use.

At the time of a fire, subcontractors should know what type of evacuation is necessary and what their role is in carrying out the plan: in cases where the fire is large, total and immediate evacuation of all subcontractors is necessary. In smaller fires, a partial evacuation of nonessential subcontractors with a delayed evacuation of others may be necessary for continued operations.

We must be sure that subcontractors know what is expected of them during a fire to assure their safety. This document is not one for which casual reading is intended or will suffice in getting the message across. If passed out as a statement to be read to oneself, some subcontractors will choose not to read it, or will not understand the plan's importance. In addition, training on the plan's content is required by OSHA.

A better method of communicating the fire prevention plan is to give all subcontractors a thorough briefing. RC ANDERSEN, LLC, INC. has chosen to train subcontractors through presentation at site safety meetings. All superintendents present the plan to the subcontractors periodically during the site safety meetings. A copy of this plan is also posted on the Safety Bulletin Board for all interested parties.

Training includes:

- What to do if employee discovers a fire
- Demonstration of alarm, if more than one type exists
- How to recognize fire exits
- Evacuation routes
- Assisting employees with disabilities
- Measures to contain fire (e.g., closing office doors, windows, etc. in immediate vicinity)
- Head count procedures (see EAP for details)
- Return to building after the "all-clear" signal

In addition to reviewing this Fire Prevention Plan at scheduled job site safety meetings, all subcontractors are required to also present this Fire Prevention Plan at their respective "Tool Box" Meetings for distribution to their workforce.

The superintendent will certify in writing that the subcontractor(s) has received and understands the fire prevention plan training (SEE BELOW). The fire prevention plan will be discussed during safety meetings and the plan should be used at least once by subcontractors as a weekly toolbox talk.

Because failure to comply with company policy concerning fire prevention can result in OSHA citations and fines as well as employee injury; a subcontractor who does not comply with this program will be in violation of OSHA standards and may face disciplinary action.

RC ANDERSEN, LLC, INC. has informed our subcontractors of their duties and responsibilities under the plan. Each supervisor in every field office has a copy of the standardized plan and it is accessible by affected subcontractors.



**I certify that I have received and understand RC Andersen, LLCs' Fire Prevention Plan training:**

**DATE** \_\_\_\_\_

[illegible]

# A Step-by-Step Guide: Incident Investigations

### **OBJECTIVES:**

- To assist safety team members in conducting an incident investigation
- To help determine the root cause of the incident: WHY did the incident occur?
- To develop recommendations for prevention of injuries and illnesses and disseminate the recommendations

### **WHO SHOULD CONDUCT AND PARTICIPATE IN THE INCIDENT INVESTIGATION?**

- Management: the Project Manager
- Members of the East Operations Investigation Team: Christine Castellano / Rob Carpenter / Kathy Curtin / Stu Lavoie
- West Operations Investigation Team: Jim Modafferi/Lauri Yusko
- Superintendent
- Subcontractor representative
- Union steward and or union representative – as applicable

### **WHEN SHOULD THE INCIDENT INVESTIGATION BE CONDUCTED?**

- As soon as possible, after the incident occurs or is reported
- Before the scene of the incident is disturbed or changed
- Before victim(s) and witnesses forget what happened

### **REPORTING OF INJURIES, INCIDENTS AND NEAR-MISSES**

- All injuries, incidents and near-misses should be reported. An incident or near-miss cannot be investigated if it is not reported. The definition of a near-miss is an incident in which an injury could have occurred but did not.

- There will be no discipline imposed on an employee who reports an incident or near-miss. Discipline or similar actions by the employer can discourage employees from reporting injuries, incidents or near-misses.

## **ELEMENTS OF AN INCIDENT INVESTIGATION**

Elements of an incident investigation include: preparation, on-site investigation and development of a report, with recommendations for prevention.

- Preparation
  - Implement a process for notifying investigators when an incident occurs.
  - Create forms to be used for taking notes and documenting conditions.
  - Identify documents that need to be collected.
- On-site Investigation
  - The purpose of on-site investigation is to document conditions and collect information, as well as to do a root-cause analysis to determine the cause(s).
  - It is important to take notes and document any and all information that might be important to the investigation. It is better to have too much information and not use it, than not have the correct information and not be able to get it after the fact.
- Collecting evidence at the scene.
  - Document conditions using:
    - photographs
    - video tapes
    - written notes
    - taking measurements
- What to look at and what information to collect. (Not all of the following will apply and this is not an all-inclusive list. You may look at things not on this list.)

- Equipment/machines involved
- Condition of equipment (e.g. sharp edges, broken pieces, duct tape holding machine together, leaks, frayed electric cords)
- Tools used (e.g. hooks, scissors, knives)
- Manufacturer and model number of machine(s) being operated at time of incident (if appropriate)
- Manufacturer, year, and model number of forklift or other industrial truck, if incident involved such equipment.
- Environmental conditions including air temperature, noise, and lighting. These may have contributed to incident.
- In the area where the incident occurred, look for conditions such as steam, fog, or haze from chemicals which may have contributed to problems with visibility.
- Safety conditions (e.g. slippery floors, uneven floors, cracked floors, ice on floors, clogged drains)
- Physical obstacles (e.g. tripping hazards, blocked exits)
- Were appropriate machine guards, floor guards, guards for moving augers or other types of guards in place?
- Interviews
  - Who to interview?
    - Victim
    - Co-workers
    - Person who reported incident, near-miss or injury (This person may be different from the victim.)
    - Supervisor of area where incident occurred
    - Witnesses
    - Safety director



- Others who may have been involved (maintenance, sanitation, etc.
  - Other workers who have done the job that was being done by the victim
- Where should interview (s) take place?
  - Conference room or other quiet, private room. Not at the scene.

## INTERVIEW

The purpose of interviews is to get the facts and find out what happened. These questions may not be appropriate in all situations, cross out any questions not applicable and mark N/A. A separate interview sheet must be filled out for every interview.

Getting the facts: Asking the questions: when, who, where, what, why?

NAME: \_\_\_\_\_

COMPANY: \_\_\_\_\_

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

PROJECT: \_\_\_\_\_ PROJECT NO. \_\_\_\_\_

<b><i>When – Time Questions</i></b>	
What time did incident occur?	
What day of the week did the incident occur?	
How long had victim been working on the day of the incident before he or she was injured?	
Was the individual working overtime?	
What shift did the incident occur on? When did shift start?	
How long had the victim worked on his or her particular job (in days, weeks, months, years) before incident occurred?	

<b>Who</b>	
Who was injured?	
Who witnessed incident?	
Who first responded after incident occurred?	
Who supervised the victim?	
Has the victim done the same job before?	
Who trained the victim on the job?	
Who installed equipment (if incident involved a piece of equipment)?	
Who provided maintenance on the equipment?	
Who inspected the equipment?	
When the equipment was last inspected and or maintained?	
Who told the victim to do the work he or she was involved in at time of incident?	
<b>Where</b>	
Where did the incident occur?	
Where was the victim at the time of the incident?	
Where were the witnesses?	
Where was the supervisor?	

<b><i>What</i></b>	
What happened?	
What was the victim doing at the time of the incident?	
If this was not the victim's regular job, what was his or her regular job?	
<b><i>Questions about conditions on the day of the incident</i></b>	
Was the victim working in crowded conditions? I.e., too close to another worker?	
Was there anything different or abnormal on the day of the incident, with respect to working conditions or the work being done?	
Was the job understaffed or under-crewed on the day of the incident or at the time of the incident? i.e. if three people are needed to do the job safely, were all three people working and present?	
Was there more work to do than normal on the day of the incident (thus putting pressure on the worker(s) to work faster or to bypass safety devices)?	
Were workers asked to work overtime on the day of the incident?	
<b><i>Other Important Questions to Ask</i></b>	
Had anyone else ever been injured doing the same job, or on the same piece of machinery, etc. (Go back in time as far as you think reasonable)?	
Had there been any near misses on the same job, same piece of machinery, etc.?	
Had concerns about the safety of the job, piece of machinery, or	

environmental conditions, been raised with management previous to the incident occurring?	
What language does (did) the victim speak? What language does the victim's supervisor speak? In what language was the safety training and any other training concerning the job conducted?	
<b><i>Regarding Personal Protective Equipment (PPE):</i></b>	
Was PPE required for the job on which the incident occurred?	
If PPE was required, exactly what kind of PPE was required?	
In the course of the investigation, does it appear that the PPE was inappropriate for this particular job?	
Was the victim wearing the required/appropriate PPE?	
Were there any problems with the PPE on the day of the incident? i.e. was the PPE defective, ill-fitting, had holes, etc.?	
Could the PPE in any way have been a contributing factor to the occurrence of the incident / injury?	

## Conclusion - Development of a Report - Recommendations for Prevention

Based upon the information collected in the investigation, the root cause(s) of the incident will be determined, and recommendations for prevention will address the root cause(s).

- Recommendations should address:
  - Issues related to the specific incident
  - Issues related to similar situations, conditions, equipment
  - Management system deficiencies
  - Effective Controls and Prevention Actions
  - Evaluation of controls and Prevention Actions

- Follow-up

When the report is completed, copies of the report should be made available to all of the participants of the incident investigation. Copies of the report should also be made available to the union if union representation participated in the investigation.



# INITIAL REPORT OF INCIDENT

Complete ALL fields – if not applicable, indicate with N/A

<b>PROJECT DATA</b>	Date of Incident:		Time: <input type="checkbox"/> AM <input type="checkbox"/> PM		Day of Week:	
	Date of Report:		Weather:		Project No.:	
	Project Manager:		Superintendent:		Foreman:	
	Exact Location of Incident (Street, City, State):				Project Name:	
	Type of Work:		Are there any witnesses? <input type="checkbox"/> Yes <input type="checkbox"/> No (if yes, complete page 3 and witness statement form(s))		Subcontractor Incident <input type="checkbox"/> Yes <input type="checkbox"/> No	
					Company Name:	
Type of Incident: <input type="checkbox"/> WC (employee injury)		<input type="checkbox"/> GL (Utility/Property damage, 3 <sup>rd</sup> party injury)	<input type="checkbox"/> AUTO	<input type="checkbox"/> EQUIP (THEFT/VANDALISM)	<input type="checkbox"/> NEAR MISS	

<b>WORKERS COMPENSATION</b> (Injury to RCA Employee OR Subcontractor Employee)	Employee Last Name:		Employee First Name:		Subcontractor Name, if applicable:	
	Employee Address (Street, City, State)				Date of Birth:	
	Occupation (title):		Phone Number:		Date of Hire:	
	Time Employee began work: <input type="checkbox"/> AM <input type="checkbox"/> PM		Was employee performing regular job duties? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, provide explanation:			
	Part of Body Injured (include left /right):			Injury Type (cut/bruise/sprain, etc.)		
	Describe in detail how injury occurred (what was employee doing):					
	Type of PPE used or controls in place at time of injury:					
	Onsite First Aid Administered: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, by whom:				Type of First Aid:	
	Offsite Medical Treatment Administered: <input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, Name and Address of Facility:		Was Employee admitted to hospital as in-patient:  <input type="checkbox"/> Yes <input type="checkbox"/> No		Was Employee Transported via ambulance:  <input type="checkbox"/> Yes <input type="checkbox"/> No	
	Employee Return to Work: <input type="checkbox"/> Yes <input type="checkbox"/> No Restricted Duty: <input type="checkbox"/> Yes <input type="checkbox"/> No			Date Returned to work		

# INITIAL REPORT OF INCIDENT

Complete ALL fields – if not applicable, indicate with N/A

<b>GENERAL LIABILITY</b> (Damage to others property (includes bodily injury as well as utility damage))	Property Owner(s) Name:		Phone Number(s): Home:		Cell:	Work:
	Address (Street, City, State)					
	Describe in detail how damage occurred:					
	Description of Property Damaged:			If Vehicle Provide Year, Make, Model:		
	Insurance Information (company, policy number, phone number):				Estimated Damage: \$	
	If injury alleged, description of injury including body part:			Photos: <input type="checkbox"/> Yes <input type="checkbox"/> No (include with report)		Police Report: <input type="checkbox"/> Yes <input type="checkbox"/> No Department:
	Equipment Type	Operator – Last Name:		First Name:		Employee ID:
	<p style="text-align: center;"><b>Utility Damage</b> (complete above as well)</p> <p><input type="checkbox"/> Cable <input type="checkbox"/> Electric <input type="checkbox"/> Gas <input type="checkbox"/> Phone <input type="checkbox"/> Water <input type="checkbox"/> Other _____</p>					
	Markout Requested: <input type="checkbox"/> Yes <input type="checkbox"/> No		Marked: <input type="checkbox"/> Yes <input type="checkbox"/> No		Mismarked: <input type="checkbox"/> Yes <input type="checkbox"/> No Explain:	
Requested by whom:		Date Requested:		Ticket No.		

<b>AUTOMOBILE</b> (Any incident involving a registered motor vehicle)	Other Driver's Name:		Phone Number(s): Home:		Cell:	Work:
	Address (Street, City, State)					
	Owner of Vehicle's Name:		Phone Number(s): Home:		Cell:	Work:
	Address (Street, City, State)					
	Describe in detail how damage occurred:					
	Description of Damage to Other Vehicle:			Vehicle Year, Make, Model:		
	Insurance Information (company, policy number, phone number):				Estimated Damage: \$	
	If injury alleged, description of injury including body part:			Photos: <input type="checkbox"/> Yes <input type="checkbox"/> No (include with report)		Police Report: <input type="checkbox"/> Yes <input type="checkbox"/> No Department:
Transported via Ambulance: <input type="checkbox"/> Yes <input type="checkbox"/> No						



# INITIAL REPORT OF INCIDENT

**Complete ALL fields – if not applicable, indicate with N/A**

<b>WITNESSES</b> (Statement Form to be completed)	Witness Name:	Phone Number(s): Home:	Cell:	Work:
	Address (Street, City, State)			
	Witness Name:	Phone Number(s): Home:	Cell:	Work:
	Address (Street, City, State)			

**If there are more than two witnesses, complete witness section on additional copies of this form**

<b>DIAGRAM</b> (complete for all incidents)	<p>Show position and any relative distances of employee(s), vehicle(s), equipment, pedestrians, utilities, etc. and indicate an arrow of direction for each if travel or moving equipment involved.</p>
--	---

<b>CORRECTIVE ACTION</b>	<p>Provide in detail corrective action taken:.</p>
--------------------------	--

**Report Completed By:**

Company Name: \_\_\_\_\_ Phone Number \_\_\_\_\_

Print Name: \_\_\_\_\_ Signature \_\_\_\_\_

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

## Witness Statement Form

### Witness Information

Name (Last, First, MI)		Date	
Email Address		Cell #	
		Home #	
Home Address			

### Description of Incident

Date and Time of Incident		Location of Incident	
---------------------------	--	----------------------	--

Please write a detailed description of the events leading up to and including the accident event.  
If more space is required, continue description on additional numbered and signed copies of this form.

--

I affirm that the information I have provided in this statement is true and accurate.

Signature		Date	
-----------	--	------	--

Witness signature should be notarized, when possible



## **Incident Reporting Procedure**

The purpose of the RC Andersen incident reporting procedure, which is mandatory, is to ensure that all incidents are promptly reported and investigated.

Proper reporting and investigation are necessary and effective for preventing recurring or future incidents. Understanding incidents allows us to determine the causes and how to eliminate them. The human economic considerations involved with loss control as well as legal implications completely justify the time and effort that needs to be devoted to incident reporting and investigation. The procedure applies to and will be implemented by RC Andersen employees, RC Andersen subcontractors, and associated third parties, as appropriate.

## **Responsibilities – Employees, Subcontractors, or Third Parties**

1. An employee, subcontractor, or third party must notify the RC Andersen Superintendent, as soon as it is safe to do so but no later than 2 hours following an incident. The RC Andersen Superintendent will immediately report the incident to the RC Andersen safety department. Within 24 hours of the incident occurrence, the RCA Superintendent will prepare and submit the RC Andersen Initial Report of Incident and Witness Statement, as well as photos, to the safety department at [safety@rcandersen.com](mailto:safety@rcandersen.com). Use RC Andersen's Step By Step Incident Investigation Guidelines, document your investigation, and include that with the Initial Report of Incident. Subcontractors or third parties are required to submit a copy of their incident report and photos within 24 hours of the occurrence. The subcontractor must provide a copy of their full detailed investigation and analysis report which includes a Root Cause Analysis and Mitigation Measures to RC Andersen within 3 days. Employee(s) who are involved in an incident are to participate in the post-incident investigation, as appropriate.



2. If the incident involves an employee injury, appropriate medical treatment will be rendered. Categories of medical treatment include emergency, non-emergency, and first aid. For life threatening or serious injuries, 911 or, if appropriate, the site emergency contact number will be used to summon aid for medical emergencies. For non-emergency employee injuries beyond first aid, off-site medical treatment may be appropriate. The project or site will post the location of nearby non-emergency medical facilities.
3. For employee injuries, subcontractors and third parties are required to provide information as to the employee's return to work status.
4. The Superintendent and employee will be prepared to discuss the details of the incident with the safety department.
5. The Superintendent will preserve evidence from incident to the extent reasonably possible until the investigation(s) is completed.

## **Responsibilities – Safety Department**

1. The safety department will convene a post-incident meeting with all appropriate individuals within 72 hours of the incident. The safety department will determine if a root-cause analysis investigation is required.
2. Notify appropriate RC Andersen management immediately when an incident requires off-site assistance such as medical care beyond first aid or other services.
3. Maintain and complete investigation reports for all incidents, including but not limited to, documents identified in this procedure.
4. Preserve evidence required by the safety department.
5. Issue all relevant forms.
6. Initiate post-incident review meetings and present corrective action plans.
7. Participate in incident-related meetings as required.
8. Develop monthly, quarterly, and yearly incident statistics and trends as appropriate.



## Incident Reporting Table

<p>1. Complete the Initial Report of Incident and Witness Statement(s).</p> <p><b>Return to Project Manager</b>  <a href="mailto:Safety@RCAndersen.com">Safety@RCAndersen.com</a></p>	<b>Super</b>	<b>24 Hours</b>	<b>72 Hours Detailed</b>
<p>2. Recordable, lost time, or near miss incidents require corrective action plans.</p> <p><b>Return to Project Manager</b>  <a href="mailto:Safety@RCAndersen.com">Safety@RCAndersen.com</a></p>	<b>Subcontractor</b>	<b>24 Hours Initial</b>	<b>72 Hours Detailed</b>
<p>3. Provide any relevant photographs, medical documentation, witness statements, drawings or sketches, and other documentation.</p> <p><b>Return to Project Manager</b>  <a href="mailto:Safety@RCAndersen.com">Safety@RCAndersen.com</a></p>	<b>Super / Subcontractor</b>	<b>24 Hours</b>	<b>72 Hours Detailed</b>
<p>4. A Near-Miss Report will be submitted to the safety department, via e-mail to <a href="mailto:safety@rcandersen.com">safety@rcandersen.com</a> within 24 hours of each incident.</p> <p>Reporting a near miss will not result in employee disciplinary action.</p>	<b>Super / Subcontractor</b>	<b>24 Hours</b>	

## Common Incident Types

1. Injury requiring any medical treatment.
2. OSHA recordable or lost time.
3. Automobile incident.
4. Property damage or third party liability.
5. Subcontractor employee injury.
6. Near miss or close call incident



**Step By Step Incident Investigation Guidelines, February 2021, attached, include answering:**

1. What happened?
2. How it happened?
3. Why it happened?
4. What is being done to prevent reoccurrence?

### **Near Miss Reporting:**

The definition of a Near-Miss is an event or occurrence that could have resulted in an injury to an employee, damage to equipment, or damage to private or public property. Near-Miss occurrences can lead to serious injuries if they go unreported and we do not share what we have learned. A Near-Miss is not defined as a failure for an individual or group to knowingly disregard a policy or procedure.

The Safety Department is requesting that all Near-Miss occurrences be communicated via Initial Report of Incident immediately to the Safety Department. The purpose of communicating a Near-Miss is to gain an understanding of what actions or non-actions contributed to the Near-Miss. Information gathering will be conducted by the Safety Department with assistance from the RC Andersen Superintendent and or subcontractor. The purpose of the information gathering will be to understand the circumstances that led to the Near-Miss, not to administer disciplinary action to any individual. Take the lessons learned and communicate the findings from the Near-Miss to all individuals. The Near-Miss lessons learned will be shared and communicated.

**Near-Miss occurrences that are reported will not result in disciplinary action for the individuals involved.**



# New! Global Harmonization System (GHS) Labeling

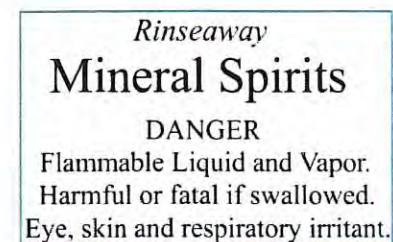
## New Chemical/Product Labeling

Labels for materials with chemical hazards are changing to a new GHS label format on or before June 1, 2015. GHS labels will have new standard pictograms (shown at right), signal words, hazard and precautionary statements, product identifier, and supplier information.

## Portable (Workplace) Container Labeling Requirements

Hazardous substances transferred from the original labeled container to a secondary container or any containers prepared on site for internal use (i.e. portable or workplace container) require labels meeting one of the following options:

*Option 1:* A GHS label that includes the following from the original product label:  
Product name, signal word, hazard statements, GHS pictograms and precautionary statements.












*Option 2:* Product name or identifier and any combination of words, pictures, or symbols that communicate the hazard and do not conflict with GHS information.

Recommended label information includes signal words, statement of hazards and precautionary statements. Labels using the NFPA or HMIS system are acceptable.



Example of a HMIS Label

## New Symbols to Indicate Hazards

<b><u>Health Hazard</u></b>  <ul style="list-style-type: none"> <li>• Carcinogen</li> <li>• Mutagenicity</li> <li>• Reproductive Toxicity</li> <li>• Respiratory Sensitizer</li> <li>• Target Organ Toxicity</li> <li>• Aspiration Toxicity</li> </ul>	<b><u>Flame</u></b>  <ul style="list-style-type: none"> <li>• Flammables</li> <li>• Pyrophorics</li> <li>• Self-Heating</li> <li>• Emits Flammable Gas</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>	<b><u>Exclamation Mark</u></b>  <ul style="list-style-type: none"> <li>• Irritant (skin and eye)</li> <li>• Skin Sensitizer</li> <li>• Acute Toxicity</li> <li>• Narcotic Effects</li> <li>• Respiratory Tract Irritant</li> <li>• Hazardous to Ozone Layer (non-mandatory)</li> </ul>
<b><u>Gas Cylinder</u></b>  <ul style="list-style-type: none"> <li>• Gases Under Pressure</li> </ul>	<b><u>Corrosion</u></b>  <ul style="list-style-type: none"> <li>• Skin Corrosion/Burns</li> <li>• Eye Damage</li> <li>• Corrosive to Metals</li> </ul>	<b><u>Exploding Bomb</u></b>  <ul style="list-style-type: none"> <li>• Explosives</li> <li>• Self-Reactives</li> <li>• Organic Peroxides</li> </ul>
<b><u>Flame Over Circle</u></b>  <ul style="list-style-type: none"> <li>• Oxidizers</li> </ul>	<b><u>Environment</u></b> (non-mandatory)  <ul style="list-style-type: none"> <li>• Aquatic Toxicity</li> </ul>	<b><u>Skull and Crossbones</u></b>  <ul style="list-style-type: none"> <li>• Acute Toxicity (fatal or toxic)</li> </ul>





## Appendix H

# ***EMERGENCY ACTION PLAN***

In case of Emergency call: **911**

*Additional Emergency numbers are located on site specific contact sheet*



# **JOBSITE EMERGENCY PLAN**

RC Andersen LLC has provided this emergency plan and communication system that describes procedures to be followed in the event of serious injuries, fatalities, structural failures and other emergencies. A copy of this emergency plan will be posted in job office. See Emergency Action Plan poster which must be displayed in the trailer and throughout structure once enclosed.

Each construction project must have adequate procedures for contingencies such as fire, medical emergencies, communication, rescue, and evacuation. Provisions for these programs should be determined before work begins.

## **A. JOBSITE FIRST AID**

Basic first aid supplies must be available for the treatment of personnel injured on the job. It is also imperative that all treatments are documented in the construction first aid log included in this plan. Prompt medical attention should be sought for any serious injury or if there is doubt of an employee's condition. The first aid log should be maintained in the site trailer. This log should reflect the following information:

- Injured employee's name.
- Immediate supervisor.
- Date and time of injury.
- Nature of the injury.
- Treatment rendered and disposition of employee (returned to work or sent for medical attention).
- Location where treatment was rendered (e.g., site, walk-in medical facility, hospital).

It should be noted that the cases noted on the first aid log are usually not entered into the OSHA 300 log unless follow-up medical treatment is provided (the OSHA 300 log is to be used for RC Andersen LLC employees only). According to OSHA (as referenced in its April 1986 publication "Recordkeeping Guidelines for Occupational Injuries and Illnesses"), medical treatment includes "treatment (other than first aid) administered by a physician or by registered professional personnel under the standing orders of a physician." It does NOT include first aid treatment even though it is administered by a physician or registered professional personnel.

## **B. EMERGENCY PROCEDURES**

### **Emergency Phone Numbers**

At each jobsite, the emergency phone numbers of police and fire services will be conspicuously posted. Medical treatment facilities near the jobsite such as hospitals, walk-in emergency centers, or industrial medical centers should be identified, and their phone numbers posted. Directions to these medical treatment facilities must also be posted. In addition, the emergency phone numbers for top company management will be available on the site.

### **Injury and Illness**

All employees need to be told the locations of the first aid stations on each construction project. Instructions for using first aid equipment should be located in each station. In the event of an emergency, employees should contact their supervisor or RC ANDERSEN'S superintendent for basic first aid only: in the event of a serious injury call 911 immediately.

## **Fire**

Prompt reaction to, and rapid suppression of, any fire is essential. In accordance to OSHA 1926.24, the company has developed an effective fire protection and prevention program for the jobsite throughout all phases of the construction. This Fire Protection & Prevention Plan is located in Appendix D. The program provides for effective firefighting equipment to be available without delay and is designed to effectively meet incipient-stage fire hazards as they occur. In addition, the fire protection program requires that:

- ✓ All firefighting equipment is conspicuously located and readily available at all times.
- ✓ The firefighting equipment is inspected and maintained in operating condition.
- ✓ The fire protection equipment should be inspected no less than once monthly, with documentation maintained for each piece of equipment inspected.
- ✓ Discharged extinguishers or damaged equipment are immediately removed from service and replaced with operable equipment.
- ✓ All supervisors and employees seek out potential fire hazards and coordinate their abatement as rapidly as possible.

## **Evacuation**

Some emergencies may require company personnel to evacuate the jobsite. In the event of an emergency that requires evacuation, an alarm or other notification system must sound to alert employees to evacuate the site. All employees are required to go the area adjacent to the project that has been designated as the "safe area." It should be noted that the safe areas can change from day to day depending on wind directions and other factors.

On this RC Andersen project, we use a repeating 3 pulse burst from an air horn in accordance with the Standard Audible Emergency Evacuation Signal. This signal shall consist of a "three-pulse" temporal pattern. Three successive "on" phases, lasting 0.5 second each, must be separated by 0.5 second of "off" time. Then, at the completion of the third "on" phase there must be 1.5 seconds of "off" time before the full cycle is repeated. Therefore, the total cycle shall last 4.0 seconds (0.5 second "on," 0.5 second "off," 0.5 second "on," 0.5 second "off", 0.5 second "on," 1.5 seconds "off"). [S3.41, Audible Emergency Evacuation Signal, American National Standard Institute (ANSI)].

Safe areas for each project must be determined and communicated to employees and subcontractors as part of the basic safety and health training covered in the weekly safety meetings. In addition, safe areas and evacuation routes are posted inside the structure when appropriate to do so.

## **Job-Specific Rescue Requirements**

In addition to these general emergency response procedures, some construction activities may require special rescue and emergency response procedures. For example, specific rescue and response procedures apply for:

- Working over or near water (1926.106).
- Permit-required confined space activities (1910.146(k)).
- Employees who have fallen during the use of personal fall arrest systems (1926.502(d)(20)).
- Trenching and excavation work where hazardous atmospheres may exist (1926.651(g)(2)).
- Responding to the release of a hazardous substance that requires an emergency response (1926.65(q)).

Some of these rescue activities require outside help from the fire department or rescue squad. Prior to each job, special rescue and emergency response requirements must be considered and arrangements must be made with the appropriate emergency responder.

# EMERGENCY PLAN

- AT ALL TIMES, THE SIGNAL TO EVACUATE THE SITE / STRUCTURE / BUILDING IN THE EVENT OF AN EMERGENCY WILL BE A REPEATING 3 PULSE BURST FROM A HORN.
- REPORT TO CURRENT MUSTER POINT FOR A CREW HEADCOUNT, IF SAFE TO DO SO.
- ONCE FOREMEN ESTABLISH THAT YOUR CREW IS IN A SAFE LOCATION AND ALL ARE ACCOUNTED FOR, FOREMEN ARE TO REPORT TO THE FRONT OF THE RC ANDERSEN TRAILER/FIELD OFFICE, FOR FURTHER DIRECTION – IF SAFE TO DO SO.

**This must be filled out and posted BEFORE beginning work on each site.**

PROJECT NAME:

STREET ADDRESS:

CITY/STATE:

## EMERGENCY PHONE CONTACT NUMBERS

911

LOCAL POLICE, NON-EMERGENCY:

LOCAL FIRE DEPT./EMS:

NEARBY MEDICAL TREATMENT:

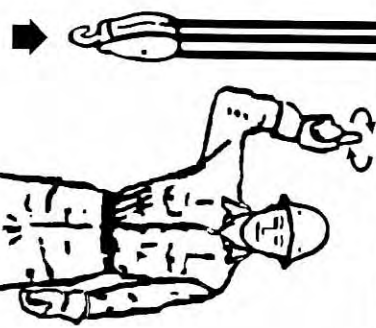
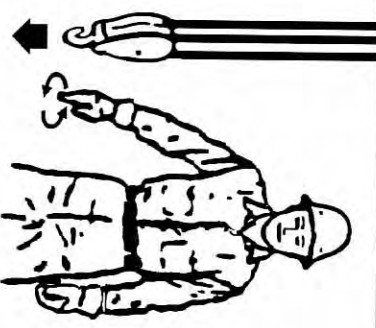
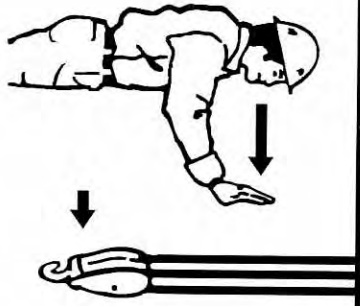
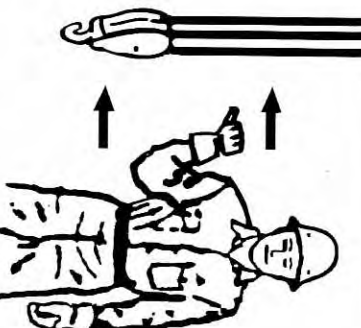
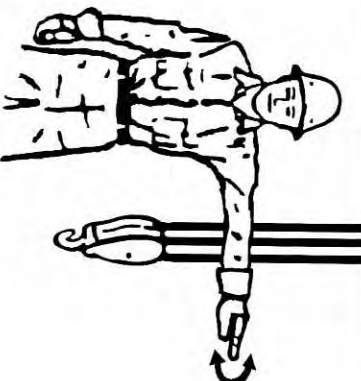
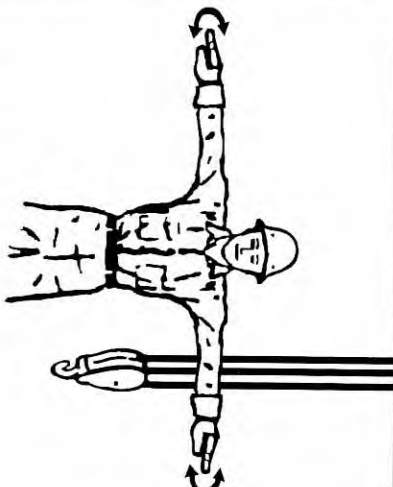
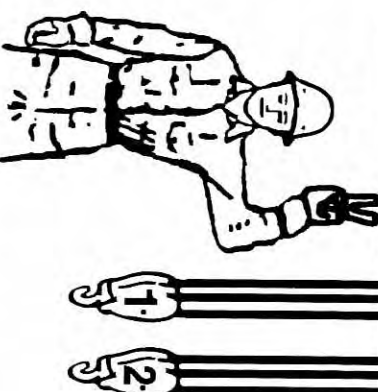
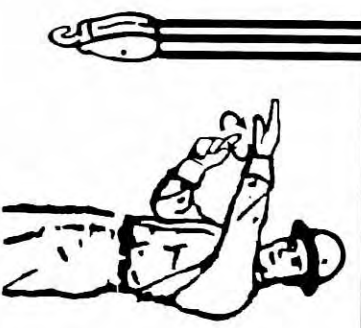
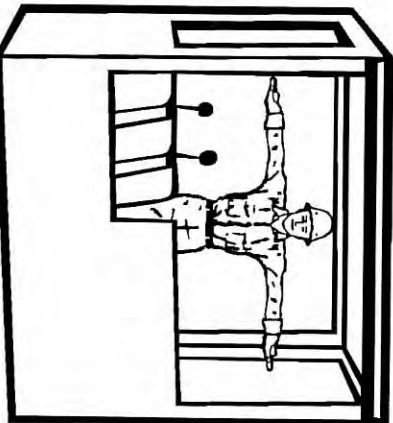
<u>HOSPITAL</u>	<u>WALK-IN CARE</u>

DIRECTIONS TO HOSPITAL OR WALK-IN TREATMENT CENTER ON SEPARATE SHEET



# STANDARD HAND SIGNALS for CONTROLLING CRANE OPERATION

ANSI 30.2 1983 Edition

 <p><b>HOIST.</b> With forearm vertical, forefinger pointing up, move hand in small horizontal circle.</p>	 <p><b>LOWER.</b> With arm extended downward, forefinger pointing down, move hand in small horizontal circles.</p>	 <p><b>BRIDGE TRAVEL.</b> Arm extended forward, hand open and slightly raised, make pushing motion in direction of travel.</p>
 <p><b>TROLLEY TRAVEL.</b> Palm up, fingers closed, thumb pointing in direction of motion, jerk hand horizontally.</p>	 <p><b>STOP.</b> Arm extended, palm down, move hand back and forth.</p>	 <p><b>EMERGENCY STOP.</b> Both arms extended, palms down, move arms back and forth.</p>
 <p><b>MULTIPLE TROLLEYS.</b> Hold up one finger for block marked "1" and two fingers for block marked "2". Regular signals follow.</p>	 <p><b>MOVE SLOWLY.</b> Use one hand to give any motion signal and place other hand motionless in front of hand giving the motion signal. (Hoist slowly shown as example.)</p>	 <p><b>MAGNET IS DISCONNECTED.</b> Crane operator spreads both hands apart, palms up.</p>



## VIOLATION REPORT

Check one: ☐ Safety Violation ☐ Misconduct Violation

Date of Occurrence: \_\_\_\_\_ Time: \_\_\_\_\_ ☐ AM ☐ PM

RCA Superintendent: \_\_\_\_\_ RCA Project Number: \_\_\_\_\_

Project Name and Address: \_\_\_\_\_

Subcontractor Company Name: \_\_\_\_\_

Name of Employee(s) Involved: \_\_\_\_\_

Employee's Supervisor Name: \_\_\_\_\_

Description & Location of Occurrence (attach photos): \_\_\_\_\_

Witness Name(s) (complete Witness Statement): \_\_\_\_\_

Action(s) Taken: ☐ Verbal Warning ☐ Written Warning ☐ Retraining ☐ Removal

Describe: \_\_\_\_\_

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

Superintendent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Subcontractor Management Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Completed form to be sent to [safety@rcandersen.com](mailto:safety@rcandersen.com)



## Witness Statement Form

### Witness Information

Name (Last, First, MI)		Date	
Company Name:		Cell #	
		Home #	

### Description of Incident

Date and Time of Incident		Location of Incident	
---------------------------	--	----------------------	--

Please write a detailed description of the events leading up to and including the event.  
If more space is required, continue description on additional numbered and signed copies of this form.

I affirm that the information I have provided in this statement is true and accurate.

Signature		Date	
-----------	--	------	--

Witness signature should be notarized, when possible

Completed form to be sent to [safety@rcandersen.com](mailto:safety@rcandersen.com)





## Appendix K

### **ASSUMPTION OF RISK, RELEASE AND HOLD HARMLESS AGREEMENT**

Whereas, I, the undersigned, have requested of RC Andersen LLC permission to be allowed on premises situated at [REDACTED] prior to completion. AND WHEREAS, I have been advised that to grant this request involves hazards inasmuch as construction work is still going on but I still desire that said permission be given.

NOW THEREFORE, in accordance of said permission hereby granted me, I HEREBY (1) assume all the risks and hazards attendant upon going upon said premises while work is still going on and workmen and materials and equipment are still on the job (2) release RC Andersen LLC and the Owner of said premises from and against any and all claims or demands which I or my heirs, executors, administrators can or might have as a result of any losses, damages, expenses, personal injury or death which I or any person on the premises under this permission may suffer or sustain, and (3) agree to indemnify and hold harmless RC Andersen LLC and the Owner of said premises for and against all loss, cost, claims, suits and judgments for property damage and personal injury, including death, to me or to anyone on or about the premises by virtue of the permission granted hereunder, howsoever caused, to the fullest extent permitted by applicable law.

---

Signature

---

Print Name

---

Company

---

Date

# Hot Work Permits

RC Andersen Health & Safety



# Hot Work Permits

## Why Hot Work Permits?

Every year fires occur, which could have been prevented had employees used appropriate fire prevention measures.

RC Andersen requires the use of a Hot Work Permit system as a primary means of preventing fires due to non-routine open flame and high temperature processes.

# Hot Work Permits

Goals and Objectives of this material:

- Recognize work that requires the use of Hot Work Permits.
- Be familiar with the Hot Work Permit System.

# Hot Work Permits

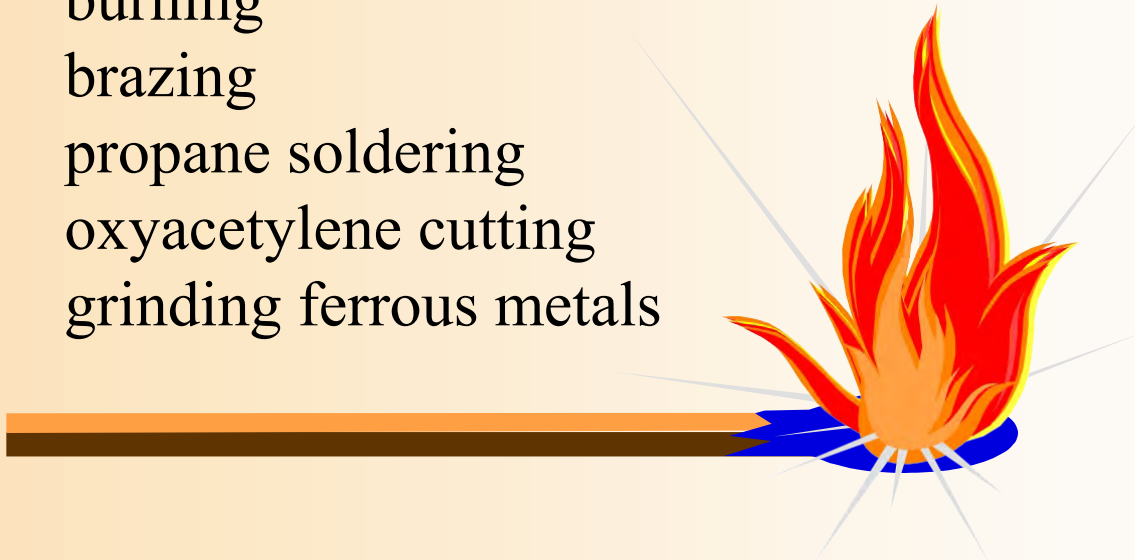
## Definitions:

Hot Work is any work using open flames or sources of heat that could ignite materials in the work area.

# Hot Work Permits

Examples of hot work are:

welding  
burning  
brazing  
propane soldering  
oxyacetylene cutting  
grinding ferrous metals



# Hot Work Permits

## Procedures:

Before beginning hot work, Provide RC Andersen's field superintendent with a completed Hot Work Permit, for review and authorization to proceed.



# Hot Work Permits

# Cutting / Welding Permit

Location:                      Job No.

Date: \_\_\_\_\_ Job No. \_\_\_\_\_

Location & Building:	Floor
----------------------	-------

Nature of Job:

Welder's Name:

The above location has been examined. The precautions checked on the reverse of this card have been taken to prevent fire. Permission is granted for this work.

Permit	Date:	Time:	
Expires			AM PM

Permits are to be issued for the specific job being done, and for a specific time period. The time period is usually for the working shift, but never exceed twenty-four hours.

# Hot Work Permits

## Necessary Precautions

- Sprinklers are in service.
- Cutting and welding equipment in good repair.

### **Precautions within 35 ft. (10 m.) of work.**

- Floors swept clean of combustibles.
- Combustible floors wet down, covered with damp sand or fire-resistive sheets.
- Flammable liquids removed; other combustibles, if not removed protected with fire-resistive tarpaulins or metal shields.
- Explosive atmosphere in area eliminated.
- All wall and floor openings covered.
- Fire-resistive tarpaulins suspended beneath work.

### **Work on Walls or Ceilings**

- Construction is noncombustible and without combustible covering or isolation.
- Combustibles moved away from other side of wall.

### **Work on Enclosed Equipment**

- Enclosed equipment cleaned of all combustibles.
- Containers purged of flammable liquids.

### **Fire Watch**

- Fire watch will be provided during and for at least 30 minutes after work, and during any coffee or lunch breaks.
- Fire watch is supplied with suitable extinguishers, or charged small hose.
- Fire watch is trained in use of this equipment and in sounding alarm.

The Subcontractor applying for permit and, RC Andersen's field superintendent, have the responsibility to verify that all necessary precautions have been taken at the worksite.

# Hot Work Permits

## Necessary Precautions

- Sprinklers are in service.



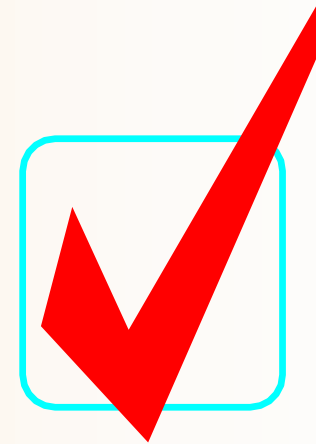
Welding and other hot work have been found to be high ranking causes of industrial fires. Sprinkler systems must remain in service in the hot work area, unless approved by the Project Manager or Safety Department.



# Hot Work Permits

## Necessary Precautions

- Cutting and welding equipment in good repair.



Gas hoses, backflow preventers, fire resistive tarpaulins, curtains and other cutting and welding equipment must be in good repair before the permit is issued.

# Hot Work Permits

## Necessary Precautions

### **Precautions within 35 ft. (10 m.) of work.**

- Floors swept clean of combustibles.
- Combustible floors wet down, covered with damp sand or fire-resistive sheets.
- Flammable liquids removed; other combustibles, if not removed protected with fire-resistive tarpaulins or metal shields.
- Explosive atmosphere in area eliminated.
- All wall and floor openings covered.
- Fire-resistive tarpaulins suspended beneath work.

### **Work on Walls or Ceilings**

- Construction is noncombustible and without combustible covering or isolation.
- Combustibles moved away from other side of wall.

### **Work on Enclosed Equipment**

- Enclosed equipment cleaned of all combustibles.
- Containers purged of flammable liquids.



Anything that can burn must be removed from the immediate work area.

# Hot Work Permits



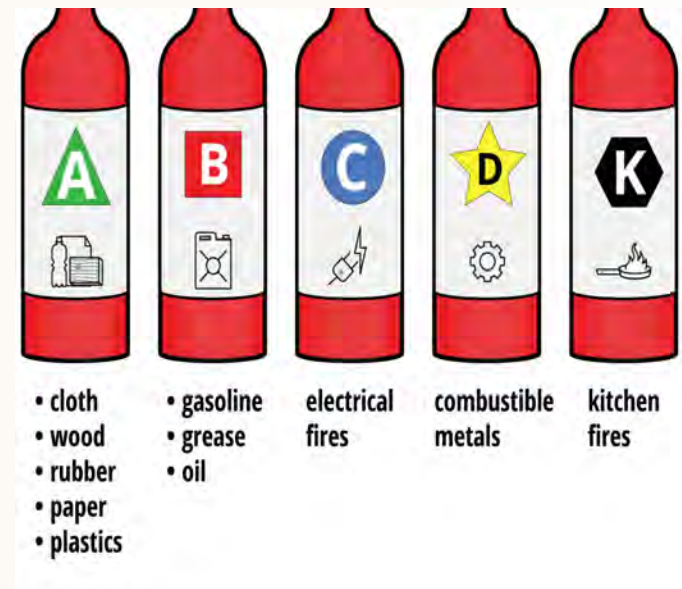
## Necessary Precautions

- Sub-contractor provided Fire Watch must be present during and for at least 30 minutes after hot work, and during any coffee or lunch breaks.
- Fire Watch is to be supplied with suitable extinguishers, or charged small hose.
- Fire Watch is trained in the use of this equipment and in sounding alarm.

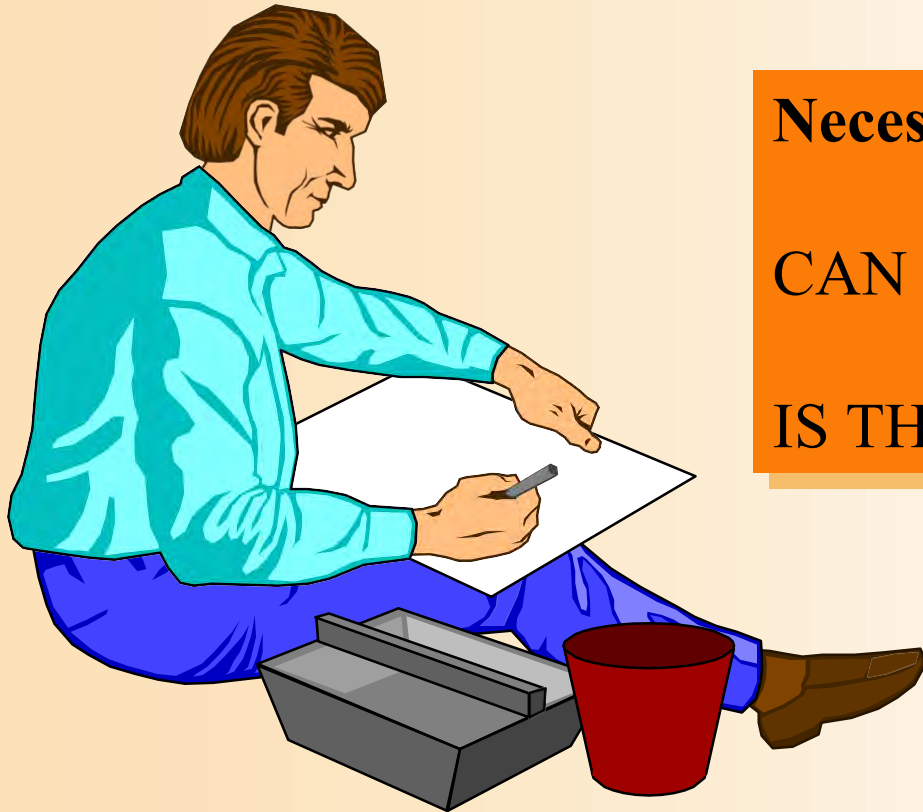
Should other precautions fail, trained personnel will be needed with fire fighting equipment to extinguish any fires which start. Personnel and equipment must be readily available before the permit is issued.

# Hot Work Permits

- Fire Watch Personnel may not do other jobs which detract from their primary responsibility.
- Fire Watch Personnel must be trained to use fire extinguishing media provided.
- Fire Watch Personnel must be aware of how to report emergencies, and trained in emergency evacuation procedures.
- Fire Watch Personnel must be identified and their qualifications verified, before permits are issued.



# Hot Work Permits



## **Necessary Precautions**

CAN THE JOB BE AVOIDED?

IS THERE A SAFER WAY?

Before beginning any hot work, ask yourself if the work can be done a safer way. Hot work is very hazardous and should be avoided if not absolutely necessary.

# Hot Work Permits

## Final Checkup By Welder

Work area and all adjacent areas to which sparks and heat might have spread (such as floors above and below and on opposite side of walls) were inspected after the work was completed and were found firesafe.

Signed:

After signing, return to person who issued it.



- Before leaving the area for the day, verify that no smoldering fires have developed within walls, cracks in floors, or in ceiling areas where you have been working.
- Return the work permit to the person who issued it within 30 minutes of job completion, so that they may complete any necessary job follow-up.

# Hot Work Permits – Summary

Jobs like electric arc welding, brazing, gas soldering, and oxygen-acetylene cutting and welding require hot work permits be provided to, reviewed and authorized by the project superintendent before work begins.

- o Permits are issued for a specific job, for a specific time frame, to a specific person.
- o All necessary equipment must be on site and in good working order before work begins.
- o A fire watch must be present for the duration of hot work and for at least 30 minutes after work is done.
- o A fire inspection must be conducted by the person doing the hot work and by the Fire Watch, before leaving the job site.
- o Permits are to be returned to the RC Andersen Superintendent when hot work is complete and fire inspection has been performed by Fire Watch and Person doing the hot work.

# Where to Get Help??

The subcontractor foreman is responsible for all necessary equipment and for contacting RC Andersen's superintendent for permit application.

RC Andersen's superintendent will review and authorize permits and answer any specific questions about fire protection systems, fire prevention measures, and precautions.

The superintendent or safety representative can answer any questions regarding other hazards, such as welding light or fumes.



## **APPENDIX L - HOT WORK PERMIT REQUIREMENTS**

- Hot work is defined as cutting and welding operations for construction/demolition activities that involve the use of welding equipment (portable gas or arc welding) or involves soldering, grinding or other similar activities producing a spark flame or heat.
- A hot work permit system is intended to educate the parties involved in the hazards, and to implement control measures to help mitigate hazards. **IT IS THE MEANS BY WHICH RC ANDERSEN CAN STAY AWARE OF AND KEEP TRACK OF THE ACTIVITIES INVOLVING HOT WORK.**
- Hot work should not be performed if the work can be avoided or performed in a safer manner. When practical, object to be welded, cut, or heated must be moved to a designated safe location.
- All personnel must be protected against the hazards generated by the hot work (e.g. sparks, fumes, welding rays, etc.) This may include shields, screens, or local exhaust ventilation - in addition to the use of personnel protective equipment.
- Before subcontractors can perform hot work for this construction project they need to provide and prepare a hot work permit.

**ALL SECTIONS OF THE 2-PART PERMIT APPLICATION MUST BE FILLED OUT AND SIGNED BY SUBCONTRACTOR AND PROJECT SAFETY PERSONNEL. (SUPERINTENDENT /SITE SAFETY INSPECTOR/ SITE SAFETY COORDINATOR or MANAGER)**

- One copy of the permit must remain at the hot work location until the hot work is completed. One copy must be kept in the Hot Work Permit binder in the site office trailer. **THE HOT WORK MUST BE COMPLETED AND PERMIT RETURNED AT THE END OF EACH DAY - NO OPEN PERMITS ALLOWED.**
- A **FIRE WATCH** is required whenever protective measures are necessary for the following conditions:
  - Appreciable combustible material (which must be covered and protected) within 35' of point of operation.
  - Appreciable combustibles more than 35 feet away that may be easily ignited by sparks.
  - Wall or floor openings within 35 feet of exposed combustibles in adjacent areas including confined spaces.
  - Combustibles could be ignited by conduction or radiation through metal partitions, walls, ceilings, or roofs.
- A Hot Work Permit will not be issued and hot work **WILL NOT BE ALLOWED** if any of the following conditions exist:
  - Sprinkler protection (existing buildings) is impaired.
  - Appropriate firefighting equipment (i.e., fire extinguishers) is not readily available.
  - Combustible or flammable materials are within 35' and cannot be moved or protected.
  - Floor and wall openings cannot be covered.
  - Cutting or welding on pipes of other metals can conduct enough heat to ignite nearby combustible materials.
  - Any conditions that could result in undue hazards by performing the work.
- The subcontractor/trade performing hot work is ultimately responsible for conducting their hot work activities in a sound, fire-safe manner and following the precautions outlined on the hot work permit. The responsible subcontractor foreman shall apply for and sign the hot work permit with RC Andersen personnel, review the work area daily, and close-out the permit at the end of the day.

RC ANDERSEN SUPERVISOR RESPONSIBILITIES	SUBCONTRACTOR / WORKER RESPONSIBILITIES	FIRE WATCH RESPONSIBILITIES
Ensure all employees and contractors are following hot work procedures. Ensure all hot work permits are issued prior to start of work Ensure that subcontractors follow RC Andersen procedures.	Follow and use hot work procedures. Provide a hot work permit for approval before starting work. Ensure that all cutting and welding equipment is in satisfactory condition and in good repair. Attend and actively participate in training sessions. Protect nearby personnel against heat, sparks, etc.	Ensure proper firefighting equipment is readily available. Locate the nearest fire alarm pull station (existing buildings). Inspect the work area before any hot work is conducted. Extinguish fire only when within trained capabilities to safely do so. Stay on watch at least one hour after hot work has been completed.

<h1 style="text-align: center;">HOT WORK PERMIT</h1>		
NAME OF COMPANY		
DATE	TIME ISSUED	PERMIT EXPIRES AM PM
LOCATION/BUILDING & FLOOR (Be Specific)		
NAME OF PERSON AUTHORIZING HOT WORK		
PERSON ('S) PERFORMING HOT WORK		
DESCRIPTION OF WORK BEING PERFORMED		
PERSON ('S) PERFORMING FIRE WATCH		
OTHER INFORMATION:		
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><b>PRECAUTIONS CHECKLIST</b></p> <p><input type="checkbox"/> Y <input type="checkbox"/> N/A</p> <p><input type="checkbox"/> <input type="checkbox"/> Security has been contacted to ensure that sprinkler systems are not impaired.</p> <p><b>Requirements within 35 ft. (11m) of work</b></p> <p><input type="checkbox"/> <input type="checkbox"/> Flammable liquids, combustible dust, and oily deposits removed.</p> <p><input type="checkbox"/> <input type="checkbox"/> Explosives atmosphere in area eliminated.</p> <p><input type="checkbox"/> <input type="checkbox"/> Floors swept clean.</p> <p><input type="checkbox"/> <input type="checkbox"/> Combustible building construction covered with fire resistive covering.</p> <p><input type="checkbox"/> <input type="checkbox"/> Remove other combustible materials where possible. Otherwise protect them with fire-resistive coverings.</p> <p><input type="checkbox"/> <input type="checkbox"/> All wall, floor, and machinery openings covered.</p> <p><input type="checkbox"/> <input type="checkbox"/> Fire-resistive tarpaulins suspended beneath work.</p> <p><input type="checkbox"/> <input type="checkbox"/> Electrical cable trays and switch gear protected with fire-resistive tarpaulins or metal shields.</p> <p><input type="checkbox"/> <input type="checkbox"/> Ducts and conveyors, systems cleaned, protected and/or shut off.</p> <p><b>Work on walls or ceilings</b></p> <p><input type="checkbox"/> <input type="checkbox"/> Construction is noncombustible and without combustible covering or insulation.</p> <p><input type="checkbox"/> <input type="checkbox"/> Combustibles on other side of walls moved away or a fire watch provided on the opposite side of the wall from the work.</p> <p><b>Work on enclosed equipment</b></p> <p><input type="checkbox"/> <input type="checkbox"/> Enclosed equipment cleaned of all combustibles.</p> <p><input type="checkbox"/> <input type="checkbox"/> Container purged of flammable liquids/vapors.</p> <p><input type="checkbox"/> <input type="checkbox"/> Pressurized vessels, piping and equipment removed from service, isolated and vented.</p> <p><b>Fire Watch / Hot Work area monitoring</b></p> <p><input type="checkbox"/> <input type="checkbox"/> Fire watch will be provided during and for 60 minutes after hot work is completed.</p> <p><input type="checkbox"/> <input type="checkbox"/> The hot work area will be periodically inspected during the three hours after the fire watch leaves the high hazard area.</p> <p><input type="checkbox"/> <input type="checkbox"/> Proper class of extinguisher must be within 10 feet.</p> <p><input type="checkbox"/> <input type="checkbox"/> Fire watch is trained in their duties.</p> <p><input type="checkbox"/> <input type="checkbox"/> Fire watch is required for adjoining areas above &amp; below.</p> <p><b>OTHER PRECAUTIONS TAKEN</b></p> </div> <div style="width: 45%; border: 1px solid black; height: 100px;"></div> </div>		

## **Cadmium Awareness In Hot Work Program**

While RC Andersen LLC does not expect any exposure to Cadmium to RC Andersen personnel, if the job or project that we are working is determined to contain or potentially expose subcontractor workers, then we will work with the client to first determine if the hazard can be engineered out or if we will need to establish a protocol using this policy to safely perform the work. The equipment and processes that typically contain Cadmium will be identified by a work permit and or job hazard analysis systems. Procedures for elimination or minimization of exposure will be the 1st line of defense. Special precautions will be exercised when maintenance of ventilation systems and changing of filters is performed.

**Appearance:** Cadmium metal-soft, blue-white, malleable, lustrous metal or grayish white powder. Some cadmium compounds may also appear as a brown, yellow, or red powdery substance. Cadmium can cause local skin or eye irritation. Cadmium can affect your health if you inhale or if you swallow it. Cadmium that may be immediately dangerous to life or health occur in jobs where workers handle large quantities of cadmium dust or fume; heat cadmium-containing compounds or cadmium-coated surfaces; weld with cadmium solders or cut cadmium-containing materials such as bolts.

The program will be evaluated and updated as needed.

**Exposure Limit:** TWA PEL 8-Hour (time weighted average, permissible exposure limit) is Five (5) micrograms of cadmium per cubic meter of air 5 ug/m(3), time weighted average for an 8- hour workday. If the PEL is exceeded, this policy will be implemented.

### **Training**

- Only trained and qualified personnel may operate or maintain welding, cutting or brazing equipment. Welders/Cutters who may be exposed or have the potential to be exposed will be trained and will possess the appropriate certifications for their work scope.
- Workers who perform any of the functions covered by this policy will be required to complete training including:
  - A test or other method to determine competency;
  - Training initial to assignment and at least annually thereafter;
  - All training records shall be documented and available to RC Andersen upon request.
- Documentation will include outline or class name, names and signatures of those who trained the class and a class date.

### **Medical Surveillance/Written Exposure Plan:**

While the company work should not expose employees to, at or above the action level, if those levels are reached, then a written exposure plan including annual reviews and updates will be required. Should employee(s) become exposed to, at or above action levels related to work exposures and cadmium, then employees will receive a medical evaluation, which will include tests to determine exposure and a medical history. This is provided at no cost to the employee. As with all medical records, these are kept strictly confidential. The employee or representative is entitled to see the records of measurements of the exposure. The employee can also request that medical records for exposure be furnished to the employee's personal physician or designated representative. The written program will be provided for examination and copying upon request of affected employees and their representatives.

**Respiratory Protection Program** – If respiratory protection is required, see the company's Respiratory Protection Program for complete guidelines to respiratory protection.

**Emergency Procedures:**

**First Aid for eye exposure** – direct contact may cause redness or pain. Wash eyes immediately with large amounts of water, and seek medical attention immediately.

**First Aid for skin exposure** – direct contact may result in irritation. Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water. Get medical attention immediately.

**Ingestion** may result in vomiting, abdominal pain, nausea, diarrhea, headache and sore throat. Treatment for symptoms must be administered by medical personnel. Get medical attention immediately.

**Inhalation** – if large amounts of cadmium are inhaled, the exposed person must be moved to fresh air at once. Get medical attention immediately.

**Rescue** – move affected person from the hazardous exposure. If the exposed person has been overcome, attempt rescue only after notifying at least one other person and put into effect established emergency procedures.

**Respirators** – you may be required to wear a respirator for work related to this type of exposure or for emergency response. Only use respirators approved by MSHA and NIOSH. Cadmium does not have a detectable odor except at levels well above the PEL. If you can smell cadmium while wearing a respirator, proceed immediately to fresh air.

**PPE** – you may be required to wear impermeable clothing, gloves, splash-proof or dust resistant goggles, face shield or other appropriate PPE to prevent skin contact with cadmium.

## Hexavalent Chromium Safety - Hexavalent Chromium (Chromium VI or Cr VI)

RC Andersen employees do not perform any welding cutting or brazing operations. RC Andersen requires subcontractors working in confined spaces with Hex Chrome to provide a Hexavalent Chromium Safety Program at least equal to the guidelines contained herein when work involves welding of chromium (VI).

### Exception to the standard:

Where the subcontractor has objective data demonstrating that a material containing chromium or a specific process, operation, or activity involving chromium cannot release dusts, fumes, or mists of chromium (VI) in concentrations at or above  $0.5 \mu\text{g}/\text{m}^3$  as an 8-hour time-weighted average (TWA) under any expected conditions of use.

### Definitions:

- **Action Level** = a concentration of airborne chromium (VI) of 2.5 micrograms per cubic meter of air ( $2.5 \mu\text{g}/\text{m}^3$ ) calculated as an 8-hour time-weighted average (TWA)
- **Chromium (VI) [hexavalent chromium or Cr(VI)]** means chromium with a valence of positive six, in any form and in any compound
- **Emergency** means any occurrence that results, or is likely to result, in an uncontrolled release of chromium (VI). If an incidental release of chromium (VI) can be controlled at the time of release by employees in the immediate release area, or by maintenance personnel, it is not an emergency
- **Employee Exposure** means the exposure to airborne chromium (VI) that would occur if the employee were not using a respirator
- **Regulated Area** means an area, demarcated by the employer, where an employee's exposure to airborne concentrations of chromium (VI) exceeds, or can reasonably be expected to exceed the PEL
- **Access to Regulated Area** shall be limited to:
  1. Persons authorized by the employer
  2. Persons with required work duties in the regulated area
  3. Employees are not permitted to eat, drink, smoke, chew tobacco or gum, or apply cosmetics in the regulated area where skin and eye contact with Chromium VI may occur
- **Permissible Exposure Limit (PEL).** Subcontractor shall ensure that no employee is exposed to an airborne concentration of chromium (VI) in excess of 5 micrograms per cubic meter of air ( $5 \mu\text{g}/\text{m}^3$ ), calculated as an 8-hour time-weighted average (TWA)
  1. Below  $0.5 \mu\text{g}/\text{m}^3$  under any condition – Exempt
  2. Between  $0.51$  and  $2.5 \mu\text{g}/\text{m}^3$ 
    1. Housekeeping – no dust
    2. Clean eating and drinking areas

3. Above action level  $2.5 \mu\text{g}/\text{m}^3$  for more than 30 days per year
    1. All of the above
    2. Install engineering controls within four years (our Clients will be working on this through their own upgrades)
    3. Personal respiratory protection
    4. Monitoring every 6 months
    5. Medical Surveillance, at least annually
    6. Recordkeeping, Hazard Communication Training
  
  4. Above the PEL  $5.0 \mu\text{g}/\text{m}^3$ 
    1. All of the above
    2. Establish regulated areas – roped off, limited access, PPE, washing facilities
    3. Monitoring every 3 months
- Respiratory protection – Fresh air will be the only method currently that will prevent airborne exposure and eye exposure when being exposed to the PEL.
  - Skin protection – if exposure or likely exposure is there, then appropriate skin protection such as Tyvek and gloves (disposable type PPE).
  - No PPE that is contaminated shall be removed from the job site, except by those employees whose job it is to launder, clean, maintain, or dispose of such clothing and equipment (all clothing/equipment being removed for laundering, cleaning, maintenance, or disposal shall be transported in sealed, impermeable bags or other closed, impermeable containers).
  - Removal of chromium (VI) from protective clothing and equipment by way of blowing, shaking, or any other means that disperses chromium (VI) into the air or onto an employee's body is prohibited.
  - Access to regulated areas will be limited to those employees with the authority to be there. Regulated areas will be marked as such.
  - Subcontractors are required to establish a medical surveillance program including notifications and medical follow-ups will be required for workers who are exposed at no cost to the worker (medical examination to include: medical work history, with emphasis on: past, present, and anticipated future exposure to chromium (VI); any history of respiratory system dysfunction; any history of asthma, dermatitis, skin ulceration, or nasal septum perforation; and smoking status and history; physical examination of the skin and respiratory tract; and any additional tests deemed appropriate by the examining physician).
  - If any worker exposure exceeds the PEL, Subcontractors will notify the worker within 15 days in writing of the exposure.
  - When protective clothing is required, a change room facility must be provided and the room will include separate areas for protective clothing and street clothes to prevent cross-contamination.
  - Where skin contact with chromium (VI) occurs, washing facilities must be provided and employees must wash their hands and faces at the end of the shift and prior to eating, drinking, smoking, chewing tobacco or gum, applying cosmetics, or using the toilet (non of these activities can be done in the regulated area).

- Housekeeping – all areas contaminated with chromium (VI) will be cleaned by HEPA-filter vacuuming or other methods that minimize the likelihood of exposure. All surfaces must be kept as free as practical of Chromium VI. Waste, scrap, debris, and other materials with Chromium VI must be placed in impermeable bags and labeled according to the Hazard Communication Standard prior to disposal.

### **Training:**

- Only trained and qualified personnel may operate or maintain welding, cutting or brazing equipment. Welders/Cutters who may be exposed or have the potential to be exposed will be trained per this policy and will possess the appropriate certifications for their work scope.
- Subcontractor tradesmen who perform any of the functions covered by this policy will be required to complete training including:
  - A test or other method to determine competency;
  - Training initial to assignment and at least annually thereafter;
  - All training records shall be documented and kept on file for the duration of the covered employee's employment.
  - Documentation will include outline or class name, names and signatures of those who trained the class and a class date).

### **Medical Surveillance/Written Exposure Plan:**

While work on RC Andersen projects should not expose workers to at or above the action level, if those levels are reached, then a written exposure plan must be provided by the subcontractor including annual reviews and updates. Should worker (s) become exposed to at or above action levels related to work exposures and Hexavalent Chromium VI, then workers will receive a medical evaluation provided by their employer, which will include tests to determine exposure and a medical history. This is provided by the employer at no cost to the worker. As with all medical records, these are kept strictly confidential. The worker or representative is entitled to see the records of measurements of the exposure. The worker can also request that medical records for exposure be furnished to the worker's personal physician or designated representative.

## SUPPLEMENTAL CONDITIONS

### **A. Project Safety Requirements**

**Subcontractors and all subcontractor employees, vendors, suppliers and other business invitees are required to know and adhere to all OSHA and other safety standards applicable to their work. RC Andersen jobsite safety materials related to subcontracted work are intended to provide general information only.**

HEALTH AND SAFETY PROJECT AWARENESS – Subcontractor shall comply with all federal, state and local laws and regulations related to jobsite safety. Subcontractor specifically acknowledges that it is responsible for preventing and/or correcting all health and safety hazards within the operations for which it and its employees or its Subcontractors and their employees are responsible. Subcontractor further acknowledges that it and its Subcontractors, suppliers and employees have special expertise in recognition and prevention of such hazards in the operations for which they are responsible. Contractor retains the right to direct Subcontractor to eliminate all hazards of which Contractor has actual knowledge, but the recognition and abatement of such hazards are the responsibility of Subcontractor and its Subcontractors, suppliers and employees. Subcontractor agrees to indemnify Contractor and all other Subcontractors for all costs and penalties incurred, including attorney fees, because of hazards created by Subcontractor, its Subcontractors, suppliers and employees. If subcontractor is found to be non-compliant and is subsequently fined by OSHA and if RC Andersen is cited and/or fined by any governmental authority having jurisdiction for any issue(s) within the subcontractor's scope of work related to jobsite safety, such fines will be back charged against Subcontractor's contract, in addition to other financial remedies available to RC Andersen, which are expressly reserved. Subcontractor hereby agrees that it will not allow any Subcontractor, supplier and/or employee of any of them who is not fully trained and, where required, certified in all safety aspects of the Subcontract Work on the project site.

SAFETY RULES AND REGULATIONS – The Subcontractor agrees to fully comply with all of the Contractor's designated safety programs for the project during the performance of the Subcontract Work.

ACCIDENT REPORTING – The Subcontractor shall notify RC Andersen's Project Superintendent as soon as it is safe to do so but no later than 2 hours after any of the Subcontractor's employees and/or equipment and/or motor vehicles are involved in a jobsite accident or injury. The Subcontractor shall also provide RC Andersen with a complete initial report of injury or damage as outlined below within 24 hours after any of the Subcontractor's or any of its lower tier subcontractor's or supplier's employees are involved or injured in a jobsite accident.

Subcontractor shall submit an initial incident report to RC Andersen within twenty-four hours of the event, which addresses the following details regarding the event: (1) What occurred?; (2) Who was involved?; (3) Where did the event take place?; (4) When did the event take place?; and (5) Why did the event occur (i.e. actions or inactions immediately preceding and during the event)? In addition, Subcontractor must also complete RC Andersen's Incident Report.

For all serious and significant incidents (as outlined in Table 1 below), in addition to the initial incident report, a full detailed incident investigation and analysis shall be submitted by the Subcontractor within seventy-two hours of the incident. For all other incidents, a full detailed incident investigation and analysis shall be submitted by the Subcontractor within 24 hours of the incident. Subcontractor shall make its principals, project managers, and superintendents available to assist in RC Andersen's incident review process.

CRANE SAFETY POLICY – The Subcontractor acknowledges and certifies that it is familiar with applicable safety and reporting regulations related to the operation of cranes, including but not limited to 29 CFR Part 1926, Subpart CC, and shall operate and perform work in full accordance with the same. The Subcontractor must have available, and provide immediately upon request by RC Andersen personnel, copies of the crane operator(s) certifications, licenses, and medical releases, and proof of annual crane inspections.



## SUPPLEMENTAL CONDITIONS

**OSHA REQUIREMENTS FOR EXCAVATION** – The Subcontractor acknowledges and certifies that it is familiar with applicable safety regulations related to Excavation, including but limited to 29 CFR 1926, Subpart P, and shall perform all excavation work in full accordance with same.

**OSHA RECORDABLE INCIDENT RATES** – Subcontractor may be required to submit its OSHA recordable and lost day incident rates if specifically required by RC Andersen's President, Project Manager, Project Superintendent or Safety Director.

**SAFETY PRECONSTRUCTION MEETING** – Subcontractor shall attend a safety preconstruction meeting to review safety requirements as they pertain to the completion of the work of their Subcontract. The safety preconstruction meeting shall take place on-site prior to the start of work on a day and at a time to be determined.

**RC ANDERSEN SAFETY RULES AND REGULATIONS** – Subcontractors found to be in non-compliance with any applicable rules and/or regulations related to jobsite safety will be directed to immediately rectify non-compliant practices and conditions. Failure to do so may result in financial penalties, in addition to other remedies available to RC Andersen, which are expressly reserved.

Following is a list of the Safety Rules in effect on all RC Andersen jobsites. This list is not exclusive and is provided here for informational purposes only. All safety rules contained herein are in addition to the Subcontractor's own safety rules. Additional safety rules are included in the RC Andersen site specific safety orientation for this project. All safety rules must be adhered to at all times.

- Subcontractor shall submit its company Site-Specific Safety Program/HAZCOM Program and designate its Jobsite Safety Coordinator prior to starting work. Programs shall be submitted electronically to [safety@rcandersen.com](mailto:safety@rcandersen.com).
- Subcontractors are required to prepare detailed pre-shift JHAs (Job Hazard Analyses) addressing hazards associated with their scope of work, which must be signed by each of the Subcontractor's workers. JHAs are to be submitted to RC Andersen's safety representative each work day a subcontractor is onsite.
- All job-related accidents and injuries shall be reported to RC Andersen's Project Superintendent as soon as it is safe to do so but no later than 2 hours after occurrence. A copy of complete initial report of injury must be submitted to the Project Superintendent within 24 hours.
- Subcontractor's employees must report all unsafe conditions and near-miss accidents to their supervisor and the Jobsite safety officer so that corrective action can be taken.
- Subcontractor's employees shall review and sign the project's SAFETY ORIENTATION TRAINING forms as required. Subcontractor's supervisor shall attend RC Andersen's weekly safety meetings. Subcontractor must hold a "Weekly Tool-Box Safety Meeting" and submit a list of those employees who have attended, along with a list of topics and related information discussed.
- Subcontractor must submit copies of certifications for specialized training which are required to perform certain types of hazardous work, Hazwoper, Asbestos Remediation, prior to work commencing.
- Subcontractor must have available and provide upon request copies of certifications for specialized training, e.g. heavy equipment operation (backhoes, front loaders, etc.), welding, torch-cutting, other Hot Work, powder-actuated tools, etc., which are required to operate certain tools and equipment.

## SUPPLEMENTAL CONDITIONS

- Subcontractor shall provide all required personal protective equipment (PPE). All equipment shall be in good working order and all defective equipment shall be discarded and removed offsite immediately.
- Hard hats (ANSI Z89.1) shall be worn at all times on site. Alterations or modifications of hat or liner are prohibited.
- Safety Glasses (ANSI Z87.1) are to be worn 100% of the time, when required on certain jobsites or in specific areas of a jobsite. Otherwise, safety glasses are required to be worn per task requirement and/or where posted notices require same.
- Hearing protection shall be worn in areas where noise levels exceed 90 DBA, where exposure to 85-90 DBA exceeds (8) hours per day, or where posted.
- All workers must wear clothing affording adequate protection of the body against risks of injury or conditions such as inclement weather and extreme temperatures (e.g. below 32° or above 90°). Sturdy work boots, shirts with sleeves, and long pants must be worn. No sneakers, sandals, tank tops, cut-off shirts, or shorts are allowed.
- For any work requiring the use of respirators, Subcontractor must implement a respiratory protection program per OSHA standards as required by their respective trade and working conditions in the field.
- “Horseplay” is strictly prohibited. No running on jobsite unless extreme emergencies warrant. Fighting on construction premises will result in immediate dismissal of employee, who shall be excluded from all of RC Andersen’s construction projects.
- Subcontractor shall provide fall protection barricades, covers, rails, etc. to protect all roof, floor, or wall openings, pits, holes, etc. that have resulted from their work performance or are within their contractual control or duty to safeguard. Unsafe conditions must be corrected immediately.
- Fall protection is required when working at heights 6' or greater above a lower level. Subcontractor shall establish a Warning Line System wherever a guardrail system is not feasible. When a warning line is being used in lieu of guardrails, the warning line must be installed at 15' from the unprotected edge with an exception for roofers performing roofing activities where the warning line shall be established at 10' from the unprotected edge. Workers must use a personal fall arrest system and be tethered at all times when in an area between a warning line and an unprotected edge.
- Subcontractor shall provide fall protection equipment (harnesses/shock-absorbing lanyards, safety lines, anchorages, etc.) as required for their employees where permanent or temporary fall prevention is not in place.
- Firearms, alcoholic beverages, illegal drugs, recreational drugs, or prescribed controlled substances are not allowed on site. The use of alcoholic beverages, the use and possession of illegal drugs and hallucinogens, the use of recreational drugs (e.g. marijuana, any substances containing THC (tetrahydrocannabinol), or the use of controlled substances (e.g. prescribed opiates, medical marijuana) during the workday, either on-site, during breaks or lunch, or before work, is prohibited. Anyone caught possessing or using firearms, illegal drugs or alcohol, or using recreational drugs or prescribed controlled substances during any of these times is subject to immediate termination or dismissal from the site.
- All subcontractors shall keep their respective areas clean and hazard free. Housekeeping is to be performed on a daily basis or more frequently if conditions warrant. Failure to do so will result in the back charge of costs for cleanup as directed by RC Andersen to the subcontractor(s) involved.

## SUPPLEMENTAL CONDITIONS

- All tools, whether company or personal, must be in good working condition. Defective tools must not be used and must be removed from the site ( e.g., chisels with mushroomed heads, hammers with split or loose handles, saws or grinders with missing guards, etc.).
- Ground fault circuit interrupters (GFCIs) shall be used on all extension cords, electrical tools, and portable electrical equipment powered from a temporary electric service or generator. Tools and equipment shall be inspected each week for defects by a competent person. If electrical power is used from permanent power system or existing building, the subcontractor shall provide a GFCI system between his equipment and permanent power. Substitution of an "assured grounding program" in lieu of 100% GFCI protection requires authorization from RC Andersen and compliance with OSHA's written program.
- Permits, written and properly authorized, may be required for work including welding, spark or fire producing hot work, excavation, confined spaces, lockout/tag-out, blasting, fire protection water, powder actuated tool, etc. Subcontractor must check with RC Andersen for such required work permits.
- Confined space procedures are in force and require an entry permit. Confined spaces include manholes, vessels, ductwork, etc., where hazards such as oxygen deficiency, hazardous gases, contamination, high temperatures, and difficulty in escaping may exist or be present.
- Before any hot work can be performed, a Hot Work permit must be prepared, duly signed by a permit-authorizing individual, and provided to RC Andersen for approval. During hot work, e.g., welding, burning, soldering, cutting, grinding, or using salamanders, adequate fire protection measures must be implemented. Such measures consist of, but are not limited to, removal of flammables and combustibles, protection of adjacent areas, appropriate fire extinguishers or standpipe, and similar measures. If these measures are not employed, a fire watch equipped with an approved portable fire extinguisher is required during, and for sufficient time after, the welding, burning, cutting, or grinding operation.
- Electrical hot work is not allowed without prior approval from RC Andersen's Project Executive or Corporate Officer. Proximity work to electrical equipment is also not allowed without prior approval from RC Andersen's Project Executive or Corporate Officer. Failure to comply may result in dismissal from the project.
- All burning and cutting equipment shall be inspected daily before being used. All hoses and manifolds shall be removed from bottles and protective caps replaced at end of each day.
- Lock-out/tag-out procedures are in force and shall be followed to protect persons from injury due to inadvertent operation of power driven equipment, opening of pipeline valves, or energizing of electrical circuits. Coordinate this procedure with RC Andersen.
- Subcontractor shall provide its own ladders, which must be in accordance with OSHA and ANSI specification and ladders must be in safe condition without broken or defective rungs, rails and hardware. No metal ladders shall be used in or around any electrical work. Ladder shall be secured top and bottom and extend 3 feet above the walking surface or above a parapet or fence, such as that found on a sidewalk shed.
- Scaffolding of all types shall be provided, erected or rigged, and used in accordance with applicable OSHA standards.
- Hazardous materials procedures are in force and protection of all personnel regarding exposure to acids, corrosives, flammables and toxic material shall be per applicable OSHA standards.

## SUPPLEMENTAL CONDITIONS

- All warning signs, barricades, and tags will be used to the full extent and shall be obeyed.
- All earthmoving and compaction equipment must have working alarms and protective devices in compliance with OSHA standards.
- Subcontractors must provide a Silica Exposure Control Plan, to the extent of applicability to their work.
- It is the subcontractor's responsibility to familiarize themselves with all local and State-specific safety requirements on this project.
- All subcontractor employees will be required to read and sign a mandatory project-specific safety training orientation as a condition of working on the project.
- Working safely through the Covid-19 pandemic has been addressed and addenda to the contract include the following requirements, which are subject to change as best practices continue to evolve:
  - Masks
  - Gloves
  - Temperature scanning (client specific)
  - Criteria for rejection from site
  - Carpooling restrictions
  - Distancing of staff
  - Distancing during breaks

**A FULL COPY OF RC ANDERSEN'S SITE SPECIFIC HEALTH AND SAFETY PLAN AND COVID-19 ADDENDUM WILL BE AVAILABLE ON THE SITE AT ALL TIMES. IN ADDITION, ANY INTERESTED PARTY MAY REQUEST A FULL COPY OF THE PLAN.**

**THE SUBCONTRACTOR IS RESPONSIBLE FOR DISSEMINATING ALL HEALTH AND SAFETY RULES OF THE PROJECT TO THEIR FIELD PERSONNEL AND SUBCONTRACTORS PRIOR TO START OF WORK. IN ADDITION, PROJECT RULES AND REGULATIONS WILL BE DISCUSSED DURING THE WEEKLY SAFETY MEETING. IN THE EVENT THERE ARE CHANGES OR ADDITIONS TO THE SAFETY PROTOCOLS ON THIS PROJECT, BEYOND WHAT IS OUTLINED HEREIN AND IN THE SITE-SPECIFIC SAFETY ORIENTATION, SUBCONTRACTOR FOREMEN WILL BE NOTIFIED AND SHALL BE RESPONSIBLE FOR DISSEMINATING UPDATED INFORMATION TO THEIR WORKFORCE.**

### *RC Andersen's Safety Mission:*

- *Strengthen our industry's safety culture and performance by sharing best practices and resources.*
- *Focus on the impact our safe choices have on our team members, their families, and the communities in which we live and work.*
- *Unite in our commitment to continuously improve our safety culture and send each employee home safe every day.*

*Together, we are building a stronger, safer industry.*

## SUPPLEMENTAL CONDITIONS

### TABLE 1

#### Subcontractor Incident Reporting Breakdown

Severity Level	Subcontractor Incident Reference	Investigation Report Due Dates and Expectations
<b>Significant</b>	<ul style="list-style-type: none"> <li>Fatality(s) (<b>require reporting to OSHA within 8 hours</b>)</li> <li>Injury(s) resulting in either hospitalization, loss of an eye and/or amputations (<b>require reporting to OSHA within 24 hours</b>)</li> <li>Injury(s) requiring medical attention</li> <li>Electrical Contact or Flash either overhead or underground</li> <li>Utility Dig-In resulting in a catastrophe. (i.e. Gas line puncture or underground electric contact)</li> <li>Switching incidents including Red tag Violation, clearance violations and LOTO incidents</li> <li>Damage to property or equipment</li> <li>Public incidents that result in personal injury or property damage</li> <li>Public incidents that result in personal injury or property damage, Environmental exposure hazard to employees and the public</li> <li>Release of hazardous substances (petroleum, PCB, asbestos, etc.)</li> <li>Near misses that could have resulted in a fatality or serious injury</li> <li>Notice of Violation issued or pending</li> <li>Any Immediately Dangerous to Life and Health (IDLH) or observed unsafe act or condition</li> <li>Any incident that results in media coverage</li> <li>Any other Regulatory Agency Reportable Incident not covered above</li> </ul>	<p><b>1 Day</b> Initial report must be submitted to the Project Superintendent within 24 hours.</p> <p><b>3 Days</b> If due date is pushed due to certain circumstances, such as litigation and outside lab tests, must notify RCA immediately</p>
<b>Serious</b>	<ul style="list-style-type: none"> <li>Any Injury resulting in a Days Away or Restricted Time (DART) Case</li> <li>Any Near Miss Incidents that could have resulted in serious injury such as a DART injury that was avoided, damage to property or equipment or the general public</li> <li>Motor vehicle and equipment accidents on job site property</li> <li>Complaint(s) by a worker or member of the public that results in a regulatory agency visit</li> <li>Theft of material, equipment or tools</li> <li>Release of hazardous substances (petroleum, PCB, asbestos, etc.)</li> <li>Any unsafe act or condition that resulted in the issue of a Stop Work or Stop the Job order or has been observed on multiple times occasions and has not been addressed by their Subcontractor's management</li> <li>Utility Strike resulting in serious service outage or interruption to customers</li> <li>Damage to Subcontractor property or equipment not resulting in any condition described above</li> <li>Incidents that result in less than \$5,000.00 in damage to public property</li> </ul>	<p><b>1 Day</b> Initial report must be submitted to the Project Superintendent within 24 hours.</p> <p><b>3 Days</b> If due date is pushed due to certain circumstances, such as litigation and outside lab tests, must notify RCA immediately</p>
<b>Record Only</b>	<ul style="list-style-type: none"> <li>Non-reportable environmental incident</li> <li>An Injury resulting in first aid treatment administered at the site</li> <li>Any Near Miss that could have resulted in a minor first aid case that was avoided, property damage, equipment damage, or having no environmental impact</li> <li>Multiple minor unsafe conditions or work practices observed</li> <li>Vandalism</li> <li>Utility strike not resulting in serious service outage or interruption to customers</li> <li>Damage to Subcontractor property or equipment not resulting in any condition described above</li> </ul>	<p><b>1 Day</b> If due date is pushed back due to certain circumstances, such as litigation and outside lab tests, must notify RCA</p>

# **BLOODBORNE PATHOGENS PROGRAM**

## **Purpose**

This Bloodborne Pathogen Exposure Control Plan has been established to ensure a safe and healthful working environment and act as a performance standard for all employees. This program applies to all occupational exposure to blood or other potentially infectious materials.

## **Scope**

This program addresses all occupational exposure to blood or other potentially infectious materials. Certain Regulatory Agencies and Client Sites requires that all employers that can "reasonably anticipate exposure" of employees to infectious material to prepare and implement a written exposure control plan.

## **Responsibilities**

Project Managers and Superintendents will have an overall responsibility for developing and implementing Exposure control procedures for all projects.

Employees will know what tasks they perform that have an occupational exposure, plan and conduct all operations in accordance with work practices, and develop good personal hygiene habits.

## **Training**

RC Andersen LLC shall ensure that all employees with occupational exposure participate in a training program. Training is conducted for all employees with occupational exposure before initial assignment and within 1 year of previous training. Training shall be provided at the time of initial assignment & within 1 year of an employee's previous training. Training shall include:

- What bloodborne pathogens are; how to protect themselves from exposure
- Methods of warnings (signs, labels, etc.)
- The requirements of bloodborne pathogens The Hepatitis B vaccine shall be made available to all employees that have occupational exposure at no cost to the employee(s).

## **Availability of Procedure to Employees**

All employees will have access to a copy of the exposure control plan. Access to a copy of the exposure control plan shall be provided in a reasonable time, place, and manner. The procedure is reviewed annually and updated whenever we establish new functional positions within our facility that may involve exposure to biohazards.

## **Exposure Determination**

- There are no job classifications in which some or all employees have occupational exposure to bloodborne pathogens that may result from the performance of their routine duties.

# BLOODBORNE PATHOGENS PROGRAM

- Designated employees are trained to render first aid and basic life support. Rendering first aid or basic life support may expose employees to bloodborne pathogens and may require them to adhere to this program.
- In addition, no medical sharps or similar equipment is provided to, or used by, employees rendering first aid or basic life support.
- This exposure determination has been made without regards to the Personal Protective Equipment that may be used by employees.
- A listing of all first aid and basic life support trained employees in this work group shall be maintained at each work site and at each first aid kit.

## Methods of Compliance

### Universal Precautions

Under circumstances in which differential between body fluids is difficult or impossible, all body fluids will be considered potentially infectious.

### Engineering Controls

Engineering and work practice controls shall be used to eliminate or minimize employee exposure. Engineering controls should be examined and maintained or replaced on a regular schedule to ensure their effectiveness. Hand washing facilities shall be readily available at all work locations. If provision of hand washing facilities is not feasible, then an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes shall be provided by RC Andersen LLC.

- Containers for contaminated reusable sharps are not provided since no medical sharps or similar equipment is provided to, or used by, employees rendering first aid or basic life support.

### Work Practice Controls

- Employees shall wash their hands immediately, or as soon as feasible, after removal of potentially contaminated gloves or other personal protective equipment.
- Following any contact of body areas with blood or any other infectious materials, employees wash their hands and any other exposed skin with soap and water as soon as possible.
- Hand washing facilities shall be available. If hand washing facilities are not feasible RC Andersen LLC will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes.
- Contaminated needles and other contaminated sharps should not be handled if you are not AUTHORIZED or TRAINED to do so.
- Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses is prohibited in work areas where there is potential for exposure to biohazardous materials.

# BLOODBORNE PATHOGENS PROGRAM

- Food and drink is not kept in refrigerators, freezers, on countertops or in other storage areas where potentially infectious materials are present.
- All equipment or environmental surfaces shall be cleaned and decontaminated after contact with blood or other infectious materials.
- Specimens of blood or other potentially infectious materials must be put in leak proof bags for handling, storage and transport.
- If outside contamination of a primary specimen container occurs, that container is placed within a second leak proof container, appropriately labeled, for handling and storage.
- Bloodborne pathogens kits are located on top of first aid kits and are to be used in emergency situations by the caregiver. Once the seal is broken on kit and any portion has been used it is not to be reused. Pathogen Kits shall be ordered and replaced promptly. Biohazard bags are identified by stickers and located in the first aid area. Contaminated supplies are to be disposed at once.

## Personal Protective Equipment

When the possibility of occupational exposure is present, PPE is to be provided at no cost to the employee such as gloves, gowns, etc. PPE shall be used unless employees temporarily declined to use under rare circumstances. PPE shall be repaired and replaced as needed to maintain its effectiveness. All PPE shall be of the proper size and readily accessible.

Our employees adhere to the following practices when using their personal protective equipment:

- Any garments penetrated by blood or other infectious materials are removed immediately.
- All potentially contaminated personal protective equipment is removed prior to leaving a work area.
- Gloves are worn whenever employees anticipate hand contact with potentially infectious materials or when handling or touching contaminated items or surfaces.
- Disposable gloves are replaced as soon as practical after contamination or if they are torn, punctured or otherwise lose their ability to function as an "exposure barrier".
- Masks and eye protection (such as goggles, face shields, etc.) are used whenever splashes or sprays may generate droplets of infectious materials.
- Any PPE exposed to bloodborne pathogens shall be disposed of properly.
- PPE shall be used unless employees temporarily declined to use PPE under rare circumstances.
- PPE should be cleaned, laundered & properly disposed of if contaminated.
- **RC Andersen LLC** will repair and replace PPE as needed to maintain its effectiveness.

## **Housekeeping**

Our staff will employ the following practices:



# BLOODBORNE PATHOGENS PROGRAM

- All equipment and surfaces will be cleaned and decontaminated after contact with blood or other potentially infectious materials.
- Protective coverings (such as plastic trash bags or wrap, aluminum foil or absorbent paper) will be removed and replaced.
- All trash containers, pails, bins, and other receptacles intended for use routinely will be inspected, cleaned and decontaminated as soon as possible if visibly contaminated.
- Potentially contaminated broken glassware is picked up using mechanical means (such as dustpan and brush, tongs, forceps, etc.).

## Post-Exposure and Follow Up

If there is an incident where exposure to bloodborne pathogens occurred we immediately focus our efforts on investigating the circumstances surrounding the exposure incident and making sure that our employees receive medical consultation and immediate treatment. The **RC Andersen LLC** Safety Director will investigate every reported exposure incident and provide a written summary of the incident and its causes, and recommendations will be made for avoiding similar incidents in the future. We will provide an exposed employee with the following confidential information:

- Documentation regarding the routes of exposure and circumstances under which the exposure incident occurred.
- Identification of the source individual (unless not feasible or prohibited by law).

Once these procedures have been completed, an appointment is arranged for the exposed employee with a qualified healthcare professional to discuss the employee's medical status. This includes an evaluation of any reported illnesses, as well as any recommended treatment.

*We will forward the following information to the Health care Professional:*

- Description of the incident
- Other pertinent information

After the consultation, the health care professional will provide our facility with a written opinion evaluating the exposed employee's situation. We, in turn, will furnish a copy of this opinion to the exposed employee. The written opinion will contain only the following information:

- Whether Hepatitis B Vaccination is indicated for the employee.
- Whether the employee has received the Hepatitis B Vaccination.
- Confirmation that the employee has been informed of the results of the evaluation.
- Confirmation that the employee has been told about any medical conditions resulting from the exposure incident which require further evaluation or treatment.
- All other findings or diagnoses will remain confidential and will not be included in the written report.

# BLOODBORNE PATHOGENS PROGRAM

Accurate medical records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years and shall include at least the following:

- Employee's name, Social Security number and employee number.
- Employee's Hepatitis B vaccination status, including vaccination dates.
- All results from examinations, medical testing and follow-up procedures, including all health care
- professional's written opinions.
- Information provided to the health care professional.
- Any Hepatitis B Vaccine Declinations.

Training records shall be maintained for 3 years from the date on which the training occurred and shall include at least the following:

- Outline of training program contents.
- Name of person conducting the training.
- Names and job titles of all persons attending the training.
- Date of training.

Information provided to our employees includes:

- The Biohazards Standard itself.
- The epidemiology and symptoms of bloodborne diseases.
- The modes of transmission of bloodborne pathogens.
- Our facility's Exposure Control Procedure (and where employees can obtain a copy).
- Appropriate methods for recognizing tasks and other activities that may involve exposure.
- A review of the use and limitations of methods that will prevent or reduce exposure.
- Selection and use of personal protective equipment.
- Visual warnings of biohazards within our facility including labels, signs and "color-coded" containers.
- Information on the Hepatitis B Vaccine.
- Actions to take and persons to contact in an emergency involving potentially infectious material.
- The procedure to follow if an exposure incident occurs, including incident reporting.
- Information on the post-exposure evaluation and follow-up, including medical consultation.

# BLOODBORNE PATHOGENS PROGRAM

## Vaccination Declination Form

Date:

Employee Name:

I understand that due to my occupational exposure to blood or other potential infectious materials I may be at risk of acquiring Hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline the Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If, in the future, I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

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

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



## **Exhibit C**

### **SUBCONTRACTOR COVID-19 POLICY AND PROCEDURES**

**Effective September, 2022**

#### ***GUIDELINES FOR ALL ACTIVE RC ANDERSEN PROJECTS: SUBCONTRACTORS / VENDORS / VISITORS / CLIENT SPECIFIC REQUIREMENTS***

RC Andersen takes the health and safety of its employees, vendors, subcontractors and clients very seriously and want to assure you that we are continuing to monitor available U.S. Center for Disease Control and Prevention (CDC) guidance on the Coronavirus pandemic. We are also taking steps to minimize exposure while at work, and to safeguard our operations in the event the situation escalates.

#### **PRECAUTIONS AT JOBSITES:**

We are asking everyone involved to help with our prevention efforts while at work. These efforts include:

- If you have tested positive or are showing symptoms of COVID-19, [isolate immediately](#). Follow link to Isolation and Exposure Calculator. (Updated 08/11/22)
- See the latest CDC guidelines regarding masking indoors in public in areas where the Community Level is high, regardless of vaccination status (updated 08/11/22):  
[https://covid.cdc.gov/covid-data-tracker/#countyview?list\\_select\\_state=all\\_states&list\\_select\\_county=all\\_counties&data-type=CommunityLevels](https://covid.cdc.gov/covid-data-tracker/#countyview?list_select_state=all_states&list_select_county=all_counties&data-type=CommunityLevels)
- Amazon projects require all personnel onsite to wear some form of gloves, standard work gloves are acceptable. Trade-specific work gloves must be worn for required tasks in accordance with applicable local, state, or federal (OSHA) regulations.

#### **TRAVEL RESTRICTIONS**

All personnel must comply with any applicable federal, state, or local quarantine requirements for travelers. Refer to guidance for return travelers provided by the location's local and national health authority. The CDC's recommendations, updated 09/08/22 are available:

<https://www.cdc.gov/coronavirus/2019-ncov/travelers/index.html>

#### **CASE MANAGEMENT**

- After Being Exposed to COVID-19 **START PRECAUTIONS** immediately.
- Wear a [mask](#) as soon as you find out you were exposed
- **Start counting from Day 1**
  - Day 0 is the day of your last exposure to someone with COVID-19
  - Day 1 is the first full day **after your last exposure**

#### **TAKE PRECAUTIONS**

- Wear a high-quality [mask](#) or respirator (e.g., N95) any time you are around others inside your home or indoors in public<sup>1</sup>
- Do not go places where you are unable to wear a mask. For travel guidance, see CDC's [Travel](#) webpage.

## **CONTINUE PRECAUTIONS**

- 10 Full Days
- You can still develop COVID-19 up to 10 days after you have been exposed
- **Take extra precautions if you will be around people who are more likely to get very sick from COVID-19.**
- Watch for symptoms
  - fever (100.4°F or greater)
  - cough
  - shortness of breath
  - [other COVID-19 symptoms](#)
- **If you develop symptoms**
  - [isolate immediately](#)
  - [get tested](#)
  - stay home until you know the result
- **GET TESTED Day 6**
  - Get tested at least 5 full days after your last exposure

<b>IF YOU TEST POSITIVE</b>	<b>IF YOU TEST NEGATIVE</b>
Follow the <a href="#">isolation recommendations</a> .	<b>Continue taking precautions through day 10</b>

If you have questions or need additional information, please contact the Human Resources representative.