

UNITED INSULATED STRUCTURES CORP.

SAFETY POLICIES AND PROCEDURES

UNITED INSULATED STRUCTURES CORP.

TABLE OF CONTENTS

Section 1	President's Letter Statement of Safety Policy Introduction
Section 2	Safety Responsibilities A. General
Section 3	Occupational Safety and Health A. General B. Disposition of OSHA Citations
Section 4	First Aid and Medical Services A. General
Section 5	Accident Report and Recordkeeping A. General B. Occupational Injury/Illness C. Property Theft and Damage D. Auto/Truck Accident
Section 6	Accident Investigation A. General B. Conducting the Investigation C. Witnesses D. Evidence E. Photographs, Drawings, and Diagrams F. Accident Report Format G. Summary
Section 7	Subcontractors A. General B. Requirements C. Accident Reporting
Section 8	Safety Education, Training, and Promotion A. General B. New Employee Safety Orientation C. Subcontractor's Safety Orientation D. Weekly Safety Meetings E. Project Safety Bulletin Board F. Hazard Communication Program

Section 9	Safety Inspection <ul style="list-style-type: none">A. GeneralB. RequirementsC. Purpose
Section 10	Safety Enforcement <ul style="list-style-type: none">A. GeneralB. Enforcement Procedures
Section 11	Drug/Alcohol Policies & Procedures <ul style="list-style-type: none">A. Statement of Company PoliciesB. Enforcement ProceduresC. Enforcement of RulesD. Procedures for Drug or Alcohol Testing and Consequences of a Positive TestE. Disciplinary Action for Violations of RulesF. Policies Regarding Voluntary Participation in Drug and Alcohol Treatment ProgramsG. Conclusion
Appendix A	Schedule of Measurable Amounts of Prohibited Substances
Section 12	Personal Protective Equipment <ul style="list-style-type: none">A. GeneralB. Requirements
Section 13	Lockout/Tagout <ul style="list-style-type: none">A. GeneralB. RequirementsC. Procedures
Section 14	Aerial Lifts <ul style="list-style-type: none">A. GeneralB. Requirements
Section 15	Ladders <ul style="list-style-type: none">A. GeneralB. Requirements
Section 16	Scaffolding <ul style="list-style-type: none">A. GeneralB. RequirementsC. Hold Harmless Agreement(s)D. Steel Frame Shoring Safety RulesE. Maintenance Procedures

Section 17	Welding and Cutting A. General B. Requirements
Section 18	Excavation and Trenching A. General B. Requirements Table I - Angle of Repose Table II - Shoring Techniques
Section 19	Floors, Wall Openings and Stairways A. General B. Requirements C. Guarding of Wall Openings
Section 20	Confined Space Entry A. General B. Requirements
Section 21	Assured Grounding/GFCI Program A. General B. Requirements
Section 22	Fire Protection A. General B. Small Projects C. Large Projects
Section 23	Respiratory Protection Program A. Purpose B. Responsibility - Program Administration C. Medical Evaluation D. Requirements For A Minimal Acceptance Program E. Training F. Maintenance and Care of Respirators
Section 24	Fall Protection A. Purpose B. Scope C. Requirements D. OSHA News Release

Section 1

President's Letter

Introduction

A. General

B. Purpose

C. Scope

UNITED INSULATED STRUCTURES CORP.



5430 St. Charles Road
Berkeley, IL 60163
FAX 708/544-8274
708/544-8200

TO: ALL EMPLOYEES

SUBJECT: SAFETY PROGRAM

As a member of our organization, you automatically accept a moral obligation to your fellow employees and an economic obligation to the company to see that operations under your care, custody, and control are carried out in an efficient and safe manner.

Along with other responsibilities, safety consciousness must always exist in your thinking and planning. Because of this obligation, you must not only prevent obvious unsafe acts on the part of those you work with, but you must anticipate potential hazards. After an accident occurs, it is too late to prevent it. All employees must recognize that working in an unsafe manner is counter-productive. Most important, each employee is encouraged to demonstrate leadership ability by setting a good example.

To make our approach to safety more effective and uniform throughout the organization, you are receiving this manual, outlining and formalizing our safety program. We feel this will be a useful tool to help in understanding and discharging our mutual responsibilities.

Very truly yours,

Lawrence L. Lantero, Jr.

Lawrence L. Lantero, Jr.
President

INTRODUCTION

A. General

Sections 1 through 11 of the Safety Manual address the administrative aspects of the United Insulated Structures Corp. (UISC) Safety Program.

Sections 12 through 24 of the Safety Manual addresses the safety requirements that are essential for attaining our goals of voluntary compliance with OSHA Statutory Regulations and to provide a safe and healthful working environment for all United Insulated Structures Corp. (UISC) employees and our subcontractors' employees

The effectiveness of our Safety Program is highly dependent upon the understanding of the total program and efforts put forth by Field Management/Supervision as well as the participation and cooperation of the craftsmen and subcontractors.

B. Purpose

The safety program has been developed to serve as a guide in achieving the following:

1. The uniform coordination of a safety program which will be in compliance with established industry practices and implementation of OSHA Safety and Health Standards.
2. Establish clear lines of communication, responsibility and accountability for safety programming throughout UISC.
3. Elimination of personal injury, general liability, and property damage losses, thus reducing losses to UISC and UISC Subcontractors, Owners, and Customers.
4. Strive to develop realistic and workable safety policies.

C. Scope

The administrative portion of the Safety Manual outlines responsibilities insofar as field implementation, along with insurance and governmental reporting functions. It is imperative that the outlined policies be adhered to throughout UISC.

Section 2

Safety Responsibilities

A. General

SAFETY RESPONSIBILITIES UNITED INSULATED STRUCTURES CORP.

A. General

It is the desire of management to protect employees from accidental injury and damage to health while working for our organization. This matter must receive top priority attention from all levels.

Safety is the functional responsibility of each supervisor who has the right to demand safe operations. **It is the Supervisor's obligation to insure that employees work safely.** Notwithstanding the responsibilities of supervision, each level of our organization is accountable for safe performance.

Duties and responsibilities of all personnel under the company's Safety Program are the following:

1. Safety Administrator/ Safety Consultant

- a. Provide all levels of management with the services and technical advice needed for proper administration of the Safety Program.
- b. Develop technical guidance and interim programs to identify and remove physical hazards from construction sites.
- c. Formulate, recommend and administer approved changes to the accident prevention program.
- d. Prepare and distribute to all department heads regular reports on the status of safety.
- e. Advise all levels of management on matters pertaining to safety, to include establishing a "chain of command" and a network to communicate safety matters within the organization.
- f. Maintain an adequate accident report system, personally investigating serious accidents, and taking corrective action to eliminate accident cause.
- g. Coordinate with project management personnel in the safety training of employees.
- h. Conduct inspections to observe unsafe conditions or work practices.
- i. Maintain outside professional contacts.
- j. Insure there is full compliance with applicable Federal, State, and Local regulations.

SAFETY RESPONSIBILITIES UNITED INSULATED STRUCTURES CORP.

- k. Recommend programs and activities that will develop and maintain incentives for and motivation of employees in safety.
- l. Recommend disciplinary procedures for repeat violators of safety rules.

2. Project Manager/Superintendent

A good safety, health, and loss prevention record at all work sites or field operations will depend, in large part, upon the priority given to these activities by the Manager in charge of the operating unit. These Managers will be held accountable for accomplishing the following safety, health, and loss prevention responsibilities.

- a. Actively support and enforce all corporate, group, and local safety, health, and loss prevention policies, practices, and procedures, giving them equal emphasis and weight with matters of production, costs, and quality.
- b. Ensure that supervisory personnel have been delegated adequate safety, health, and loss prevention responsibility and authority for which they are held accountable as part of their performance review.
- c. Include safety, health, and loss prevention issues as part of the established agenda for supervisory staff meetings.
- d. Review and approve all accident investigation reports to ensure an acceptable level of quality and timeliness and establish a follow-up system to ensure that recommended corrective actions have been implemented.
- e. Monitor site safety inspections reports to ensure an acceptable level of quality and timely implementation of corrective actions.
- f. Monitor the effectiveness of the sites Safety and Health Committee (if applicable) activities by regular review of meeting documentation and periodically observing and participating in these activities.
- g. Monitor the effectiveness of the site's safety and health training programs by regular review of training documentation and periodically observing and participating in these activities.

SAFETY RESPONSIBILITIES UNITED INSULATED STRUCTURES CORP.

- h. Develop and implement site specific safety and loss prevention incentive programs and recognition for good performance (if applicable).

3. Claims Manager

- a. Process all Workers' Compensation, Property and General Liability accident reports. Distribute copies of the Employers First Report of Injury or Illness. Supervisors Accident Investigation Report, and General Liability and Property Damage Report to the Safety Administrator.
- b. Maintain records of all bills, dates of treatment, compensation payments, dates worked and not worked, etc. in the workers' compensation accident file.
- c. Receive and review all incoming medical bills for accuracy and authenticity before processing for payment.
- d. Maintain all records of occupational injuries and illnesses in accordance with the OSHA Recordkeeping Requirements.

4. Foreman

Management at each location has the major responsibility for establishing definite safety, health, and loss prevention, policies, procedures for safe work practices and safe working conditions. Most of what is planned and established will reach the employee on the job by way of the first line supervisor, who is in frequent and close contact with his/her employees. The first line supervisor is held accountable for the following safety, health, loss prevention responsibilities:

- a. By personal example, communicate and demonstrate to the employees the importance of working in a safe and healthful manner.
- b. By knowledgeable of all General Safety Rules and Safe Work Practices and enforce them.
- c. Enforce the wearing of required personal protective equipment.
- d. Insist upon good housekeeping practices and accept nothing less.
- e. Ensure that employees understand and properly follow all established safe work practices and procedures.

SAFETY RESPONSIBILITIES UNITED INSULATED STRUCTURES CORP.

- f. Provide both group and individual employee recognition for good safety performance.
- g. Include safety, health, and loss prevention in all job planning activities.
- h. Respond to all employee safety suggestions and take immediate action to correct any unsafe physical condition of which you become aware. The employee should be given feedback on the action taken.
- i. Immediately correct any unsafe action and work practice observed. Never allow an unsafe act to go unchallenged.
- j. Instruct each new and/or transferred employee on the hazards of the job or task that the employee will be assigned and document this orientation.
- k. Plan, organize, and conduct an effective Tool Box Safety Talk meeting at least once a week. Document each of these sessions that are held by giving the date, subject matter, and list of attendees.
- l. Immediately investigate all accidents or near miss incidents to determine causes and develop corrective actions needed to prevent recurrence. These reports must be completed in a quality manner and communicated to the immediate supervisor and other appropriate staff.
- m. Conduct a weekly, formal safety inspection of the job site/location and fully document this inspection. Ensure that proper corrective measures are initiated and that progress is being made by consistent follow-up.
- n. Call Safety Administrator immediately when an accident is reported and fax reports into office immediately. Follow-up by sending original reports to the office by regular mail.

5. Employee

Each employee has a responsibility for their own safety, the safety of their co-workers, and the community in which they are operating.

In the performance of their duties and responsibilities, they are expected to observe all safety, health, and loss prevention rules, practices, and

SAFETY RESPONSIBILITIES UNITED INSULATED STRUCTURES CORP.

procedures, as well as specific instructions related to the safe and efficient performance of their work.

An effective and viable safety, health, and loss prevention program will be attained only when all employees are safety conscious and keenly aware, both mentally and physically, of the potential hazards of their environment.

6. Subcontractors

The provisions of these safety responsibilities apply to our subcontractors and their employees working on projects for our company.

Section 3

Occupational Safety and Health

A. General

B. Disposition of OSHA Citations

C. OSHA Inspection Outline

OCCUPATIONAL SAFETY & HEALTH

A. General

1. Occupational Safety and Health Act

- a. It is the policy of United Insulated Structures Corp. (UISC) to achieve voluntary compliance with the Occupational Safety and Health Act of 1970 (29 CFR 1926/1910 standards).
- b. Field supervisory personnel are to become familiar with the requirements of this Act, and work diligently to meet the stated objectives.
- c. As additions, deletions, or other changes relating to this legislation are made, management will be advised of such changes by the Safety Administrator. Supervision will then institute action as necessary.

2. Occupational Safety and Health Standards

- a. Pursuant to authority provided under the Occupational Safety and Health Act, **minimum** health and safety standards have been developed (29 CFR Part 1926/1910).
- b. The above referenced standards have been adopted by UISC and every effort to achieve compliance will be made. If and when conditions or practices in violation of these standards are discovered, corrective action will be initiated by management.

3. Occupational Safety and Health Compliance Inspections

- a. Periodically, OSHA Safety Officers may visit work places for the purpose of ensuring that employers are complying with the above referenced health and safety standards. Inspections are intended to serve the overall remedial purpose of the Act, which is to make the employer's work place as safe as reasonably possible. Based on the results of the inspection, General Contractors, Owners, and Subcontractors may be subjected to monetary penalties for violation of the OSHA standards.
- b. Inspections are basically in three categories:
 - (1) Fatalities, serious accidents or reported incidents. This type of inspection occurs after the employer has notified OSHA that a specific work related incident has taken place.
 - (2) General Inspections. These inspections are scheduled by the Occupational Safety and Health Agency. They are

OCCUPATIONAL SAFETY & HEALTH

random and unannounced. Usually the inspection involves the entire work site and may occur twice a year.

- (3) Complaints. This type of an inspection occurs as a result of the inspection agency receiving a complaint concerning an alleged unsafe or unhealthy condition. These complaints are generally registered by an employee or a representative of the employee; e.g., union steward, business agent, etc. While in most instances the Inspector limits his inspections to complaint particulars, he/she may choose to conduct an inspection of the entire work site.
 - (a) Safety Administrator and/or Safety Consultant are to be promptly notified when an OSHA Inspector visits the site.

4. OSHA Compliance Officer

- a. The OSHA Compliance Officer may inspect work sites at any reasonable hour, interview employees, and collect environmental samples. Requests to review documents will be met with complete cooperation in the presence of the Safety Administrator and/or Safety Consultant.
- b. When an OSHA Compliance Officer intends to inspect any UISC operation he/she will be permitted to do so after an opening conference has taken place and upon determination, by the appropriate UISC representatives, that the inspection shall take place. At the time of the opening conference, the OSHA Compliance Officer must present his/her credentials and state generally the nature and scope of the inspection. **UISC employees attending the opening conference must record the name of the OSHA Compliance Officer and his/her area director.**
- c. OSHA Compliance Officers shall, at all times, be treated in a courteous and businesslike manner.
- d. Only give direct responses to direct questions asked by the Compliance Officer. **DO NOT offer any additional information** to the compliance officer.

B. Disposition of OSHA Citations.

After an inspection of a UISC workplace has been conducted by an Occupational Safety and Health Administration Compliance Officer, the Compliance Officer may find conditions in violation of the OSHA Act. If it is determined that a violation does exist, UISC will be issued a Citation and Notification of Penalty

OCCUPATIONAL SAFETY & HEALTH

which explains in detail the exact nature of the violations and any associated penalties. The purpose of this procedure is to serve as a guide to adequately and promptly respond to the citation in accordance with the Occupational Safety and Health Act.

1. Citation and Notification of Penalty along with all additional notices, letters, etc. received from the Occupational Safety and Health Administration will be forwarded to the UISC Safety Administrator.
2. The Safety Administrator, and/or proper legal council, will complete the following:
 - a. Investigate all reasons(s) why the citation was issued.
 - b. Determine if adequate corrective action/abatement has taken place.
 - c. Assure that proper posting requirements have taken place; i.e. when we receive a Citation and Notification of Penalty, we must post a copy of the citation at or near the place where employees meet or congregate at the jobsite and main office locations. The citation must remain posted for three (3) working days or until the violation is corrected, whichever is longer.
3. It is the policy of UISC to request an informal conference to discuss issues related to all Citations and Notification of Penalties, levied against our Company. The Safety Administrator, and/or proper legal council, will notify the OSHA Area Director of our desire to have an informal conference. A "Notice To Employees" regarding the informal conference must be posted on the job next to the citation posting at this time.
4. The Safety Administrator, and/or proper legal council, will notify the OSHA office issuing the citation, in a "Letter of Corrective Action", of the appropriate corrective action we have taken. This will take place within the time set forth on the citation. That notification will include:
 - a. Abatement steps taken.
 - b. Dates of abatement.
 - c. Adequate supporting documentation, i.e. drawings, photographs, purchase/work orders related to abatement, air sample results, etc.
5. It may become necessary to contest a citation wholly or in part if we feel the citation is incorrect or inappropriate. We will first attempt to resolve the conflict at the informal conference. If the issue(s) remain unresolved and we opt to continue the contest, the following applies:

OCCUPATIONAL SAFETY & HEALTH

- a. The Safety Administrator must submit a "Notice of Intent to Contest" in writing within fifteen (15) working days after receipt of the citation and notice of penalty. The Notice of Intent to Contest must clearly state:
 - What is being contested. List the specific items, i.e. citation, penalty amount, etc.
 - The penalty.
 - The abatement date.
- b. A proper contest suspends our legal obligation to abate and/or pay only those items being contested.
- c. Once we file a Notice of Intent to Contest, our case is officially in litigation.

C. OSHA Inspection Outline

The following is an outline of what to do when you are involved in an OSHA Compliance Inspection:

1. Notify your office when OSHA arrives.
2. Determine if a subpoena should be required.
3. See the Inspector's credentials and record his name, serial number, and name of his/her supervisor.
4. Opening conference - learn purpose and scope of the inspection. Ask for copies of the applicable safety and health standard, as well as a copy of the complaint, if any.
5. Be sure your OSHA poster is up, your assured grounding material is available, your hazard communication program is on hand, and your lockout procedure is available, if applicable.
6. Do not disclose any information which can be used against you and do not ask the Inspector if something is or is not in compliance. Be polite, yet firm.
7. Walk-around inspection - a supervisory employee should accompany the Inspector. The Inspector has the right to consult with a reasonable number of employees concerning safety and health matters. Take photos of the same items photographed by the Inspector. They can talk with your employees in private and ask for their home phone numbers (workers are not obligated to discuss anything with OSHA).

OCCUPATIONAL SAFETY & HEALTH

8. Make a note of every violation that the Inspector points out. Correct, if possible, all violations on the spot and be sure the Inspector's records reflect the correction.
9. Note the amount of time the Inspector was on your project.
10. Subcontractors should be present during inspection of their work.
11. Closing conference - go over every item for which you will be cited. Check the item against the standard. Ask for complete explanation if it is not absolutely clear. Should you disagree with the Inspector's position, politely yet firmly point out your opinion.
12. Do not discuss the fine! This could be construed as a bribe.
13. Types of citations - serious, other-than-serious, repeat, failure to abate, willful and regulatory (egregious). Expect a follow-up inspection if your citation is classified serious, repeat, failure to abate, or willful.

Section 4 || **First Aid and Medical Services**
A. General

FIRST AID AND MEDICAL SERVICES

A. General

1. Injury Reporting

All employees shall be instructed to report all injuries or illnesses, regardless of their apparent severity, to their immediate supervisors as soon as accidents occur. These shall be logged for future reference, as instructed in Section 5 of this Safety Manual.

The listing below states United Insulated Structures Corp.'s (UISC) procedures that must be followed in order to provide efficient care and follow-up to all employees.

1. All serious job-related injuries must contact 911 immediately!
2. Following any other job-related injuries, see Section 5 Item A for proper documentation of injuries.

2. First Aid Equipment

An adequate first aid kit shall be supplied. The contents of the kit should be checked weekly and, if needed, the supplies shall be replaced at once. These supplies should be centrally located near a telephone is possible, and every worker familiarized with the area designated.

Section 5 | **Accident Report and Recordkeeping**

- A. General**
- B. Occupational Injury/Illness**
- C. Property Theft and Damage**
- D. Auto/Truck Accident**

ACCIDENT REPORTING AND RECORDKEEPING

A. General

1. The United Insulated Structures Corp. (UISC) Project Manager/Superintendent is responsible for ensuring that the appropriate safety-related reports concerning occupational injury/illness, general liability, property damage, theft, and auto/truck accidents are properly executed and maintained. Copies of the following will be immediately forwarded to the Safety Administrator in the Safety Department as required.
 - a. Jobsite Injury/First Aid Log (Exhibit A)
 - b. Injured Employee Accident Report (Exhibit B)
 - c. Supervisor's Accident Report (Exhibit C)
 - d. Witness' Accident Report (Exhibit D)
 - e. Medical Treatment Authorization/Doctor's Release (Exhibit E)
 - f. Property Damage Report (Exhibit F)
 - g. Driver's Accident Report Form (Exhibit G)
 - h. Employee Orientation Sheet (Exhibit H)
 - i. Notice to Employee - Corrective Action (Exhibit I)
 - j. Hazardous Energy Control Inventory (Exhibit J)
 - k. Hold Harmless Agreement (Exhibit K)
 - l. Safety Audit Report Form (Exhibit L)
 - m. Incident Investigation Report (Exhibit M)

B. Occupational Injury/Illness

1. In the case of a workers injury accident, the Project Manager/Superintendent may rely on his/her Job Field Supervisor to determine if the injury or illness is serious enough to require medical attention. If only jobsite first aid is required and the employee **does not** request a doctor's attention, then the following steps will be taken.
 - a. First aid should be rendered to the injured employee by a certified first aid person or a capable individual, preferably a manager or supervisor.
 - b. Record the injury on the Jobsite Injury/First Aid Log (Exhibit A), which must be posted at all times in a conspicuous location.
 - c. If for any reason the injured employee cannot return to his normal duties after first aid has been administered or if the original injury later develops complications that require him/her to see a doctor, the steps in the following section will be followed.

ACCIDENT REPORTING AND RECORDKEEPING

2. Workers' Compensation/Doctor-Treated Cases

When Workers' Compensation accidents require the injured to seek medical attention, the following steps are to be taken.

- a. Notice to Doctor/Doctor's Release Form (Exhibit E) is to be completed by the injured employee's supervisor and given to the injured employee, or person assisting the injured employee, prior to the employee being sent to the medical facility for treatment. If the injury is serious enough that a delay to the hospital can further endanger the injured employee's health, the employee's supervisor or his representative should take the completed form to the treating physician as soon as possible. It is particularly important that each employee fully understands that the lower portion of the form, Doctor's Release, must be completed by the attending physician and returned to the jobsite office by the employee before the individual can be allowed to return to work.
- b. Immediately telephone the Safety Administrator at 708/544-8200 and report the accident.
- c. Complete the Accident Reports (Exhibits B, C, & D). (Note that if immediate medical attention is required, the victim must be escorted to the medical facility by a responsible supervisor or co-worker who will remain with the victim until released from the emergency room. The escort will be responsible to report to the supervisor if the victim is advised in writing by the attending physician not to attend work the following day.)
- d. Upon completion of the forms, deliver or fax them immediately to the Safety Administrator at 708/544-8274. Send the originals via mail to:

Attn: Safety Administrator
United Insulated Structures Corp.
5430 St. Charles Road
Berkeley, IL 60163

It is very important that the forms be completed accurately and timely, and received by fax. If you should have any questions when filling out the forms, call either the Safety Administrator or the Safety Consultant for assistance.

C. Property Theft and Damage

In the event damage or theft occurs to property, tools, equipment, or materials owned or leased by UISC's Property Damage Report (Exhibit F) must be filled

ACCIDENT REPORTING AND RECORDKEEPING

out immediately upon discovery of the loss and forwarded to the Safety Administrator. This form is also to be used in the event that a UISC/Subcontractor operation damages property owned by others, i.e. striking underground utilities, damaging a general public vehicle or injuring a non-employee such as another tradesman or a pedestrian.

D. Auto/Truck Accident

For an auto accident involving any company vehicles, the driver of the vehicle must fill out the Driver's Accident Report (Exhibit G) form located in the glove box of the vehicle at the time of the accident. If the vehicle involved is assigned to a Project Manager/Superintendent or to that individual's jobsite, the Project Manager/ Superintendent must insure the accident report has been properly filled out. The completed report form must be immediately sent to the Safety Administrator.

Section 6

Accident Investigation

- A. General**
- B. Conducting the Investigation**
- C. Witnesses**
- D. Evidence**
- E. Photographs, Drawings, and
Diagrams**
- F. Accident Report Format**
- G. Summary**

A. General

1. Each occupational injury or illness and/or accident resulting in property damage or third party liability will be investigated thoroughly by the field management. In addition, field management shall submit a report detailing the incident and preventive measures taken to prevent a recurrence. **This report is due for completion the same day of the accident.**

The purpose of any accident investigation is to identify all possible contributing causes so that future incidents that are similar in nature can be prevented, and to determine all the facts which may have a bearing on legal liability. **Investigations should be directed toward fact finding, not fault finding.**

The investigation should begin as soon as the necessary notifications have been accomplished. A written Accident Investigation Report will be submitted to the Safety Administrator by Field Supervision pursuant to Parts II and III below.

If the accident is serious, i.e. results in a fatality or hospitalization, involves five or more employees required to receive medical attention, or if third parties are involved, investigation report will be submitted to the Safety Administrator by the Field Supervisor pursuant to Parts II and III below. The Safety Administrator must be **immediately** contacted so he/she can assist with Parts IV and VII, ensuing. If the Safety Administrator is not available, the Project Manager/Superintendent shall be contacted to assist with the investigation as it applies to Parts IV and VII.

B. Conducting the Investigation

1. **Secure the accident area so that none of the evidence is disturbed until after the accident investigation has been completed.**
2. Discuss the accident with the injured employee.
3. Discuss the accident with other employees who may have seen the accident.
4. Carefully consider the following points:
 - a. What was the injured employee doing prior to and at the time of the accident? Was this in pursuit of his regular duties?
 - b. Was the employee properly instructed as to the manner in which to perform his duties? Did he do the work in accordance with instructions?

- c. Did any other employee contribute to this accident?
- d. Was the equipment or machinery which the injured employee was using in good condition? Was it properly guarded? Was it suited for the purpose for which it was being used? Had it been inspected or repaired recently?
- e. Was ample and sufficiently lighted work space provided?
- f. Were proper housekeeping conditions maintained?
- g. How is the same type of work done by other employees?
- h. Is there a safer way in which this work could be done?
- i. Was the injured employee in good health and did he appear normal on the day of the accident.

C. Witnesses

- 1. All personnel associated with the operation and other eye witnesses to the accident shall be interviewed and written statements taken.
- 2. The information obtained during these interviews must be limited to direct knowledge of what was observed. Opinions and hearsay information does not represent factual findings.
- 3. Each individual interviewed should be requested to sign a statement of his or her recorded sequence of events that lead up to and included the accident.
- 4. The following information should be obtained from each individual interviewed:
 - a. Name, employer, address, and occupation or trade. Where can he/she be reached during day/night?
 - b. Date, time and place of interview.
 - c. Where the person being interviewed was at the time of the accident.
 - d. A complete narrative of what the witness knows of the accident.
 - e. What operational activity or other events were taking place prior to and at the time of the accident.

- f. What materials (lumber, conduit, etc.), equipment (ladder, drill, etc.), or conditions (icy conditions, labor disputes, etc.) were involved.
 - g. What facts may have caused the accident? Answers must be as objective as possible.
 - h. Was there a pre-existing known and/or reported unsafe condition or actions associated with the accident. If so, when was it reported, to whom, and was there any action taken.
5. Upon conclusion of the interview, review the statement with the witness and clear up any possible discrepancies. The statement should then be dated, signed, and witnessed by a third party. A written witness statement will accompany the accident report forms.

D. Evidence

- 1. In the case of serious accidents and/or serious third party involvement, it is in the best interest of all parties that all physical evidence not be disturbed or tampered with, regardless of the circumstances involved.
 - a. All efforts must be made to secure the area of the accident as soon as possible after the occurrence to prevent any alteration of the scene prior to the investigation.
 - b. If any equipment, tools, and/or materials are involved with the accident, they shall be removed from service and placed in safekeeping after the immediate investigation has concluded.

E. Photographs, Drawings, and Diagrams

- 1. Sufficient photographs shall be taken as soon as possible after the serious accident by the Safety Administrator or by Field Management if he/she is not available, since conditions rapidly change. Each photograph shall be properly labeled with the following information: description and location of principal item(s), date(s), and time and name of photographer.
- 2. The investigator should endeavor to provide a series of photographs which supply a maximum of useful information and which will enable the viewer to understand how the accident occurred. Several long range general photographs should also be taken.
 - a. As the scene is examined, various objects will appear to have relation to the injury. Tools, blood stains, and similar items should be photographed before they are moved or cleaned up. Two photographs are needed for a significant object which is less than 12" in length. The first should be at close range to obtain a fairly large image of the article; also, the use of a ruler laid alongside of

the object shows exact measurement of the object. The second photograph should be taken with the camera approximately 6' from object in order to bring the background in view and show the object in perspective.

3. Any contiguous areas which may have been used by the accident victim should be considered part of the scene of the accident. The nature of the accident will determine the extent to which the environments need be photographed for a better understanding of the events which led to the accident.
4. Drawings and diagrams should be marked up and/or sketches prepared to indicate the location of the accident noting where the photographs were shot. All diagrams should be drawn as close to scale as possible. Secure all blueprints or engineering drawings of the accident site.

F. Accident Report Format

1. The investigative report shall be completed as soon as possible. An accurate, detailed narrative description of the operation being performed at the time of the accident is extremely important. It is important to remember that a minor miscalculation of movement may have been the generating force that triggered the sequence of events which resulted in the accident.
2. Investigative reports should reveal the following:
 - a. What happened?
 - b. When did it happen?
 - c. Where did it happen?
 - d. Why did it happen?
 - e. Who did it happen to?
3. A sequence of all pertinent facts by the time of their occurrence should be embodied in the report.
 - a. Time - Activity prior to accident.
 - b. Time - Occurrence.
 - c. Times - Emergency notification of first aid, safety, ambulance, etc.
 - d. Times - Arrival at scene of first aid team, ambulance, etc.

- e. Time - Initial treatment or rescue efforts began.
- f. Time - Arrival of ambulance at medical facility, medical treatment, surgery.

G. Summary

1. At the conclusion of a major accident investigation, a meeting will be held at the work site of the incident to assure the cause has been determined and proper corrective action has been initiated.
2. The following personnel should attend this meeting:
 - a. Project Manager and/or his Supervisor.
 - b. Job Field Supervisor.
 - c. Safety Administrator or Safety Consultant.
 - d. Construction Manager/General Contractor and Site Safety Coordinator, if applicable.
 - e. Owner's Representative(s) (optional).
3. The OSHA field office having jurisdiction must be notified within twenty-four (24) hours in case of:
 - a. Accident resulting in a fatality.
 - b. Accident resulting in the hospitalization of five or more employees per occurrence.
 - c. Notification of the OSHA office will be done by the Safety Administrator or Safety Consultant **ONLY**.
4. If all the facts surrounding an accident have been determined, it should not be difficult to decide what action is necessary to prevent other employees from having the same type of accident

Section 7

Subcontractors

A. General

B. Requirements

C. Accident Reporting

A. General

It will be the responsibility of the Project Manager/Superintendent to ensure that the terms and conditions of all Subcontractor agreements are adequately met. Since each Subcontractor shall be directly responsible for initiating and maintaining a safe workplace for his employees, the Subcontractor's compliance with the UISC Safety Manual rules, OSHA, and the Terms and Conditions of the Subcontractor's Agreement is mandatory.

B. Requirements

1. Compliance with and maintenance of insurance as specified in the contract.
2. Compliance with all accepted health, safety and fire protection standards.
3. The Subcontractor shall prohibit the use of unsafe machinery, tools, materials, or equipment. Items identified as unsafe shall be locked out and tagged to render them inoperable or they shall be removed from service.
4. The Subcontractor shall instruct each of his employees in the recognition and avoidance of unsafe conditions.
5. In accordance with the OSHA 1926.59 Hazard Communication Standard, the Subcontractor shall instruct each of his employees required to handle or use flammable liquids, gasses, toxic materials, poisons, caustics, and other harmful substances in their safe handling and use. The employee shall be made aware of the potential hazards, the necessary personal hygiene, and the personal protective measures required.
6. The Subcontractor shall instruct each of his employees required to enter confined spaces as to the nature of the hazards involved, the necessary precautions to be taken, and the proper use of protective and emergency equipment required. The Subcontractor shall supply his own monitoring devices for the determination of air quality.
7. The Subcontractor shall designate a representative to be responsible for the safety and health of his employees.
8. The Subcontractor is responsible for providing and enforcing the use of necessary personal protective equipment according to the hazards of the work being performed, in accordance with the Occupational Safety and Health Standards, and the UISC Safety Manual.
9. The Subcontractor shall conduct periodic inspections of all equipment and work areas in accordance with OSHA. Appropriate records shall be maintained.

C. Accident Reporting

The Subcontractor shall report all injuries occurring to their employees and all accidents involving the general public resulting from their operations to UISC site management. Property damage and theft losses should also be reported.

All appropriate Subcontractor paperwork must be forwarded to UISC's Safety Administrator immediately.

- Section 8** | **Safety Education, Training, & Promotion**
- A. General**
 - B. New Employee Safety Orientation**
 - C. Subcontractor's Safety Orientation**
 - D. Weekly Safety Meetings**
 - E. Project Safety Bulletin Board**
 - F. Hazard Communication Program**

SAFETY EDUCATION, TRAINING, AND PROMOTION

A. General

A proven means for instituting and reinforcing a safety program is through a carefully planned and conveyed program of safety education, training, and informational activities. These activities are to be presented as logically and systematically as possible to insure that all employees know their obligations and responsibilities as they apply to the overall safety effort.

United Insulated Structures Corp. (UISC) advocates different means in which these activities relating to work hazards and their controls are conveyed to the employees. These activities include, but are not limited to, the following:

1. New employee safety orientation by the Job Field Supervisor.
2. Subcontractors' safety orientation.
3. Weekly "Tool Box" safety meetings.
4. Project safety postings.
5. Ongoing competent person training.

B. New Employee Safety Orientation

1. All newly hired UISC employees will be required to attend a safety orientation by the Job Field Supervisor prior to beginning their duties. This includes craftsmen, new supervisors, office staff, and Subcontractor personnel.
2. Employee Safety Guidelines will be provided to each new employee. These guidelines will include UISC's safety philosophy and employee safety responsibilities. The new employee must acknowledge that he/she has been provided with the Employee Safety Guidelines and will follow the rules and regulations by signing the statement at the end of the statements. Send all signed statements to the UISC Safety Administrator when completed.
3. The new employee orientation process requires Hazard Communication Training. The Job Field Supervisor must explain to the new employee his/her rights described under "Employee Information" contained in the UISC Hazard Communication Program Manual. This orientation training must be documented in the Hazardous Substance Training Log located in the program manual.
4. To assure all requirements have been covered with the new employee, the safety orientation checklist must be completed, signed, and kept by the Safety Department in the employee training file (Exhibit H).

SAFETY EDUCATION, TRAINING, AND PROMOTION

5. The new employee must fill out all applicable tax forms. The Job Field Supervisor will then send all completed new employee orientation forms to the Payroll Department.

C. Subcontractor's Safety Orientation

1. Subcontractors engaging in contracts with UISC projects will receive an orientation as to the UISC Safety Program and the Subcontractor's safety responsibilities as they apply to the terms and conditions of the Subcontractor's agreement.
2. The Subcontractor will be informed of the job rules required by UISC and be expected to follow those rules.
3. All Subcontractor employees will be required to attend a weekly "Tool Box" safety meeting.
4. All Subcontractors will be informed as to their requirements under the auspices of the OSHA Hazard Communication Standard; i.e. they must provide the UISC jobsite management with all applicable material safety data sheets pursuant to their operations under contract.

D. Weekly Safety Meetings

1. The Job Field Supervisor chooses a day and time to conduct the safety meeting. This day of the week and time should remain constant throughout the duration of the job. First thing Monday morning or Friday afternoons is recommended. All employees should be asked if any injuries had occurred during that week.
2. The meeting is usually conducted by the Job Field Supervisor, however, on occasion a "guest" speaker may be desirable, i.e. a crane operator if riggings and hand signals become an issue on the job.
3. Choose a safety topic that is pertinent to the job, i.e. discuss ladder safety if the men are using ladders on the job.
4. Always discuss accidents/incidents on the job that occurred the previous week (if any). The reasons why they occurred and how they could have been prevented must be emphasized.
5. Review with the men the safety violations noted by the Job Field Supervisor during day-to-day observations or planned inspections.

SAFETY EDUCATION, TRAINING, AND PROMOTION

6. Always encourage the men to take part in the meeting by asking for suggestions or by asking the men to relate personal experiences regarding the meeting safety topic(s).
7. Normally, the meeting should not be a lengthy affair, but should be of sufficient duration to allow all in attendance to understand the subject matter being discussed. Usually ten (10) minutes is adequate.
8. All employees in attendance must sign an attendance roster that outlines the topic(s) that were discussed. Any recommendations or suggestions offered by the meeting attendees must be documented on or be attached to the meeting roster with corrective action or follow-up taken by the Job Field Supervisor.
9. The meeting documentation must be forwarded to the Safety Administrator on a monthly basis for proper filing.

E. Project Safety Bulletin Board

1. Each new project of significant size and duration will receive an "OSHA Kit". In order to promote safety and maintain a highly visible safety profile on the worksite, each "permanent" project shall establish a Safety Bulletin Board. Bulletin boards may be fabricated on the job, or office trailer walls may be used. Bulletin boards will be of sufficient size to accommodate the following material:
 - a. Emergency phone numbers, i.e. fire department, ambulance, hospital, etc.
 - b. Minimum wage notice.
 - c. Appropriate Occupational Safety and Health and Workers' Compensation Information posters.
 - d. Equal Employment Opportunity Law.
 - e. Appropriate safety posters.
 - f. Safety responsibilities.
 - g. Enforcement policy.
2. Bulletin boards will be located where they are readily accessible and may be easily read by employees.
3. The board will be located or constructed in such a manner to provide protection for the information placed on it, i.e.. weatherproof.

SAFETY EDUCATION, TRAINING, AND PROMOTION

4. It is the responsibility of the Job Field Supervisor to see that the material on the bulletin board is kept current.

F. Hazard Communication Program

1. At the start of each new project all employees must be given an orientation on The UISC Hazard Communication Program. When new employees are added to the job or transferred from another job, each employee must be given this orientation.

These sessions should take place the morning of arrival on the site. Orientation training can be administered in a group session to save time by reducing the number of required sessions.

2. The Job Field Supervisor should become familiar with the UISC Hazard Communication Program prior to conducting any training sessions.

The Job Field Supervisor should request the assistance of the UISC Safety Administrator if he/she still has any questions after reviewing the program.

3. The Job Field Supervisor may get as entailed as he/she feels is necessary when putting on this training, however; only the following items are required to be covered:

- a. Employee information as outlined in the UISC Hazard Communication Program Manual.
- b. Explain to the employee how to read a Material Safety Data Sheet (MSDS) and explain our labeling system. Clarify any questions that employee(s) may have in regard to these items, i.e. make sure he/she understands.
- c. Discuss the hazardous materials commonly used by UISC and subsidiaries, informing that employee as to the hazards associated with those materials and the personal protective equipment or special specific procedures are needed when using same.
- d. Methods and observations that may be used to detect the presence or release of a hazardous chemical in the work, i.e. visual appearance or odor of hazardous chemicals when being released.
- e. The action that an employee must take if a chemical spill is detected, i.e. leave the area and immediately report the incident to his/her supervisor.

SAFETY EDUCATION, TRAINING, AND PROMOTION

4. It is important that a record be kept of all training situations. This includes large group training, Tool Box sessions, or individual training sessions. Please use the Hazardous Substance Training Log located in the UISC Hazard Communication Program Manual.

5. As necessary, all employees shall be given new or updated information regarding chemicals being used on the project and personal protective equipment requirements. This training can take place as part of a regularly scheduled Tool Box safety meeting, prior to those chemicals being used on the job. It is important that our employees are informed of the chemical being used by UISC and also those of other trades on the jobsite where UISC employees may be exposed. An MSDS must be requested from other trades in this instance and kept on file

Section 9

Safety Inspection

A. General

B. Requirements

C. Purpose

A. General

To achieve the safest possible working conditions on our projects and to meet the Occupational Safety and Health Administration's requirements for in-house safety inspection, the following weekly safety inspection policy and procedure has been developed. The inspection must be completed by an individual that holds a supervisory level position or higher.

B. Requirements

1. The individual conducting the site inspection must become familiar with OSHA 1926 and 1910 Standards applicable to the operation(s) they are inspecting.
2. A time should be set aside during the week when activities are relatively high. This will give the inspector the opportunity to observe several activities and conditions at critical times.
3. All deficiencies noted must be documented by completing the Site Inspection Report Form. The inspector must make the employee(s) affected immediately aware of the deficiencies noted and see that corrective action or exposure abatement has taken place.
4. These inspections should become part of the job field supervisor's weekly safety meetings. The employees should be made aware of all unsafe conditions and/or procedures noted. It should also be emphasized that repeated violations of the noted deficiencies will not be tolerated.
5. Each inspection must identify all unsafe acts and work conditions and identify the party responsible for correcting the deficiencies. Corrective measures taken or lack thereof must be documented, including the date of corrective action. Noted deficiencies must be tended to and corrected immediately.
6. The Site Inspection Report form will be kept on the jobsite.
7. It is all employees' responsibility to perform daily inspections of tools, equipment, and work areas, and to correct or notify the proper supervision of the unsafe areas.

C. Purpose

The Site Inspection Report will serve to provide the following benefits:

1. Determine unsafe acts and conditions that lead up to accidents and to take corrective action.

2. Serve to inform the Subcontractors of unsafe acts and conditions that are not under our control. We should ask the Subcontractors, in writing either on this form or by a separate follow-up memo, to implement corrective action.

3. Serve as documentation that we have addressed all unsafe acts or conditions discovered. This will be very important should we be cited by an Occupational Safety and Health Administration Compliance Officer for safety violations not in our control.

Section 10 || **Safety Enforcement**
A. General
B. Enforcement Procedures

SAFETY ENFORCEMENT

A. General

The success of the United Insulated Structures Corp.'s (UISC) Safety Program will be, to a large extent, dependent upon employee cooperation and strict compliance with established safety rules, regulations, policies, etc. While management and labor share safety responsibilities, management must establish and enforce a policy by which habitual safety offenders are disciplined.

Those individuals who repeatedly refuse to cooperate with our efforts in providing a safe place of employment for all employees will be notified in writing and subject to removal from the jobsite.

The safety orientation provided to "new hires" shall intone the verbal message that violations of the rules and regulations contained within the Occupational Safety and Health Standards and/or the UISC Safety Manual practices may result in disciplinary action.

B. Enforcement Procedures

1. First Offense - Verbal Warning

In those instances where an employee is observed committing an unsafe act, the worker is to be informed that his actions are jeopardizing his or her fellow workers' safety. The exact nature of the violation and what is acceptable is to be thoroughly detailed to the employee. The violation is to be brought to the attention of the area superintendent and an informal written note made and sent to the UISC Safety Administrator to be filed in the employee's personnel file.

2. Second Offense - Warning Letter

In the event that an employee is observed committing a second unsafe act, a formal written warning will be issued. This letter will explain, in detail, the nature of the safety violation. The letter will be copied to the Payroll Department and area superintendent. Employee and steward must sign the form in appropriate places.

3. Third Offense - Removal From Project

If an employee continues to engage in unsafe work practices and/or willfully violates safety procedures, he is subject to immediate removal from the jobsite or termination.

Section 11

Drug/Alcohol Policies & Procedures

- A. Statement of Company Policies**
- B. Enforcement Procedures**
- C. Enforcement of Rules**
- D. Procedures for Drug or Alcohol Testing and Consequences of a Positive Test**
- E. Disciplinary Action for Violations of Rules**
- F. Policies Regarding Voluntary Participation in Drug and Alcohol Treatment Programs**
- G. Conclusion**

Schedule of Measurable Amounts of Prohibited Substances

DRUG/ALCOHOL POLICIES & PROCEDURES

A. STATEMENT OF COMPANY POLICIES

United Insulated Structures Corp. (UISC) is committed to providing a safe working environment for all its employees. UISC recognizes the safety hazards which are created by drug and alcohol abuse and the presence of drugs and alcohol in the work place.

UISC also recognizes that alcoholism and drug dependence are highly complex illnesses which, under most circumstances, can be successfully treated.

Accordingly, the purpose of the following Policy is to establish and maintain a drug-free, alcohol-free, and safe work environment for all company employees and to provide employees with an opportunity to obtain appropriate treatment for drug or alcohol dependence.

This program is administrated by UISC's Risk Management Department.

B. RULES

UISC has adopted the following regulations:

1. All employees must report to work in a physical condition that will enable them to perform their work in a safe and efficient manner.
2. All employees are prohibited from using, possessing, dispensing or receiving "prohibited substances" on the "Company Premises."
 - The term "prohibited substances" (as used throughout this Policy) means and includes illegal drugs (including controlled substances, look-alike drugs, designer drugs, synthetic drugs, unauthorized prescription drugs, prescription drugs not used for their prescribed purposes, as well as alcohol).
 - The term "Company Premises" (as used throughout this Policy) includes all property, facilities, land, buildings, structures, automobiles, trucks and other vehicles owned, leased or used by the Company, including construction job sites at which the Company is providing services or otherwise has responsibility.
3. All employees are prohibited from reporting to work with a "measurable amount" (See Appendix A) of a prohibited substance" in their system.
 - The term "measurable amount of a prohibited substance" (as used throughout this Policy) is defined in the attached "Schedule of Measurable amounts of prohibited substances."

DRUG/ALCOHOL POLICIES & PROCEDURES

4. All employees who are taking “prescribed medication which may affect an employee’s ability to perform the employee’s work in a safe and efficient manner” are required to notify their immediate supervisor that they are taking such medication.
 - The term “prescribed medication which may affect an employee’s ability to perform the employee’s work in a safe and efficient manner” means any prescription medication where the label indicates that the drug may cause drowsiness, imbalance, or includes a caution with regard to operating a vehicle or machinery, or any prescription medication which the employee knows or has reason to believe may impair his/her ability to perform the work safely and efficiently.

C. ENFORCEMENT OF RULES

UISC, in order to enforce the Rules, reserves the following rights:

1. Right to Search and Inspect

- a. UISC has the right at all times, under all circumstances, and for any reason to search and inspect the Company Premises.
- b. UISC has the right to search and inspect employees and their personal property, including, but not limited to, their lockers, baggage, desks, tool boxes, clothing and vehicles located on the Company Premises if, and only if, the Company management (i.e., its supervisory personnel) has a reasonable suspicion that the employee has violated one of the Rules.
- c. UISC will report the results of any search or inspection, which results in the discovery of prohibited substances, to the appropriate law enforcement authorities.

2. Right to Require Drug/Alcohol Tests

UISC has the right to require an employee to submit to drug and alcohol testing (as described in Section D below) if any one or more of the following occurs:

- a. If the employee is involved in or has directly or indirectly caused an “accident”. The term “accident” shall mean any event or occurrence resulting in injury to a person or damage to property.
- b. If the employee is involved in or has directly or indirectly caused an “incident”. The term “incident” shall mean an event or occurrence which has all the attributes of an accident, except that no injury was caused to a person or damage caused to property.

DRUG/ALCOHOL POLICIES & PROCEDURES

- c. If UISC has a “reasonable suspicion” that a violation of a Rule has occurred. UISC shall have such a “reasonable suspicion” in the event of excessive tardiness, excessive absenteeism, and/or erratic behavior such as noticeable imbalance, incoherence, and/or disorientation.
 - d. If an employee has notified UISC that the employee has successfully completed a drug or alcohol dependence treatment program, then UISC may require the employee to be tested at any time during the twelve-month period following the successful completion of their program.
 - e. If such testing is reasonable requested or required by a customer of UISC pursuant to the customer’s written policy or program.
3. Right to Obtain Information Concerning Prescription Medication and to Reassign or Require Leave of Absence

UISC reserves the right to request the employee to identify the type of prescription medication and the dosage of prescription medication which is being taken by the employee and the period of time during which the employee expects to be taking the medication. If UISC determines that the prescription medication is likely to impair the employee’s ability to perform the employee’s assigned work safely and efficiently, then UISC may either reassign the employee to other work, if such other appropriate work is available, or UISC may place the employee on an unpaid leave of absence until appropriate work for the employee becomes available.

D. PROCEDURES FOR DRUG OR ALCOHOL TESTING AND CONSEQUENCES OF A POSITIVE TEST

If an employee is requested to submit to a drug and alcohol test, then the testing will be conducted in the following manner:

1. When The Tests will be Required

UISC, through one of its management or supervisory personnel (i.e., a Corporate Officer, Risk Manager, Project Manager, and Superintendent) will orally request the employee to submit to a drug or alcohol test and explain to the employee the reason why the tests are being requested. The employee then is obligated to promptly submit to the tests as soon as practicable. In this regard, a UISC representative will be entitled to accompany the employee to the testing facility.

2. Who Will Take the Samples

The employee will be required to provide blood and urine samples. The samples will be taken by medical personnel located at various facilities. The medical personnel may witness the actual taking of the samples. The

DRUG/ALCOHOL POLICIES & PROCEDURES

employee will be required to execute a consent for the facility to take the samples.

3. Who Will Test the Samples

The tests on the samples will be conducted by an independent, certified or licensed, drug testing facility selected by the Company. The employee will be required to sign a consent form authorizing the testing facility to conduct the tests. The tests will be conducted at the expense of the Company.

4. What Tests will be Performed

The initial screening procedure or test will be performed using an enzyme immunoassay emit test (“Emit Test”). If the Emit Test indicates the presence of a measurable amount of prohibited substances, then a second gas chromatography with mass spectrometry test (“GC/MS Test”) will be utilized.

5. What Constitutes a “Positive” Test for a Prohibited Substance

If the GC/MS confirms the presence of a measurable amount of a prohibited substance, then the test shall be deemed to be “positive” for the prohibited substance.

6. Consequences of a “Positive” Drug or Alcohol Test

If an employee’s test is positive for a prohibited substance, then the employee shall be deemed to have violated UISC’s Rule prohibiting the employee from reporting to work with a measurable amount of a prohibited substance in the employee’s system.

7. Your Rights Concerning Testing

In connection with the testing procedures, you have the following rights:

- a. UISC shall direct the testing facility to preserve part of the original samples for the testing by the employee at the employee’s expense. (UISC shall not be bound by the results of any additional tests conducted by the employee, but UISC may take such results into consideration in connection with the disciplinary action).
- b. UISC will provide the employee with copies of the test results.
- c. UISC will provide the employee with written notification that the employee’s test was “positive” for a prohibited substance.

DRUG/ALCOHOL POLICIES & PROCEDURES

- d. UISC will keep the results of the tests confidential, to the extent practicable. UISC will disclose the results of the tests only to persons who have a legitimate need to know the test results.

E. DISCIPLINARY ACTION FOR VIOLATIONS OF RULES

1. An employee who uses, possesses, dispenses or receives prohibited substances on UISC premises shall be terminated.

Example: If an employee has prohibited drugs, alcohol or paraphernalia on UISC premises, then the employee will be terminated even if the employee's physical ability to perform the work at the time has not been impaired.

2. An employee who reports to work with a measurable amount of a prohibited substance in the employee's system will be terminated.

Example: If an employee tests positive for a prohibited substance, then the employee will be terminated.

3. If an employee refuses to cooperate with the drug or alcohol testing procedures, then the employee will be terminated.

Example: If the employee refused to submit to testing, refuses to sign a consent for testing, unreasonably postpones or obstructs the testing procedure, or sabotages a sample, then the employee will be terminated.

4. If the employee refuses to permit UISC to conduct a search or inspection permitted under this Policy, then the employee will be terminated.

Example: If UISC has a reasonable suspicion that an employee has violated a Rule and the employee refuses to permit UISC to conduct a search and inspection of the employee and his property which is located on UISC premises, then the employee will be terminated.

5. If an employee fails to report the employee's use of prescribed medication which will or may impair the employee's ability to perform the employee's job in a safe and efficient manner, then the employee shall be subject to disciplinary action, including suspension without pay and, depending upon the circumstances, termination.

Example: If an employee does not report the use of a prescription medication which the employee has been informed may cause drowsiness, imbalance or otherwise impair the employee's ability,

DRUG/ALCOHOL POLICIES & PROCEDURES

then the employee will be subject to disciplinary action but not necessarily termination.

NOTE: The “Examples” set forth above are merely illustrations of the disciplinary action which will be taken for violations of the Rules’ the “Examples” are not intended to be exhaustive and do not limit the scope of application of the Rules.

F. DISCIPLINARY ACTION FOR VIOLATIONS OF RULES

Employees, who have a drug or alcohol dependence problem, are encouraged to seek help for the problem before the problem results in a situation which will require disciplinary action. If an employee, prior to committing a violation of a Rule, voluntarily notifies UISC that the employee wishes to participate in a drug or alcohol dependence treatment program, then UISC will assist the employee in locating a suitable treatment program.

If an employee wishes to obtain confidentially additional information concerning drug or alcohol abuse treatment programs throughout the area, the employee should contact UISC’s Employee Assistance Program Coordinator.

If the treatment program requires the employee to spend time away from work, then UISC shall provide the employee with an unpaid leave of absence for the purpose of participating in the treatment program.

If the treatment program requires the employee to spend time away from work, then UISC shall provide the employee with an unpaid leave of absence for the purpose of participating in the treatment program.

If an employee participates in such a program, UISC will keep the employee’s participation confidential to the extent practicable.

The employee shall be responsible for the costs of the treatment program. UISC believes that most group health insurance plans provide insurance coverage for qualified treatment programs.

An employee who successfully completes a treatment program shall be reinstated if UISC has work for which the employee is qualified when the employee completes the program.

Employees returning to work after successfully completing the treatment program will be subject to drug and alcohol tests without prior notice for a period of twelve months after the employee’s return to work.

G. CONCLUSION

The employee’s compliance and cooperation with this Policy, including cooperation with Company-requested drug and alcohol testing and search and

DRUG/ALCOHOL POLICIES & PROCEDURES

inspection procedures, is a condition of employment. The failure of an employee to comply and cooperate with this Policy will be grounds for disciplinary action, including termination.

UISC will administer this Policy in a balanced and non-discriminatory manner.

UISC can, with your cooperation, provide and maintain a safe, drug-free and alcohol-free work environment for all employees.

UNITED INSULATED STRUCTURES CORP.
DRUG/ALCOHOL POLICIES & PROCEDURES

APPENDIX A

SCHEDULE OF MEASURABLE AMOUNTS OF PROHIBITED SUBSTANCES

<u>Substance</u>	<u>Per Emit Test</u>	<u>Per GC/MS Test</u>
Amphetamines	1000 ng/ml	500 ng/ml
Barbiturates	300 ng/ml	150 ng/ml
Benzodiazepines	300 ng/ml	150 ng/ml
Marijuana	100 ng/ml	15 ng/ml
Cocaine	300 ng/ml	150 ng/ml
Methaqualone	300 ng/ml	150 ng/ml
Propoxyphene	300 ng/ml	150 ng/ml
Ethadone	300 ng/ml	50 ng/ml
Opiates	300 ng/ml	300 ng/ml
Phencyclidine	25 ng/ml	25 ng/ml
<hr/>		
Alcohol	.10% by volume	

Section 12 || **Personal Protective Equipment**
|| **A. General**
|| **B. Requirements**

PERSONAL PROTECTIVE EQUIPMENT

A. General

Project Management must ensure that all employees are provided maximum protection against the inherent hazards of the construction industry. The use of personal protective equipment is an effective barrier between a person and potentially dangerous objects, substances, processes, etc. The following items of personal protective equipment and dress are required on all United Insulated Structures Corp. (UISC) construction projects.

B. Requirements

1. Dress
 - a. Construction safety footwear; i.e. no street or tennis shoes.
 - b. Long pants or trousers; i.e. short pants are unacceptable.
 - c. Shirt must be worn at all times.
 - d. The wearing of hard hats will take place at **ALL** times.
 - e. Safety glasses will be worn at **ALL** times.
2. When elevated work is part of the contract, the use of a safety harness and lanyard is mandatory when proper guard rails are not present. Also, when working in a man lift bucket, the employee(s) in the bucket must be tied off via safety harness and lanyard secured either to the bucket or boom.
3. Goggles or full face protection is mandatory when engaging in any cutting, welding, chipping, grinding, sawing, etc. This protection is also mandatory when working other trades doing this type of work and/or when our employees are doing any hot work or overhead work.
4. Working hot (energized circuits) is always discouraged. If it becomes necessary to work "hot", the employee must first be given a task orientation by his supervisor. The employee working "hot" must have on a full face shield, gloves, and long sleeve shirt for the duration of the operation. The face shield and gloves must be rated for the electrical operation being performed.
5. Hearing protection will be required for employees working in areas of excessive noise or with tools that generate excessive noise. There are two types of recognized hearing protectors available for use in effectively reducing noise exposure.
 - a. Ear plugs

PERSONAL PROTECTIVE EQUIPMENT

b. Ear muffs

In most instances, ear plugs are acceptable hearing protectors. Cotton plugs are not acceptable and shall not be used.

6. Respirator protection shall be used when employees are or may be exposed to hazardous concentrations of gasses, vapors, smoke, fumes, mists, or dust. The wearing of contact lenses during the use of respiratory protection in contaminated atmospheres shall be prohibited.
 - a. Identify the substance against which protection is necessary. Check the MSDS.
 - b. Determine the physical health and limitations of the individual who will use respiratory protection, through a physical examination.
 - c. OSHA/NIOSH approval must be specified for all respiratory devices to be used. The proper cartridge must be selected for the particular exposure.
7. Should it become necessary to work over or near water where the danger of drowning exists, employees shall be provided and wear U.S. Coast Guard approved life jackets or buoyant work vests. A ring buoy with at least 90 feet of line shall be provided within 200' of any operation. At least one life saving skiff shall also be available at the work site.

Section 13 || **Lockout/Tagout**
A. General
B. Requirements
C. Procedures

LOCKOUT/TAGOUT

A. General

The power source of any equipment, machine, or process to be installed, repaired, serviced, or removed from service shall be isolated to eliminate all potentially hazardous energy by locking and tagging out prior to conducting the work. Management must ensure that field supervision fully understands and follows the safest and most feasible method of lockout/tagout for each particular job to be performed. Field supervision must adequately instruct and supervise each employee prior to and during work requiring this procedure. Employees shall demonstrate a complete understanding of the procedure prior to performing their duties.

B. Requirements

1. Develop safe work practices for de-energizing circuits and equipment to prevent electric shock or other injuries resulting from direct or indirect electrical contacts when the work is performed near or on equipment circuits which are or may be energized. These practices shall be consistent with the nature and extent of the associated electrical hazards and developed before the circuits and equipment are de-energized.
2. De-energize live parts to which an employee may be exposed before the employee works on or near them, unless it can be demonstrated that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. In such cases, the procedures outlined in Item 9 for working on energized equipment shall be followed.
3. Disconnect all electric sources from circuits and equipment upon which work is to be performed. Control circuit devices, such as pushbuttons, selector switches and interlocks, may not be used as the safe means for de-energizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.
4. Release stored electrical energy in circuits and equipment which might endanger personnel. Capacitors shall be discharged and high capacitance elements shall be short-circuited and grounded.
5. Place a lock and a tag on each disconnecting means used to de-energize circuits and equipment on which work is to be performed. The lock shall be attached so as to prevent persons from operating and disconnecting means unless they resort to undue force or use of tools. The tag shall contain a statement prohibiting unauthorized operations of the disconnecting means and removal of the tag.
6. If a lock cannot be applied, a tag may be used without a lock, provided the following additional requirements are met:

LOCKOUT/TAGOUT

- a. Tags are of a distinctive, employer-standardized design that clearly prohibits unauthorized energizing of circuits and removal of the tag.
 - b. Additional safety measures, such as removal of isolating circuit elements, blocking of controlling switches, or opening extra disconnecting devices, are employed.
 - c. Only one circuit or piece of equipment is de-energized.
 - d. The tagout period does not extend beyond the work shift.
 - e. All persons who have access to controlling devices are trained and familiar with the employer's tagging procedures.
7. A qualified person shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted. The qualified person shall use test equipment to test circuit elements and electrical parts to which employees will be exposed and shall verify that the circuit elements and equipment parts are de-energized before work is allowed to proceed. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage backfeed even though specific parts of the circuit have been de-energized and presumed to be safe.
 8. Before circuits or equipment are re-energized, even temporarily, a qualified person shall conduct tests and visual inspections, as necessary to verify all tools, electrical jumpers, shorts, grounds, and other such devices have been removed so that the circuits and equipment can be safely energized. A visual determination shall be made to assure all employees are clear of circuits and equipment before they are energized.
 9. Only qualified persons may work on electric circuit parts or equipment that have not been de-energized in accordance with Items 1 through 8 above. Such persons shall be capable of working safely on energized circuits and shall be familiar with proper use of special precautionary techniques, personal protective equipment, insulating and shielding materials, and insulating tools. Safety-related work practices shall be developed which are suitable to work being performed and for the voltage level of the exposed conductors or circuit parts.
 10. Employees who may reasonably be expected to face a risk of injury due to electric shock or other electrical hazards shall be trained in and familiar with the safety-related work practices outlined in Items 1 through 7 above that pertain to their respective job assignments. Furthermore, qualified persons, i.e. those permitted to work on or near exposed energized parts,

LOCKOUT/TAGOUT

shall, in addition to the above training requirements, also be trained in and be familiar with the following:

- a. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
- b. The skills and techniques necessary to determine the normal voltage of exposed live parts.
- c. Safety-related work practices used to protect employees against contact with energized circuit parts directly with any part of their body or indirectly through other conductive objects.

C. Procedures

1. General

Lockout is the preferred method of isolating machines or equipment from energy sources. To assist in developing a procedure which meets the requirements of the standard, however, the following simple procedure may be used when there are limited number of types of machines or equipment, or there is a single power source. For more complex systems, a more comprehensive procedure will need to be developed, documented, and utilized by our company.

2. Purpose

This procedure establishes requirements for the lockout or tagout of energy isolating devices. It should be used to ensure that the machine or equipment is isolated from all potentially hazardous energy and locked out or tagged out before employees perform any servicing or maintenance activities where the unexpected energization, start-up, or release of stored energy could cause injury.

3. Responsibility

Appropriate employees shall be instructed in the safety significance of the lockout (or tagout) procedure by our designated trainer, as well as how to use those procedures. Only authorized employees may lockout or tagout machines or equipment. Authorized employees are identified on each Hazardous Energy Control Procedure form.

Each new or transferred affected employee and other employees whose work operations are or may be in the area should be instructed in the purpose and use of the lockout or tagout procedure. Affected employees are identified on each Hazardous Energy Control Procedure form. They will be notified by the authorized employees whenever a lockout or tagout

LOCKOUT/TAGOUT

will occur, as well as when the equipment or machine is being placed back in service.

It is the responsibility of management to approve all Hazardous Energy Control Procedures.

4. Preparation for Lockout or Tagout

Obtain the proper Hazardous Energy Control Procedure for the equipment or machine to be locked out or tagged out. Determine if changes need to be made to the procedures based on changes to the equipment and/or personnel.

Identify all affected employees that may be involved in the impending lockout or tagout.

Obtain necessary locks (and/or tags) and devices to implement the lockout and/or tagout.

5. Sequence of Lockout or Tagout System Procedure

The specific lockout or tagout procedure for each machine or equipment is detailed on the Hazardous Energy Control Procedure form. This form is used for documentation of our procedures. This document should be referred to before, during, and after a lockout or tagout operation.

The following Sections a. and b. were taken directly from the OSHA Appendix A 1910.147. It is intended to provide general overview of a lockout procedure. Operations that do not need a separate Hazardous Energy Control Procedure may use this procedure.

a. Sequence of lockout or Tagout System Procedure

- (1) Notify all affected employees that a lockout or tagout system is going to be utilized and the reason therefor. The authorized employee shall know the type and magnitude of energy that the machine or equipment utilizes and shall understand any hazards thereof.
- (2) If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).
- (3) Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air,

LOCKOUT/TAGOUT

gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc. (Type(s) of Stored Energy-methods to dissipate or restrain.)

- (4) Lockout and/or tagout the energy isolating device(s) with assigned individual lock(s) and tag(s). (Method(s) Selected, i.e. locks, tags, additional safety measures, etc.)
- (5) After ensuring that no personnel are exposed, and as a check on having disconnected the energy sources, operate the push-button or other normal operating controls to make certain the equipment will not operate. (Type(s) of Equipment checked to ensure disconnection's.)

CAUTION: Return operating control(s) to "neutral" or "off" position after the test (de-energized state).

- (6) The equipment is now locked out or tagged out.

b. Restoring Machines or Equipment to Normal Production Operations

- (1) After the servicing and/or maintenance is complete and equipment is ready for normal production operations, check the area around the machines or equipment to ensure that no one is exposed.
- (2) After all tools have been removed from the machine or equipment, guards have been reinstalled, and employees are in the clear, remove all lockout or tagout devices. Operate the energy isolating devices to restore energy to the machine or equipment.

c. Procedure Involving More Than One Person

In the preceding steps, if more than one individual is required to lockout or tagout equipment, each shall place his/her own personal lockout (tagout) device on the energy isolating device(s). When an energy isolating device cannot accept multiple locks or tags, a multiple lockout or tagout device (hasp) may be used. If lockout is used, a single lock may be used to lockout the machine or equipment with the key being placed in a lockout box or cabinet which allows the use of multiple locks to secure it. Each employee will then use his/her own lock to secure the box or cabinet. As each person no longer needs to maintain his or her lockout protection, that person will remove his/her lock from the box or cabinet. (Names/Job Titles of employees authorized for group

LOCKOUT/TAGOUT

lockout or tagout are detailed in the Hazardous Energy Control Procedure form).

6. **Basic Results for Using Lockout or Tagout System Procedures**

All equipment shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device where it is locked (or tagged) out. Refer to your department safety rules and the plant safety rules for further information. Our company's disciplinary procedures apply to violation of the Lockout/Tagout Program.

7. **Training and Annual Inspection**

a. Training

- (1) Training will be given by the Safety Consultant on an annual basis to all Field Superintendents and/or at each job requiring the implementation of the lockout program.

Affected and authorized employee training will consist of the following elements:

- (2) Review of 1910.174 "The Control of Hazardous Energy" requirements.
- (3) Type and magnitude of energy sources.
- (4) Purpose and use of the Hazardous Energy Control Procedures.
- (5) Nature and limitations of tags.
- (6) How to isolate equipment/machinery for lockout/tagout.
- (7) Conditions for restarting machine/equipment or removing tags.

This training will last approximately one and one half hours.

The lockout/tagout training will be given to affected employees as part of orientation.

Authorized employees will receive training prior to their initial involvement with any lockout or tagout operation.

LOCKOUT/TAGOUT

Retraining will be given for authorized and affected employees whenever there is a change in job assignment, a change in machines, equipment or process that presents a new hazard or a change in the UISC Hazardous Energy Control Procedure. Retraining will also be given whenever the annual inspection identifies a deficiency in the procedures.

A list of names and dates of training will be maintained.

b. Annual Inspection

Each year an authorized employee who is not involved in the HECP being inspected will conduct an inspection of the Hazardous Energy Control Procedure (HECP).

This will be accomplished by reviewing the HECP form with authorized employees. In addition, the authorized employee conducting the inspection will observe the actual implementation of the HECP.

When lockout is used, the HECP will be reviewed with each authorized employee. Where tagout is used, HECP will be reviewed with both affected and authorized employees.

8. **Outside Service or Contractor Personnel**

Outside personnel or contractors involved in operations relating to equipment or machinery lockout that affects our employees must submit their energy control procedures to UISC. Affected employees must be trained and notified as outlined in this written program. The responsible Field Superintendent for the affected area will ensure that outside personnel and affected employees are informed of the proper procedure.

9. **Hazardous Energy Control Inventory**

Please see Exhibit J.

Section 14 || **Aerial Lifts**
|| **A. General**
|| **B. Requirements**

A. General

This procedure is established to eliminate accidents caused by the misuse of aerial lifts and to comply with the applicable OSHA Standard 29 CFR 1926.556. It is the Job Field Supervisor's responsibility to assure that all aerial lifts used on the job are in good condition and adequate for the particular job that they are to perform. The results described below apply to aerial lifts.

B. Requirements

1. Aerial lifts must never be modified for any purpose other than what they are designed for unless the modification has been certified in writing by the manufacturer or engineer.
2. All aerial lifts must be inspected for condition when they arrive on the jobsite. Aerial lifts are unacceptable if:
 - a. Platform lifts do not include top and mid-rails, and 4 inch toe boards.
 - b. The controls stick or produce unusual jerky motions of the work platform or basket.
 - c. The aerial lift does not include an operators manual with load limits.
3. When using a boom/basket type aerial lift the operator **must wear a harness with lanyard**. The lanyard must be attached to either the basket or boom. Tying off to adjacent poles, structures, or equipment is unacceptable.
4. Employees shall always stand firmly on the floor of the aerial lift and shall not sit or climb on the edge or use planks, ladders, or other devices for a work position.
5. Only authorized and trained employees shall operate an aerial lift.
6. The brakes shall be set before using an aerial lift.
7. If the aerial lift was designed to include outriggers and the outriggers have either been removed, damaged, or are not working properly, then the aerial lift shall not be used. Outriggers shall be fully extended and positioned on pads or a solid surface.
8. Wheel chocks shall be installed before using an aerial lift on an incline provided they can be safely installed.

Section 15 || **Ladders**
|| **A. General**
|| **B. Requirements**

A. General

The following requirements are established to help prevent injuries from improper design, use, and maintenance of ladders. It will be the responsibility of management to assure that employees understand the proper use of ladders and to routinely inspect ladders for proper maintenance and design.

B. Requirements

1. Use the proper type of ladder. **DO NOT** use makeshift ladders, such as boxes, barrels, chairs, etc.
2. Purchase only wooden or fiberglass ladders. Metal and metal reinforced ladders must **NOT** be used when working on or near electrical wires.
3. Ladders should be regularly inspected for defects, i.e. missing cleats, cracked rungs, broken spreaders, etc. Defective ladders shall be dismantled and discarded.
4. Straight ladders should have grippers or cleats. They shall be tied off at the top and blocked at the bottom, if possible.
5. The two highest steps on any ladder must not be climbed on.
6. If a straight ladder is used to climb onto a work platform, it must extend at least 3 feet above the working level.
7. Extension ladders must be placed at a ratio of 4 to 1. For every 4 feet in height, the ladder bottom must be 1 foot out from the perpendicular.
8. If a ladder is placed near a door or aisle, a person should hold it at the bottom, and/or warning signs and barricades put out.
9. Do not paint wooden ladders with solid color paints. This may mask cracks in the wood and make them hard to see. Clear wood preservative can be used to protect bare wood.
10. Do not overreach. Move the ladder as your work progresses. Do not jump on or slide the ladder while you are on it. Go back down and move the ladder over.
11. Always face the ladder and use both hands while ascending or descending the ladder.
12. Only one person is permitted to work from an ordinary straight ladder or stepladders.

13. All non-job manufactured wood and metal ladders must be marked or stamped to show they were manufactured in compliance with ANSI Standards #A14.1-1968 (Safety Code for Portable Wood Ladders) and #A14.2-1956 (Safety Code for Portable Metal Ladders).
14. For further compliance with OSHA regulations, see 29 CFR 1910.25-26 and 29 CFR 1926.450.

Section 16

Scaffolding

- A. General**
- B. Requirements**
- C. Hold Harmless Agreement(s)**
- D. Steel Frame Shoring Safety Rules**
- E. Maintenance Procedures**

A. General

Scaffolding is a very important aspect of the construction industry. Good judgment on the part of the management is imperative to assure that the placement selection and grade of materials used in erecting scaffolding takes place. Below are the requirements for proper scaffold erection.

B. Requirements**1. Scaffolding (General)**

- a. The footing of scaffolding must be sound and rigid, capable of supporting the weight. Unstable objects such as bricks or blocks shall not be used in the support.
- b. Only competent persons shall erect, dismantle or move a scaffold.
- c. Scaffold and components shall be able to support at least four times the intended load.
- d. Guard rails shall be 2" x 4" (or equivalent), 42" high with supports not to exceed 8' on center. Toe boards shall be 4" high.
- e. Any components of a scaffold damaged or weakened from any cause shall immediately be repaired or replaced.
- f. The maximum span for 2" x 12" planks shall be 8'.
- g. All planking or platforms shall be overlapped a minimum of 12" and secured from movement.
- h. An access ladder or other safe access shall be provided.
- i. Scaffold planks extend over their end support at least 6" but not more than 12".
- j. The legs or uprights of scaffolds shall be plumb and rigidly braced to prevent swaying.
- k. Overhead protection shall be provided for men on a scaffold exposed to overhead hazards.
- l. Wire or wire rope used for scaffold suspensions shall be capable of supporting six times the intended load.
- m. Shore or lean-to scaffolds shall not be used.

2. Scaffolds (Tubular Welded Frame)

- a. The scaffold and its components shall be designed to support four times the rated load.
- b. Scaffold shall be braced and the braces shall be of the proper length so that the scaffold can remain plumb and rigid.
- c. Scaffold legs shall be set on adjustable bases, plain bases, or other foundations adequate to support the maximum rated load.
- d. To prevent movement, the scaffold shall be secured to the building or structure at intervals not to exceed 30' horizontally and 26' vertically.

3. Scaffolds (Needle Beam)

- a. Wood needle beams shall not be less than 4" x 6" with greatest dimension placed in vertical direction. Metal beams or the equivalent may be used.
- b. Ropes and hangers shall be provided for supports. The span between supports on the needle beam shall not exceed 10' for 4" x 6" timbers. Rope support shall be equivalent to 1" diameter first grade manila rope.
- c. The platform span between the needle beams shall not exceed 8' when using 2" scaffold planks. For spans greater than 8', platforms shall be designed for the special span. The overhang of each of the platform planks shall not be less than 6" or more than 12".
- d. When needle beam scaffolds are used, the planks shall be secured against slipping.
- e. All unattached tools, bolts, washers, nuts, etc., used on needle beam scaffolds shall be kept in containers properly secured to prevent falling.
- f. One end of a needle beam scaffold may be supported by a permanent structural member. The scaffold shall be securely attached.
- g. Any employee working on a needle beam scaffold who is not afforded a positive means to prevent falling 6 or more feet shall be tied off.

4. Scaffolds (Float)

- a. A float scaffold shall be hung from overhead supports by means of ropes and a substantial platform having diagonal bracing underneath resting upon and fastened to two parallel plank bearers at right angles to the span.
- b. Float scaffolds shall not be used to support more than three men and a few light tools such as those needed for riveting, bolting, cutting and welding.
- c. The platform shall not be less than 3' wide and 6' long made of 3/4" plywood equivalent to American Plywood Association Grade B-B, Group I, exterior or similar material.
- d. The two supporting bearers shall be 2" x 4" or 1" x 10" rough selected lumber or better. They shall be free of knots and shall project 6" beyond the platform on both sides and the ends of the platform shall extend 6" beyond the bearers.
- e. An edging of wood not less than 3/4" x 1-1/2" or equivalent shall be placed around all sides of the platform to prevent tools from rolling off.
- f. Supporting ropes shall be 1" manila rope or equivalent with connections such that the platform cannot slip and securely fastened to an overhead support. Rope shall be hitched around one end of the bearer and passed under platform where it is hitched again to other end of bearer.
- g. All employees working on floats shall use safety belts with lanyards tied off to prevent a free fall of less than 6'.

5. Boatswain's Chairs

- a. The chair seat shall be not less than 1" x 12" x 24".
- b. Seat shall be reinforced on underside by cleats securely fastened to prevent the board from splitting.
- c. The two fiber rope seat slings shall be of 5/8" diameter reeved through the four seat holes so as to cross each other on the underside of the seat.
- d. Employees shall be protected by a safety belt or safety harness and lifeline.

- e. The tackle shall consist of correct size ball bearing or bushed blocks and properly spliced 5/8" diameter first grade manila rope or equivalent.
- f. The roof irons, hooks, or the object to which the tackle is anchored shall be securely installed.
- g. Tie backs, when used, shall be installed at right angles to the face of the building and securely fastened.

6. Swinging Scaffolds - Two-Point Suspension

- a. Two-point suspension scaffold platforms shall not be less than 20" nor more than 36" wide overall. The platform shall be securely fastened to the hangers by U-bolts or by other equivalent means.
- b. The hangers of two-point suspension scaffolds shall be capable of sustaining 4 times the maximum rated load, and shall be designed with a support for guardrail, intermediate rail, and toe-board.
- c. Two-point suspension scaffolds shall be suspended by wire, synthetic, or fiber ropes capable of supporting at least 6 times the rated load. All other components shall be capable of supporting at least 4 times the rated load.
- d. On suspension scaffolds designed for a working load of 500 pounds, no more than two men shall be permitted to work on the scaffold. Each employee shall be protected by an approved fall protection system. The lifeline shall be securely attached to substantial members of the structure (not scaffold) or to securely rigged lines which will safely suspend the employee in case of a fall.
- e. Two-point suspension scaffolds shall be securely lashed to the building or structure to prevent them from swaying.
- f. Light metal-type platforms, when used, shall be tested and listed according to Underwriters' Laboratories or Factory Mutual.

C. Hold Harmless Agreement(s)

Other contractors on our construction jobs periodically request the use of our scaffolds, hi-jackers, mobile lifts and the like. Prior to allowing another contractor use such equipment of ours, it is imperative that someone in authority from the other contractor sign a Hold Harmless Agreement. Such an agreement protects us in the event that a non-United Insulated Structures Corp. (UISC) employee is hurt while using the scaffolding.

Our management must never allow an exception to this rule. Our organization has experienced numerous lawsuits against us as a result of some act, alleged or otherwise, for which we were supposedly responsible.

At times, we also request permission to use scaffolding erected by other contractors. In this case, the more astute contractor will insist that we sign a Hold Harmless Agreement.

An example of the Hold Harmless Agreement is included in this binder as Exhibit K. This agreement is to be used when the scaffolding is property of UISC and a Subcontractor, or such, wants to borrow it. In all cases, this document must be completed in duplicate so that both parties may retain a copy. The original copy must be sent to the UISC Safety Administrator after it is signed.

Section 17 || **Welding and Cutting**
|| **A. General**
|| **B. Requirements**

A. General

The procedures for welding and burning operations are established to prevent fire, explosion, and injury to employees by controlling the use of flame and heat producing devices. These safe work practices apply to all personnel using or exposed to welding and burning equipment (Refer to OSHA 29 CFR 1926.350 through .354). It is the responsibility of the management to assure the following safe work practices are applied.

B. Requirements**1. Gas Welding and Cutting**

- a. Employees whose work involves the use of compressed gasses are to be indoctrinated as to the safe method of handling, storing, and the utilization of compressed gas cylinders (acetylene is listed as a hazardous substance).
- b. When transporting, moving, and storing compressed gas cylinders, valve protection caps shall be in place over the valve and secured. When stored, they must be positioned in the upright position and properly secured via rope, chain, heavy gage wire, etc., in a well ventilated, dry area away from combustible materials.
- c. When cylinders are hoisted they shall be secured on a cradle, sling board or pallet. They shall not be hoisted or transported by means of magnets or choker slings. Valve protection caps shall not be used to hoist cylinders.
- d. All fuel gas cylinders shall be placed with valve end up whenever they are used or stored. They shall not be located in close proximity of the torch head or where they are subject to open flame, hot metal, or electrical arc.
- e. Compressed gas cylinders must never be taken into confined spaces (refer to Confined Space Entry section of this manual).
- f. Inspect the regulator, gages, hoses, and torch before each use. Damaged or clogged items must be replaced immediately. Oil or grease accumulations on any components of the cylinders, fittings, or torch must be cleaned off before use.

2. Arc Welding and Cutting

- a. All arc welding and cutting cables shall be of the completely insulated, flexible type. Any damaged cables or equipment must be repaired or replaced immediately.

- b. All ground connections shall be inspected to ensure that they are mechanically strong and electrically adequate for the required current.
- c. Pipelines containing gasses or flammable liquids shall not be used as a ground return.
- d. When electrode holders are to be left unattended, the electrodes shall be removed and the holders shall be so placed or protected that they cannot make electrical contact with employees or conducting objects.

3. Fire Prevention

- a. No welding, cutting, or heating shall be done where the application of flammable paints or the presence of other flammable compounds or heavy dust concentrations creates a hazard.
- b. Suitable fire extinguishing equipment shall be immediately available in the work area and shall be maintained in a state of readiness for instant use.
- c. At the conclusion of welding, cutting, or heating operations, inspect the work area to be sure there are no smoldering embers or materials present.

4. Personal Protective Equipment

- a. Be sure welding or cutting operations take place in a well ventilated area or provide adequate mechanical ventilation.
- b. Whenever practicable, all arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from direct rays of the arc.
- c. All employees engaged in welding, cutting, or heating operations must wear appropriate eye/face shield protection, long sleeve shirts and pants, non-combustible gloves, and appropriate foot wear.
- d. Know what you are cutting and welding, i.e. cutting lead based paint coated metal will produce lead fumes. When exposed to metals or materials producing lead, cadmium, chromium, beryllium, etc., the employees performing such operations shall be protected by the appropriate filter-type respirators. The employees must be indoctrinated to the operation per the Hazard Communication section of this manual before they start cutting or welding operations.

5. Cylinder Storage

- a. Gas cylinders or unlike gasses must be separated by 20' or by a 5' high half hour fire-rated partition.
- b. Compresses gas cylinders must be stored in designated areas outside of buildings in a fenced-in area or other open air secure area.
- c. All cylinders must be stored secured in an upright position with appropriate cap protecting the gas outlet.

Section 18 | **Excavation and Trenching**
A. General
B. Requirements
Table I - Angle of Repose
Table II - Shoring Techniques

EXCAVATION AND TRENCHING

A. General

The Field Superintendent must become familiar with OSHA Standards 29 CFR 1926, Subpart P, Section 1926.650 through .653 inclusive, to assure proper procedures are being implemented. After the Field Superintendent is assured the OSHA standards are being met, the following criteria will be followed.

B. Requirements

1. Daily inspections of excavations and trenches shall be made by a competent person. If evidence of possible cave-ins or slides is apparent, all work in the excavation or trench shall cease until the necessary precautions have been taken to safeguard the employee. In addition, all open trenches require high visibility perimeter flagging. The Field Superintendent will monitor these inspections.
2. All excavations and trenches shall be inspected by a competent person after every rainstorm or other hazard-increasing occurrence. Protection against slides and cave-ins shall be increased if necessary.
3. Tables I and II in this section shall be used as a guide for reference to angle of repose and shoring techniques used in excavations and trenches. These tables show the minimum requirements. Added measurements must be taken if the conditions warrant added protection to slides and cave-ins.
4. Walkways, runways, and sidewalks shall be kept clear of excavated material or other obstructions. No sidewalk will be undermined unless shored to carry a minimum live load of one hundred and twenty-five pounds per square foot.
5. If planks are used for raised walkways, runways, or sidewalks, they shall be laid parallel to the length of the walk and fastened together against displacement.
6. Planks shall be uniform in thickness and all exposed ends will be provided with beveled cleats to prevent tripping.
7. Raised walkways, runways, and sidewalks shall be provided with plank steps on strong stringers. Ramps used in lieu of steps will be provided with cleats to ensure a safe walking surface.
8. All employees shall be protected with personal protective equipment for the protection of the head, eyes, respiratory tract, hands, feet, and other parts of the body.

EXCAVATION AND TRENCHING

9. Employees exposed to vehicular traffic will be provided with warning vests made of reflectorized or high visibility material.
10. No person shall be permitted under loads handled by power shovels, derricks, or hoists.
11. Prior to opening an excavation, efforts shall be made to determine whether underground installations, i.e. sewer, telephone, water, fuel, electric lines, etc., will be encountered, and if so, where such installations are located.
12. Trees, boulders, and other surface encumbrances, located so as to create a hazard to employees, shall be removed.
13. The walls and faces of all excavations in which employees are exposed to danger from moving ground shall be guarded by a shoring system, sloping of the ground, or some other means.
14. Excavations shall be inspected by a competent person after every rain storm or other hazard-increasing occurrence, and the protection against slides and cave-ins shall be increased if necessary.
15. The determination of the angle of repose and design of the supporting system shall be based on careful evaluation of pertinent factors such as: the depth of cut; possible variation in water content of the material while the excavation is open; anticipated changes in materials from exposure to sun, air, water or freezing; or loading imposed by structures, equipment, overlying material, etc.
16. Supporting systems, i.e. shoring cribbing, etc., shall be designed by a qualified person and meet accepted engineering requirements.
17. All slopes shall be excavated to at least the angle of repose except for areas where solid rock allows for line drilling or pre-splitting.
18. The angle of repose shall be flattened when an excavation has water conditions, silty materials, loose boulders, and areas where erosion, deep frost action and slide planes appear.
19. In excavations where employees may be required to enter excavated or other material, shall be effectively stored and retained at least 2 feet or more from the edge of the excavation.
20. Slides, slopes, and faces of all excavations shall meet accepted engineering requirements by scaling, benching, barricading, rock bolting, wire meshing, or other equally effective means.

EXCAVATION AND TRENCHING

21. Support system shall be planned and designed by a qualified person when excavation depth is in excess of 20 feet, adjacent to structures or improvements, or subject to vibration or ground water.
22. Materials used for sheeting, sheet piling, cribbing, bracing, shoring, and underpinning shall be in good serviceable condition, and timbers shall be free from large knots and be of proper dimensions.
23. Special precautions shall be taken in sloping or shoring the sides of excavations adjacent to a previously backfilled excavation or a fill, particularly when the separation is less than the depth of the excavation.
24. Except in hard rock, excavations below the level of the base of footing of any foundation or retaining wall shall not be permitted, unless the wall is underpinned and all other precautions taken to insure the stability of the adjacent walls.
25. Diversion ditches, dikes, or other suitable means shall be used to prevent surface water from entering an excavation and to provide adequate drainage of the area adjacent to the excavation. Water shall not be allowed to accumulate in an excavation.
26. If it is necessary to place or operate power shovels, derricks, trucks, etc., on a level above and near an excavation, the side of the excavation shall be sheet-piled, shored, and braced.
27. Adequate physical barrier protection shall be provided at all remotely located excavations. All wells, pits, shafts, etc., shall be barricaded or covered. Upon completion of exploration, temporary wells, pits, shafts, etc., shall be backfilled.
28. Where an employee or equipment is required or permitted to cross over excavations, walkways, or bridges with standard guardrails will be provided.
29. Where ramps are used for employees or equipment, they shall be designed and constructed by qualified persons in accordance with accepted engineering requirements.
30. In location where oxygen deficiency or gaseous conditions are possible, the employees entering the excavation will be subject to the procedures outlined in the Confined Space Entry section of this manual.
31. A job representative must remain on the job with the equipment operator at all times after hours or at deserted sites.

EXCAVATION AND TRENCHING

TABLE I
ANGLE OF REPOSE

EXCAVATION AND TRENCHING

Table B-1 - Maximum Allowable Slopes

Soil or Rock Type	Maximum Allowable Slopes (H:V) ¹ For Excavations Less Than 20 Feet Deep ³
Stable Rock	Vertical (90 Deg.)
Type A ²	3/4:1 (53 Deg.)
Type B	1:1 (45 Deg.)
Type C	1 1/2:1 (34 Deg.)

1. Numbers shown in parentheses next to maximum allowable slopes are angles expressed in degrees from the horizontal. Angles have been rounded off.
2. A short-term maximum allowable slope of 1/2H:1V (63 degrees) is allowed in excavations in Type A soil that are 12 feet (3.67 m) or less in depth. Short-term maximum allowable slopes for excavations greater than 12 feet (3.67 m) in depth shall be 3/4H:1V (53 degrees).
3. Sloping or benching for excavations greater than 20 feet deep shall be designed by a registered professional engineer.

UNITED INSULATED STRUCTURES CORP.

EXCAVATION AND TRENCHING

FIGURE B-1
SLOPE CONFIGURATIONS
 (All slopes listed below are in the horizontal to vertical ratio)
B-1.1 EXCAVATIONS MADE IN TYPE A SOIL

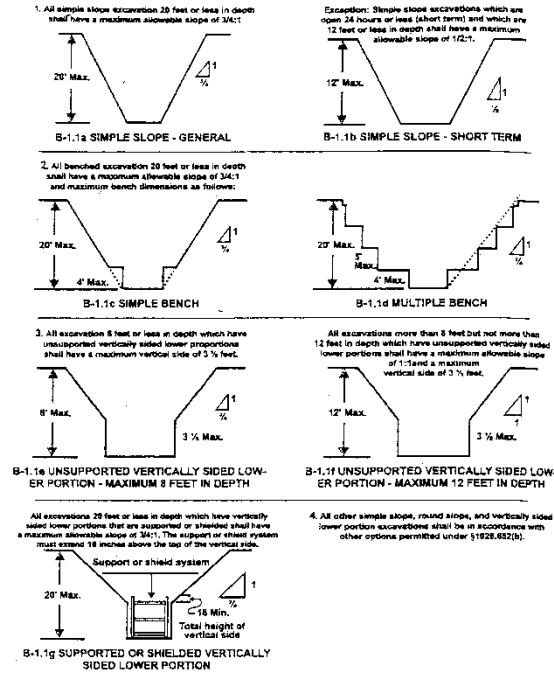


FIGURE B-1.2
EXCAVATIONS MADE IN TYPE B SOIL

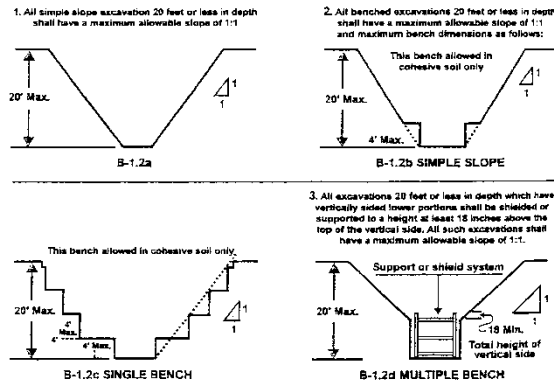
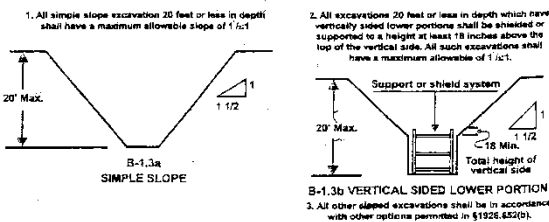


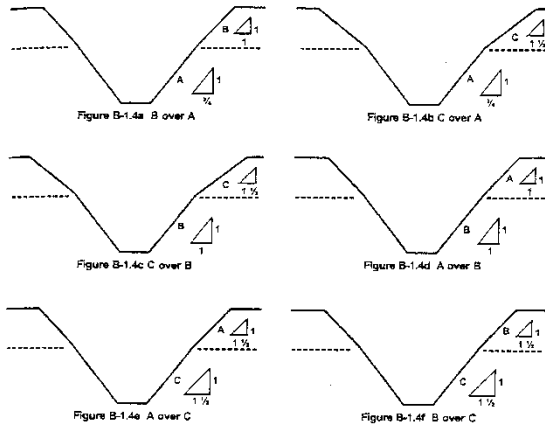
FIGURE B-1.3
EXCAVATIONS MADE IN TYPE C SOIL



EXCAVATION AND TRENCHING

**FIGURE B-1.4
EXCAVATIONS MADE IN LAYERED SOILS**

1. All excavations 20 feet or less in depth made in layered soils shall have a maximum allowable slope for each layer as set forth below.



EXCAVATION AND TRENCHING

TABLE II
SHORING TECHNIQUES

EXCAVATION AND TRENCHING

Table C-1.1

Timber Trench Shoring - Minimum Timber Requirements*

Soil Type A $P_a = 25 \times H + 72$ psf (2 ft. Surcharge)

Depth of trench (feet)	Size (actual) and spacing of members **													
	Horiz. spacing (feet)	Cross braces					Wales		Uprights					
		Width of trench (feet)					Vertical spacing (feet)	Size (in.)	Vertical spacing (feet)	Maximum allowable horizontal spacing (feet)				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	4	5	6	8
5 to 10	Up to 6	4 X 4	4 X 4	4 X 6	6 X 6	6 X 6	4	Not req'd	—				2 X 6	
	Up to 8	4 X 4	4 X 4	4 X 6	6 X 6	6 X 6	4	Not req'd	—					2 X 8
	Up to 10	4 X 6	4 X 6	4 X 6	6 X 6	6 X 6	4	8 X 8	4			2 X 6		
	Up to 12	4 X 6	4 X 4	6 X 6	6 X 6	6 X 6	4	8 X 8	4					
10 to 15	Up to 6	4 X 4	4 X 4	4 X 6	6 X 6	6 X 6	4	Not req'd	—				2 X 6	
	Up to 8	4 X 6	4 X 6	6 X 6	6 X 6	6 X 6	4	8 X 8	4		2 X 5			3 X 8
	Up to 10	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	4	8 X 10	4			2 X 6		
	Up to 12	6 X 6	6 X 6	6 X 8	6 X 8	6 X 8	4	10 X 10	4					3 X 8
15 to 20	Up to 6	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	4	6 X 8	4	3 X 6				
	Up to 8	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	4	8 X 8	4	3 X 6				
	Up to 10	8 X 8	8 X 8	8 X 8	8 X 8	8 X 10	4	8 X 10	4	3 X 6				
	Up to 12	8 X 8	8 X 8	8 X 8	8 X 8	8 X 10	4	10 X 10	4	3 X 6				
Over 20		See Note 1												

- * Mixed oak or equivalent with a bending strength not less than 850 psi.
- ** Manufactured members of equivalent strength may be substituted for wood.

Table C-1.2

Timber Trench Shoring - Minimum Timber Requirements *

Soil Type B $P_a = 45 \times H + 72$ psf (2 ft. Surcharge)

Depth of trench (feet)	Size (actual) and spacing of members **													
	Horiz. spacing (feet)	Cross braces					Wales		Uprights					
		Width of trench (feet)					Vertical spacing (feet)	Size (in.)	Vertical spacing (feet)	Maximum allowable horizontal spacing (feet)				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				Close	2	3		
5 to 10	Up to 6	4 X 6	4 X 6	6 X 6	6 X 6	6 X 6	5	6 X 8	5				2 X 6	
	Up to 8	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	5	8 X 10	5				2 X 6	
	Up to 10	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	5	10 X 10	5				2 X 6	
	See Note 1													
10 to 15	Up to 6	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	5	8 X 8	5	2 X 6				
	Up to 8	6 X 8	6 X 8	6 X 8	8 X 8	8 X 8	5	10 X 10	5	2 X 6				
	Up to 10	8 X 8	8 X 8	8 X 8	8 X 8	8 X 10	5	10 X 12	5	2 X 6				
	See note 1													
15 to 20	Up to 6	6 X 8	6 X 8	6 X 8	8 X 8	8 X 8	5	8 X 10	5	3 X 6				
	Up to 8	8 X 8	8 X 8	8 X 8	8 X 8	8 X 10	5	10 X 12	5	3 X 6				
	Up to 10	8 X 10	8 X 10	8 X 10	8 X 10	10 X 10	5	12 X 12	5	3 X 6				
	See Note 1													
Over 20		See Note 1												

1. * Mixed oak or equivalent with a bending strength not less than 850 psi.
- ** Manufactured members of equivalent strength may be substituted for wood.

EXCAVATION AND TRENCHING

Table C 1.3
 Timber Trench Shoring - Minimum Timber Requirements*
 Soil Type C P_a = 80 X H+72 psf (2 ft. Surcharge)

Depth of Trench (feet)	Size (Actual) and Spacing of Members **										
	Horiz. Spacing	Cross Braces					Vertical spacing (feet)	Wales		Uprights	
		Width of Trench (feet)						Size (in.)	Vertical spacing (feet)	Maximum Allowable Horizontal Spacing (feet) (See Note 2)	
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15			Close		
5 to 10	Up to 6	6X8	6X8	6X8	8X8	8X8	5	8X10	5	2X6	
	Up to 8	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6	
	Up to 10	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6	
	See Note 1										
10 to 15	Up to 6	8X8	8X8	8X8	8X8	8X10	5	10X12	5	2X6	
	Up to 8	8X10	8X10	8X10	8X10	10X10	5	12X12	5	2X6	
	See Note 1										
	See Note 1										
15 to 20	Up to 6	8X10	8X10	8X10	8X10	10X10	5	12X12	5	3X6	
	See Note 1										
	See Note 1										
	See Note 1										
over 20	See Note 1										

1. *Mixed oak or equivalent with a bending strength not less than 850 psi.
 ** Manufactured members of equivalent strength may be substituted for wood.

Table C-2.3
 Timber Trench Shoring - Minimum Timber Requirements *
 Soil Type C P_a = 80 X H + 72 psf (2 ft. Surcharge)

Depth of trench (feet)	Size (actual) and spacing of members **										
	Horiz. spacing (feet)	Cross braces					Vert. spacing (feet)	Wales		Uprights	
		Width of trench (feet)						Size (in.)	Vert. spacing (feet)	Maximum allowable horizontal spacing (feet)	
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15			Close		
5 to 10	Up to 6	6 X 6	6 X 6	6 X 6	6 X 6	8 X 8	5	8 X 8	5	3 x 6	
	Up to 8	6 X 6	6 X 6	6 X 6	8 X 8	8 X 8	5	10 X 10	5	3 x 6	
	Up to 10	6 X 6	6 X 6	8 X 8	8 X 8	8 X 8	5	10 X 12	5	3 x 6	
	See Note 1										
10 to 15	Up to 6	6 X 8	6 X 8	6 X 8	8 X 8	8 X 8	5	10 x 10	5	4 X 6	
	Up to 8	8 X 8	8 X 8	8 X 8	8 X 8	8 X 8	5	12 X 12	5	4 X 6	
	See Note 1										
	See Note 1										
15 to 20	Up to 6	8 X 8	8 X 8	8 X 8	8 X 10	8 X 10	5	10 x 12	5	4 X 6	
	See Note 1										
	See Note 1										
	See Note 1										
Over 20	See Note 1										

1. *Douglas fir or equivalent with a bending strength not less than 1500 psi.
 **Manufactured members of equivalent strength may be substituted for wood.

EXCAVATION AND TRENCHING

Table C-2.1
 Timber Trench Shoring - Minimum Timber Requirements*
 Soil Type A $P_a = 25 \times H + 72$ psf (2 ft. Surcharge)

Depth of trench (feet)	Size (S4S) and spacing of members **													
	Horiz. spacing (feet)	Cross braces					Vert. spacing (feet)	Wales		Uprights				
		Width of trench (feet)						Size (in.)	Vert. spacing (feet)	Maximum allowable horizontal spacing				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				close	4	5	6	8
5 to 10	Up to 6	4 X 4	4 X 4	4 X 4	4 X 4	4 X 6	4	Not req'd	Not req'd				4 X 6	
	Up to 8	4 X 4	4 X 4	4 X 4	4 X 6	4 X 6	4	Not req'd	Not req'd					4 X 8
	Up to 10	4 X 6	4 X 6	4 X 6	4 X 6	6 X 6	4	8 X 8	4			4 X 6		
	Up to 12	4 X 6	4 X 6	4 X 6	6 X 6	6 X 6	4	8 X 8	4				4 X 6	
10 to 15	Up to 6	4 X 4	4 X 4	4 X 4	6 X 6	6 X 6	4	Not req'd	Not req'd				4 x 10	
	Up to 8	4 X 6	4 X 6	4 X 6	6 X 6	6 X 6	4	8 X 8	4		4 X 6			
	Up to 10	6 X 6	6 X 6	6 X 6	6 X 6	6 X 6	4	8 X 8	4			4 x 8		
	Up to 12	6 X 6	6 X 6	6 X 6	6 X 6	6 X 6	4	8 X 10	4		4 x 6		4 X 10	
15 to 20	Up to 6	6 X 6	6 X 6	6 X 6	6 X 6	6 X 6	4	6 X 8	4	3 X 6				
	Up to 8	6 X 6	6 X 6	6 X 6	6 X 6	6 X 6	4	8 X 8	4	3 X 6	4 x 12			
	Up to 10	6 X 6	6 X 6	6 X 6	6 X 6	6 X 6	4	8 X 10	4	3 X 6				
	Up to 12	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	4	8 X 12	4	3 X 6	4 x 12			
Over 20	See Note 1													

- * Douglas fir or equivalent with a bending strength not less than 1500 psi.
- ** Manufactured members of equivalent strength may be substituted for wood.

Table C-2.2
 Timber Trench Shoring - Minimum Timber Requirements*
 Soil Type B $P_a = 45 \times H + 72$ psf (2 ft. Surcharge)

Depth of trench (feet)	Size (S4S) and spacing of members **													
	Horiz. spacing (feet)	Cross braces					Vertical spacing (feet)	Wales		Uprights				
		Width of trench (feet)						Size (in.)	Vertical spacing (feet)	Maximum allowable horizontal spacing				
		Up to 4	Up to 6	Up to 9	Up to 12	Up to 15				close	2	3	4	6
5 to 10	Up to 6	4 X 6	4 X 6	4 X 6	6 X 6	6 X 6	5	6 X 8	5			3 X 12	4 X 8	4 X 12
	Up to 8	4 X 6	4 X 6	6 X 6	6 X 6	6 X 6	5	8 X 8	5		3 X 8		4 X 8	
	Up to 10	4 X 6	4 X 6	6 X 6	6 X 6	6 X 6	5	8 X 10	5			4 X 8		
	See Note 1													
10 to 15	Up to 6	6 X 6	6 X 6	6 X 6	6 X 8	6 X 8	5	8 X 8	5	3 X 6	4 X 10			
	Up to 8	6 X 8	6 X 8	6 X 8	8 X 8	8 X 8	5	10 X 10	5	3 X 6	4 X 10			
	Up to 10	6 X 8	6 X 8	8 X 8	8 X 8	8 X 8	5	10 X 12	5	3 X 6	4 X 10			
	See Note 1													
15 to 20	Up to 6	6 X 8	6 X 8	6 X 8	6 X 8	8 X 8	5	8 X 10	5	4 X 6				
	Up to 8	6 X 8	6 X 8	6 X 8	8 X 8	8 X 8	5	10 X 12	5	4 X 6				
	Up to 10	8 X 8	8 X 8	8 X 8	8 X 8	8 X 8	5	12 X 12	5	4 X 6				
	See Note 1													
Over 20	See Note 1													

- * Douglas fir or equivalent with a bending strength not less than 1500 psi.
- ** Manufactured members of equivalent strength may be substituted for wood.

Section 19 || **Floors, Wall Openings and Stairways**
|| **A. General**
|| **B. Requirements**
|| **C. Guarding of Wall Openings**

FLOORS, WALL OPENINGS, AND STAIRWAYS

A. General

The management is required to conduct ongoing inspections of the jobsite to assure adequate safety protection is provided for the men working under him/her. To protect all employees from potential fall hazards when exposed to openings in floors, walls, and stairways, the following requirements must be met.

B. General Requirements

1. Floor openings shall be guarded by a standard railing and standard 4" toeboards or cover. The railing will be provided on all sides of the opening, except at the entrance to stairways.
2. Ladderway floor openings or platforms shall be guarded by standard railings with standard toeboards on all exposed sides, except at the entrance to the opening, with passage through the railing either provided with a gate or so offset that a person cannot walk directly into the opening.
3. Hatchways and chute floor openings will be guarded by hinged covers of standard strength and construction, and a standard railing with only one exposed side. When the opening is not in use, the cover shall be closed.
4. Where there is a danger of falling through a skylight opening, it shall be guarded by a fixed standard railing on all exposed sides.
5. Pits and trap door openings will be guarded by floor opening covers of standard strength and construction.
6. Manhole floor openings shall be guarded by standard manhole covers. While the cover is not in place, the manhole opening shall be protected by standard railings.
7. Temporary floor openings shall have standard railings.
8. Where doors or gates open directly on a stairway, a platform will be provided.

D. Guarding of Wall Openings

1. Wall openings, from which there is a drop of more than 4 feet, shall be guarded with a standard or intermediate rail that will effectively reduce the danger of falling.
2. The bottom of a wall opening which is less than 4 feet above the working surface shall be protected by a standard 4 inch toeboard.

FLOORS, WALL OPENINGS, AND STAIRWAYS

3. An extension platform outside a wall opening onto which materials can be hoisted for handling, shall have side rails or equivalent guards of standard specification. One side of the platform may have removable rails.

E. Open-Sided Rails

1. Every open-sided floor or platform 6 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all open sides. The railing will be provided with a standard toeboard.
2. Where employees entering upon runways become thereby exposed to machinery, electrical equipment, or other danger not a falling hazard, additional guarding shall be provided.

F. Stairway Railings and Guards

1. Every flight of stairs having 4 or more risers shall be equipped with standard stair railings or standard handrails.
2. For further information regarding specific guarding requirements for floor and wall openings and stairway guarding, such as a description of the "Standard Handrail", please consult OSHA 29 CFR 1926.500.

Section 20 || **Confined Space Entry**
A. General
B. Requirements

A. General

The purpose of this section is to ensure that the entry and subsequent work operations within confined or enclosed spaces are accomplished in a manner where safety, health, and fire protection procedures are maintained at all times. A confined or enclosed space means any space having a limited means of egress which is subject to the accumulation of toxic or flammable contaminants or has an oxygen deficient atmosphere. Confined or enclosed spaces include, but are not limited to, storage tanks, process vessels, bins, boilers, ventilation or exhaust ducts, sewers, underground utility vaults, tunnels, pipelines, and open top spaces more than four feet in depth such as pits, tubs, vaults, caissons and vessels. It will be the responsibility of management to instruct employees required to enter into confined or enclosed spaces as to:

1. The nature of the hazards involved.
2. The necessary precautions to be taken.
3. The use of protective and emergency equipment required.

B. Requirements**1. Environmental Testing Requirements are as follows:**

- a. Before entry of any confined space suspected of having mixtures or concentrations of flammable and/or toxic air contaminants or deficiencies of oxygen, appropriate tests of the atmosphere shall be made. The test shall be made by the Field Superintendent or a competent person in charge to assure that explosive or toxic limits are not exceeded, or the oxygen concentration is not below 19.5% or above 23% of the total air mixture.
- b. Any confined or enclosed space found to have or suspected of having oxygen deficiency or exceeding toxic or flammable limits shall be:
 - (1) Promptly reported to the Safety Administrator, Superintendent, and General Contractor.
 - (2) Posted with appropriate warning signs, i.e. "KEEP OUT", "FLAMMABLE", "TOXIC", "INERT", etc.
 - (3) Ventilated or exhausted, depending upon practicability.
 - (4) Prechecked by approved methods prior to entry.
- c. During inert gas welding, portable and/or fixed oxygen analyzers with visual/audible alarms shall be provided in areas where oxygen-deficient atmosphere may occur. In addition, continuous oxygen

monitoring devices equipped with appropriate warning alarms shall be provided.

- d. All monitoring and air sampling equipment will be maintained and calibrated in accordance with the manufacturer's specifications, and records shall be maintained by the Field Superintendent.

Note: Many vessels, transformers, etc., are received with an inert purge. The Field Superintendent must ensure a safe atmosphere prior to entry for inspection or rework.

2. Personal Protective Equipment Requirements are as follows:

- a. Suitable and necessary work/rescue equipment, including lifelines, harness, stretchers, mobile cranes, hoists, etc., shall be immediately available at all times. This equipment shall be selected with the potential hazards or possible contingencies anticipated during the work operations.
- b. Appropriate eye, face and ear protection and protective clothing shall be worn by employees exposed to physical hazards.
- c. Respiratory Protection. Where air sampling has determined that flammable or toxic limits have been exceeded or an oxygen deficiency exists and accepted engineering control measures such as general and local ventilation are not feasible, respiratory protection (cartridge masks, air line respirators, etc.) shall be worn. This equipment must be applicable and suitable for the identified air contaminants.

3. Ventilation/Exhaust

When ventilation is used as an engineering control method in maintaining acceptable concentrations of flammable and toxic contaminants, i.e. dust, fumes, mists, vapors, and gases, this section shall be used as a guide in the installation and operation of ventilation systems.

- a. Ventilation/exhaust will be designed, constructed, maintained and operated as to ensure the required protection by maintaining a volume and velocity of exhaust air sufficient to gather dust, fumes, vapors or gases from the confined space. The system must convey those contaminants to suitable points of safe disposal, thereby preventing their dispersion in harmful concentrations into other atmospheres where employees are or will be working during ventilation operations.
- b. Periodic air sampling for flammable and toxic materials and oxygen deficiencies shall be done before, during and after employee work

assignments in the confined or enclosed space to ensure toxic limits are not exceeded and a safe environment is maintained. The Job Field Supervisor is responsible for making appropriate tests and advising the person in charge when the breathing air meets requirements.

4. Lighting/Electrical

- a. Lighting will be provided in areas where sufficient natural light does not meet requirements, i.e. 5 foot candles unless additional lighting is required by contract or OSHA (CFR 1926.56).
- b. For work areas that may contain concentrations that exceed explosive limits of flammable materials, appropriate lighting systems such as explosion-proof fixtures, switches, or equipment otherwise designated for explosive atmospheres shall be used (Article 500 of the National Electrical Code.)
- c. Emergency lighting shall be provided at all points of access and egress. When this is not practical, explosion-proof flashlights shall be provided to persons required to enter confined spaces which are subject to blackout.
- d. In areas where moisture exists, portable electric lighting shall be operated at a maximum of 12 volts.

5. Communications

Communications shall be maintained with all personnel in enclosed or confined spaces by personnel outside those areas. This shall be accomplished by utilizing one or more of the following methods:

- Visual
- Voice
- Telephone
- Two-way radio (explosion-proof when required)

Note: Proper selection shall be dictated as to whether an explosive atmosphere exists in areas of intended use.

6. Fire Protection

Fire protection conditions shall be assured in confined or enclosed spaces at all times.

- a. Access and egress will be maintained at all times where work is being performed in a confined or enclosed space. Access ladders, floors, and components that are constructed out of combustible

materials shall be protected, covered, or wrapped with a flame-retardant material.

- b. Flammable liquids, i.e. acetone, alcohol, etc., must be stored in approved (UL or FM) flammable liquid containers or dispensers. The amount of such flammable liquid(s) shall not be in excess of the amount necessary to perform the work each day.
- c. Properly rated fire extinguishers shall be immediately available. In instances where extreme fire potential exists, a charged fire hose shall be readily available for immediate use.
- d. Cylinders containing oxygen, acetylene, or other fuel gases shall not be taken into confined or enclosed spaces.
- e. All rags, brushes, wipes, gloves, etc., that have come in contact with flammable materials shall be stored in metal containers with lids outside the confined space.
- f. A person shall be posted during all welding, burning, and heating operations to monitor for fire and will ensure that after the work has ceased or at the end of a work shift, there are no fire conditions present.
- g. All flammable gas equipment, hoses, torches, etc., shall be free of defects and inspected by the user prior to such operations or are adequately protected to prevent ignition.
- h. For the elimination of possible fire in confined spaces as a result of gas escaping through leaking or improperly closed torch valves, the gas supply to the torch shall be positively shut whenever the torch is left unattended. At the end of a work shift, the torch and hose shall be removed from the confined or enclosed space. Open end fuel gas and oxygen hoses shall be immediately removed from enclosed spaces when they are disconnected from the torch or other gas-consuming device.

7. Lockout Procedure

All lines, pipes, or other conveyance of flammable and/or toxic materials shall be positively locked out and tagged in accordance with the Lockout/Tagging Policy Section of this manual.

8. Recordkeeping Requirements

- a. A special work authorization, such as a vessel entry permit, or hot work or welding/cutting permit, shall be prepared and signed by the person in charge of the work operation. It shall be then reviewed

by the Field Superintendent after visual inspection has been completed and all requirements of this section have been met.

- b. A log of sampling results will be kept by the Field Superintendent for each confined or enclosed space.
- c. Employee training records will be maintained by the Field Superintendent, i.e. Special Hazard Job Safety Orientation.
- d. The Safety Administrator shall be informed of all work involving confined space entries.

9. **Rescue**

Whenever work is to be performed in a confined or enclosed space, emergency rescue must be anticipated. The Field Superintendent will be responsible for training of his employees in emergency procedures (i.e. rescue, escape, etc.)

Section 21 || **Assured Grounding/GFCI Program**
A. General
B. Requirements

ASSURED GROUNDING/GFCI PROGRAM

A. General

This program defines the minimum requirements to assure the installation and maintenance of equipment grounding conductors in accordance with the National Electrical Code (NEC) and OSHA Regulations. There are two methods in which this requirement may be met: the Assured Equipment Grounding Conductor Program and the Ground Fault Circuit Interrupter Program. Either program is acceptable by OSHA and NEC. These programs may also be used in conjunction with each other if required by project contractual obligations. United Insulated Structures Corp.'s (UISC) policy, however, requires the use of the Assured Equipment Grounding Conductor Program.

B. Requirements

1. Ground Fault Circuit Interrupters (GFCI)

- a. All 120 volt, single phase, 15 and 20 ampere receptacle outlets on construction sites which are not a part of the permanent wiring of the building or structure shall have approved GFCI's.
- b. When using the receptacle of permanent wiring, a GFCI is not required if the electrical tool or equipment is plugged directly into the receptacle. If a cord set (extension cord) is used, a portable GFCI must be installed between the receptacle of the permanent wiring and the cord set or a cord set with a built-in GFCI may be used.
- c. The UISC project superintendent will ensure that GFCI are used by all trade personnel prior to permanent building power installation.

2. Assured Grounding Program

- a. All 120 volt, single phase, 15 and 20 ampere receptacles shall be of a grounding type and their grounding contacts shall be grounded by conduction to the equipment grounding conductor of the circuit supplying the receptacle in accordance with the applicable requirements of Sections 210-7(c) and 305-2(d) of the National Electrical Code.
- b. All 120 volt flexible cord sets (extension cords) shall have an equipment grounding conductor which shall be connected to the grounding contact of the connector(s) on each end of the cord.
- c. The exposed non-current carrying metal parts of 120 volt cord and plug connected tools and equipment that are likely to become energized shall be grounded.

ASSURED GROUNDING/GFCI PROGRAM

- d. Visual Inspection - All employees shall be instructed that each cord set, and any equipment connected by cord and plug, shall be visually inspected by the user before each days use. Items shall be inspected for external defects, deformed or missing pins, insulation damage, and for indication of possible internal damage. Equipment found damaged or defective may not be used until repaired. These directions should be given to the employees during jobsite orientations and weekly safety meetings.

- e. Testing - All 120 volt, single phase, 15 and 20 ampere receptacles, 120 volt flexible cord sets, and 120 volt equipment connected by cord and plug which are not a part of the permanent wiring of the building or structure shall be tested to ensure that electrical continuity is maintained through all required equipment grounding conductors and their connectors. These tests shall be conducted as follows:
 - (1) All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.
 - (2) Receptacle of cord sets shall be tested for correct attachment of the equipment grounding conductor. The equipment grounding conductor shall be connected to its proper terminal.

- f. Testing Intervals
 - (1) Before the first use of the cord or equipment on each job.
 - (2) Before equipment is returned to service following any repair.
 - (3) Before equipment is used after any incident which can be reasonably suspected to have caused damage, i.e. when a cord is run over.
 - (4) At intervals not to exceed three months.

- g. Test Equipment - All receptacles, attachment caps, and plug receptacles of cord sets shall be tested as in the following manner.
 - (1) While in service with receptacle circuit tester.
 - (2) When not in service with a continuity tester.

Assured Grounding Kits are available from the main office. Kits contain circuit tester, continuity tester, colored marking tape,

ASSURED GROUNDING/GFCI PROGRAM

Assured Grounding Conductor Program instruction sheet (Exhibit N), and test log.

- h. Test Verification - Tests shall be documented by means of color coding and logging. The following color coding system will be used to verify that testing is current and that all receptacles, portable cords, and tools have been inspected and tested as required. All tests must also be documented on the Assured Equipment Grounding Conductor Program Test log (Exhibit O). The logs must be kept on the job for review by OSHA or the local electrical inspector.

Color Coding Scheme

January - March	<u>Quarterly</u> White
April - June	Green
July - September	Red
October - December	Orange

Do not make available or permit employees to use any equipment which has not passed the required test. Document all tests. All receptacles, cords and tools shall be marked with the tape used to designate the period for which the inspections and test were conducted.

Section 22 || **Fire Protection**
A. General
B. Small Projects
C. Large Projects

A. General

There is more inherent danger from the fire during the construction phase of a project than in the completed facility with full protection in service. As construction progresses, fire hazard conditions constantly change. Accumulation of scrap lumber, scaffolding, paper, cardboard, and other refuse appear at new locations daily. In addition, many ignition sources are present, such as cutting and welding, temporary heaters, lighting, employee smoking, etc. Consequently, the potential for loss due to fire is extensive. It is the responsibility of management to assure that the following requirements are met.

B. Small Projects

1. Keep our work area clear of all combustible refuse at all times.
2. At least one 2A/20BC rated portable fire extinguisher must be kept in the construction trailer compound. The extinguisher will be properly mounted to an interior wall of a trailer, available for ready access, and posted with a sign indicating "Fire Extinguisher".
3. Fire extinguishers will be regularly inspected to ensure that they are properly charged and undamaged. Damaged or discharged extinguishers will be recharged or replaced immediately.
4. A fire extinguisher must be readily accessible within 50 feet of welding or cutting operations, confined space entry, or where temporary heaters are used.

C. Large Projects

On large projects an outdoor portable tank (usually 500 gallons) may be used for refueling our equipment. The following rules apply to outdoor portable tanks.

1. The tank shall not be stored closer than 20 feet from any building or construction trailer.
2. Storage areas shall be kept free of weeds, debris, and other combustible material not requiring storage.
3. The storage tank will be provided with an emergency venting device, i.e. pressure relief valve or rupture disc.
4. A **NO SMOKING** sign must be prominently attached to the tank or posted adjacent to the tank.
5. The tank must be grounded to a grounding rod. The rod must be driven at least 8 feet into the ground.

6. One portable fire extinguisher having a rating of not less than 20B shall be located not less than 25 feet nor more than 75 feet from any flammable storage area located outside.
7. The storage tank shall be isolated or properly barricaded to prohibit it from being damaged by vehicles or equipment.
8. The motors of all equipment being fueled shall be shut off.

- Section 23** | **Respiratory Protection Program**
- A. Purpose**
 - B. Responsibility - Program Administration**
 - C. Medical Evaluation**
 - D. Requirements For A Minimal Acceptance Program**
 - E. Training**
 - F. Maintenance and Care of Respirators**

RESPIRATORY PROTECTION PROGRAM

A. Purpose

When it is not feasible to render the environment completely safe, it may be necessary to protect the worker from contact with airborne contaminants. Personal protective equipment should be provided and used where it is not possible to enclose or isolate the process or equipment, to provide ventilation or to use other control measures, or where there are short exposures to hazardous airborne concentrations of contaminants.

Designs of respiratory protective devices vary in application and protective capability. The management must, therefore, assess the inhalation hazard and understand the specific use and limitations of available equipment to assure proper selection. Not all types of respiratory protective devices are covered by current approval schedules. It is desirable, however, to select approved equipment whenever possible (ANSI Z58.2).

This guide will provide essential information realizing that worker acceptance is the key factor in a successful Respiratory Protection Program.

B. Responsibility - Program Administration

1. Formulation and coordination of the Respiratory Protection Program is the responsibility of the Safety Administrator with assistance from the Safety Consultant. These responsibilities include:
 - a. Formulating and making necessary changes in the Respiratory Protection Program.
 - b. Acting in an advisory capacity on all matters pertaining to this program.
 - c. Making certain the program complies with federal, state, and local regulations and ordinances.
 - d. Periodic monitoring and advising appropriate personnel of potential hazards arising out of any current or proposed process or operation.
 - e. Specifying controls necessary to minimize employee exposure to potentially harmful air contaminants and specifying the design and quality of the respiratory protective equipment.
 - f. Periodically measuring program effectiveness by conducting frequent random inspections to assure that respirators are properly selected, used, cleaned, and maintained.

RESPIRATORY PROTECTION PROGRAM

2. The Field Superintendent must fully understand the Respiratory Protection Program.
 - a. He must maintain a work environment that insures the maximum safety and health for his employees.
 - b. He shall furnish his employees with the proper personal respiratory protective equipment, instruct them in its proper use, and enforce the wearing of such equipment.
3. The employee should notify his supervisor immediately when certain conditions or practices may cause personal injury or illness.

The employee should make the maximum use of all prescribed respiratory protective equipment and follow established practices and procedures.

C. Medical Evaluation

1. Persons should not be assigned to tasks requiring use of respirators unless it has been determined that they are physically able to perform the work and use the equipment.
2. The respirator user's medical status should be reviewed annually by the company physician.

D. Requirements For A Minimal Acceptance Program

1. Any facility finding it necessary to supply their employees with respiratory protective equipment shall develop written procedures governing the selection, use, and the care of respirators.
 - a. This procedure shall be issued to every respirator user.

E. Training

1. Minimum training for both respirator user and supervisor shall include the following:
 - a. Instruction in the nature of the hazard, whether acute, chronic, or both, with an honest appraisal of what may happen if the respirator is not used properly.
 - b. Explanation of why more positive control is not immediately feasible. This shall include recognition that every reasonable effort is being made to reduce or eliminate the need for respirators.

RESPIRATORY PROTECTION PROGRAM

- c. A discussion of why this is the proper type of respirator for the particular purpose.
- d. A discussion of the respirator's capabilities and limitations (this information is available from the manufacturer).
- e. Instruction and training in actual use of the respirator (especially a respirator for emergency use). This is to include having the respirator fitted properly, testing the facepiece-to-face seal, and cleaning.
- f. Special training (such as field training to recognize and cope with emergency situations).

F. Maintenance and Care of Respirators

1. Inspection

- a. All respirators shall be inspected routinely before and after each use.
- b. A respirator that is not routinely used, but is kept ready for emergency use, shall be inspected after each use and at least monthly.
- c. Self-contained breathing apparatus shall be inspected monthly. Air and oxygen cylinders shall be fully charged according to the manufacturer's instructions. It shall be determined that the regulator and warning devices function properly.
 - (1) A record shall be kept of inspection dates and findings for respirators maintained for emergency use.
- d. Respirator inspection shall include a check of the tightness of connections and the condition of the facepiece, headbands, valves, connecting tube, and canisters. Rubber or elastomer parts shall be inspected for pliability and signs of deterioration. Stretching and manipulating rubber or elastomer parts with a massaging action will keep them pliable and flexible and prevent them from taking a set during storage.
- e. Frequent random inspections shall be conducted by a qualified individual to assure that respirators are properly selected, used, cleaned, and maintained.

RESPIRATORY PROTECTION PROGRAM

2. **Cleaning and Disinfection**

- a. The following procedure is recommended for cleaning and disinfecting respirators.
 - (1) Remove all filters, cartridges, or canisters.
 - (2) Wash facepiece and breathing tube in cleaner-disinfectant or detergent solution. (The bacterial agent is generally a quaternary ammonium compound and may be available from the manufacturer of the respirator.) Use a hand brush to facilitate removal of dirt.
 - (3) Rinse completely in clean, warm water.
 - (4) Air dry in a clean area.
 - (5) Clean other respirator parts as recommended by the manufacturer.
 - (6) Inspect valves, headstraps, and other parts; replace with new parts if defective.
 - (7) Insert new filters, cartridges, or canisters; make sure seal is tight.
 - (8) Place in plastic bag or container for storage.

3. **Repair**

Replacement or repairs shall be done only by experienced persons with parts designed for the respirator. No attempt shall be made to replace components or to make adjustment or repairs beyond the manufacturer's recommendations.

4. **Storage**

- a. After inspection, cleaning, and the necessary repair, respirators shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture or damaging chemicals.
- b. Respirators should be packed or stored so that the facepiece and exhalation valve will rest in a normal position and function will not be impaired by the elastomer resting in an abnormal position.

RESPIRATORY PROTECTION PROGRAM

- c. Respirators placed at stations and work areas for emergency use should be stored in compartments built for the purpose, be quickly accessible at all times, and be clearly marked.

Section 24 | **Fall Protection**

A. Purpose

B. Scope

C. Requirements

D. OSHA News Release

A. Purpose

Define the requirements for the selection and proper utilization of all protection equipment.

B. Scope

All employees and subcontractors are included whose work places them outside any secured area, otherwise protected by finished or temporary handrails or where their work is to be performed on single or two-point suspension scaffolding, boatswain chairs, floats, or needlebeam scaffolds or any other work surface where a fall potential of 6 feet or greater exists. All employees in personal lifting devices or motorized platforms are also included.

C. Requirements**1. Lifelines, Safety Harnesses and Lanyards**

- a. Lifelines, safety harnesses, and lanyards shall be used only for employee protection.
- b. Lifelines, safety harness, and lanyards shall be inspected daily for excessive wear or damage. Damaged equipment shall be removed from service and destroyed.
- c. Lifelines shall be secured to a point of anchorage or to a structural member capable of supporting a minimum of 5,400 pounds.
- d. Lifelines must be a minimum of 1/2" nylon or polyester or 5/8" polypropylene rope or 3/8" wire rope. The lifeline must be in good condition and support a minimum of 5,400 pounds.
- e. Safety harness lanyard shall be a minimum of 1/2" nylon or equivalent with a maximum length of fall no greater than 6 feet. The lanyard shall have a breaking strength of 5,400 pounds or greater.
- f. All safety harness and lanyard hardware shall be drop forged or pressed steel, cadmium plated. All surfaces shall be smooth and free from sharp edges.
- g. Lifelines, safety harness, or lanyards may not be used to support or lift tools or equipment.