LUNDY
CONSTRUCTION CO. INC.

FIELD EMPLOYEE

HANDBOOK

200 Arch Street
PO Box 3276
Williamsport PA 17701
Phone: 570-323-8451
Fax: 570-323-8535

LUNDY
CONSTRUCTION CO. INC.

EMPLOYEE HANDBOOK

This handbook contains company employment policies and our safety manual.

A. SEXUAL HARRASSMENT POLICY
B. SUBSTANCE ABUSE
C. WORK RELATED INJURY PROCEDURS
D. COMPETENT PERSON
E. WASTE MANAGEMENT
F. EMPLOYEE GAS POLICY
G. SAFETY PROGRAM

You are expected to read and understand our policies and adhere to our safety program.

Lundy Construction is an equal opportunity employer and does not discriminate against applicants or employees on the basis of sex, race, color, religion, national origin, ancestry or age (40 years of age and over). In addition, the company does not discriminate against qualified individuals with disabilities.

I understand and agree that, if hired, my employment will be for no definite period and may, regardless of the date of payment off wages, be terminated at any time without previous notice and with or without reason, at the will of either myself or the company.

In this handbook, the words "company, corporate, Lundy, Lundy Construction, Lundy Construction Co. shall all refer to the legal entity Lundy Construction Co., Inc.

LUNDY
CONSTRUCTION CO. INC.

CORPORATE POLICY

AGAINST SEXUAL AND OTHER FORMS OF HARASSMENT

The company prohibits unlawful harassment of its employees. This policy applies to harassment on the basis of sex, race, color, national origin, age (40 and over), religion, disability, military service/veteran status or other protected status under the law. Harassing conduct or condoning such conduct may result in disciplinary action up to and including dismissal or other action as appropriate.

The company's prohibition against workplace harassment applies to everyone. Specifically, no one who supervises or otherwise exercises control over the terms and conditions of an employee's employment shall threaten or insinuate, either explicitly or implicitly, that an employee's refusal to submit to sexual advances will adversely affect the employee with regard to such employment conditions as hiring, termination, promotion, wages, a significant change in benefits or that an employee's acceptance of such sexual advances will positively affect an employee with respect to-such employment conditions.

It is important to remember that any unwelcome verbal or physical conduct, whether committed by supervisors or non-supervisors, may be viewed as harassment if such conduct is because of protected characteristics such as race or gender and has the purpose or effect of unreasonably interfering with an individual's job performance or creating an intimidating, hostile or offensive work environment.

The company cannot list all possible examples of poor judgment or unprofessional conduct. However, the following examples will serve to illustrate the kind of speech or behavior we do not want in our workplace. Prohibited conduct includes such things as verbal abuse of a sexual, racial or ethnic nature; sexual gestures; comments about an individual's body in a sexually offensive manner; degrading words used to describe an individual's race, age, sex, religion, ancestry or disability; suggestive or offensive objects, pictures, cartoons, magazines, e-mails, text messages, Facebook posts or social sites post or computer images.

It is important to remember that inappropriate and unprofessional remarks or conduct may be reason for intervention and discipline whether or not they are actually "harassing."

It is everyone's responsibility to maintain a discrimination and harassment-free work atmosphere. This includes freedom from harassment not only by fellow employees, but also by others whom employees encounter in the course of their employment, provided that the company is made aware of such harassment. If you have a good faith complaint or concern about possible harassment in connection with incidents you have experienced or of which you are aware, you must report such complaint or concern immediately. These reports should be made to THE GENERAL SUPERINTENDENT, PRESIDENT or CEO. The concern will be investigated and accorded confidentiality to the extent a thorough investigation and practical considerations allow.

Retaliation against an employee because of a report under this policy or because an employee has participated in an investigation under this policy is prohibited and will not be tolerated. Any suspected retaliation must also be immediately reported to the persons set forth above. Regardless of who is involved or the status of the accused - retaliation is not permitted. Complaints of retaliation will be investigated and, where appropriate, may lead to disciplinary action up to and including dismissal. Supervisors who act inconsistently with or contrary to this policy are acting beyond the scope of their authority. This policy is not intended to create any contractual rights.

LUNDY
CONSTRUCTION

EMPLOYEE DRUG AND ALCOHOL ABUSE POLICY

Substance Abuse Policy – Effective July 31, 2012

The abuse of drugs and alcohol is a nationwide problem which affects persons of every age, race and gender. Lundy Construction Co., Inc. recognizes that work performance and safety problems are created when employees use or abuse illegal drugs and/or alcohol. Lundy Construction Co., Inc. wishes to provide a safe workplace for its employees and to maintain a drug and alcohol free workplace. Lundy Construction Co., Inc. has established the following policy for field employees on drugs and alcohol with drug and alcohol testing provisions.

POLICY STATEMENT

All field employees are strictly prohibited from using, possessing, selling, transferring, or being under the influence of drugs or alcohol while working or performing job duties or while on Lundy Construction Co., Inc. premises, or worksites, or while operating vehicles, machinery or equipment owned or leased by Lundy Construction Co., Inc. No employee shall perform employment related functions within four hours after using alcohol. Amy employee found to be in violation of this policy is subject to discipline up to and including termination of employment.

COVERAGE

Lundy Construction Co., Inc. requires that all field employees shall be subject to drug and alcohol testing.

DEFINITIONS

1. Alcohol means the intoxicating agent in beverage alcohol, ethyl alcohol or other low molecular weight alcohol including, methyl or isopropyl alcohol.

2. Breath Alcohol Technician (BAT) means an individual who instructs and assists individuals in the alcohol testing process and operates an EBT.

3. Confirmation (or confirmatory) test. In drug testing-2, a second analystical procedure to identify the presence of a specific drug or metabolite that is independent of the screening test and that uses a different technique and chemical principle from that of the screening test in order to ensure reliability and accuracy. In alcohol testing-a second test, following a screening test with a result of 0.02 or greater, that provides quantitative data of alcohol concentration.

4. Controlled substance has the meaning assigned by 21 U.S.C. 802 and includes all substances listed on Scheduled 1-5 as they may be revised from time to time (21 C.F. R. Part 1308).

5. Drug means any substance (other than alcohol) that is a controlled substance as defined in this section and 49 C.F.R. Part 40.

6. Evidential breath testing device (EBT) means an EBT approved by the National Highway Traffic Safety Administration (NHSA) for the evidential testing of breath.

7. FWHA. The Federal Highway Administration.

8. Medical Review Officer (MRO) means a licensed physician responsible for receiving laboratory results generated by an Employer's drug testing program who has knowledge of substance abuse disorders and has appropriate medical training to interpret and evaluate an individual's confirmed positive test result together with his or her medical history and any other relevant biomedical information.

9. Random selection means a mechanism for selection of employee for testing where each employee has an equal chance of being tested each time selections are made.

10. Reasonable suspicion means that the employer believes the appearance, behavior, speech or body odors of an employee are indicative of the use of a controlled substance or alcohol based on the observation of at least one (1) supervisor or official who has received training in the identification of behaviors indicative of drug and alcohol use.

11. Refuse to submit (to an alcohol or controlled substance test) means that an employee:

a. Fails to provide adequate breath for testing without a valid medical explanation after he or she has received notice of the requirement for breath testing;

b. Fails to provide adequate urine for controlled substances testing; without a valid medical explanation after he or she has received notice of the requirement for urine testing; or

c. Engages in conduct that clearly obstructs the testing process.

12. Substance Abuse Professional (SAP) means a licensed physician or a licensed or certified psychologist, social worker, employee assistance professional, or addiction counselor (certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission) with knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled substances - related disorders.

CIRCUMSTANCES UNDER WHICH DRUG AND ALCOHOL TESTS SHALL BE REQUIRED OR REQUESTED

DURING THE APPLICATION PROCESS. All job applicants are required to undergo testing for drugs and or alcohol during or upon. completion of the initial probation period. The job offer is contingent upon a negative drug and or alcohol report and may include the applicant's written agreement authorizing former employers to release to Lundy Construction Co., Inc. all information on the applicant's drug or alcohol tests with a concentration result of 0.04 or greater, positive controlled substances.

REASONABLE SUSPICION. A drug and or alcohol test shall be required if a supervisor has reasonable suspicion that an employee has violated the provisions of this policy regarding alcohol and/or controlled substances. Reasonable Suspicion drug and alcohol tests should be administered as soon as practicable. If the test is not administered within 2 hours, the reason shall be documented. If the alcohol test is not administered within 8 hours all attempts to conduct the test shall cease and the reasons shall be documented. The employee shall not be permitted to perform or continue to perform safety sensitive functions until:, a negative drug and/or a negative alcohol test result has been determined, or 24 hours have elapsed following the determination of reasonable suspicion.

POST-ACCIDENT / INJURY. A post accident / injury alcohol and drug test is required if an employee sustains an injury for which medical attention is necessary during the course of their employment, or if equipment is damaged.

RETURN TO DUTY TESTING. An employee found to have violated this policy shall not return to work until after undergoing return-to-duty tests indicating an alcohol concentration of less than 0.02 and a verified negative result for controlled substances. Any employee allowed to return to duty after a positive Drug and or Alcohol test shall be required to produce a negative test result for substances of abuse from a licensed testing facility, all testing, will be at the employee's expense.

FOLLOW-UP TESTING. Following, a determination by a SAP that an employee is in need of assistance in resolving problems with alcohol abuse and/or controlled substances use, an employee shall be subject to unannounced follow-up alcohol and/or controlled substances testing, as directed by the SAP. Follow-up testing shall not exceed 60 months from the date of the employee's return to duty. If during follow-up testing the employee shows the presence of a prohibited substance, the testing expense shall be by the employee.

RANDOM TESTING. The Employer randomly select employees subject to this policy for unannounced alcohol and controlled substances testing. All employees covered by this policy have an equal opportunity for selection for drug and alcohol testing throughout the year. Alcohol testing shall be performed just before, during or just after an employee's performance of work related duties. Employees selected for testing must proceed immediately to the testing site or on the worksite. Lundy Construction Co., Inc. will conduct random controlled substances testing on 50% of the average number of employees and random alcohol testing on 25% of the average number of employees. Employees may be selected for more than one test per year. Tests shall be spread reasonably throughout the year.

DRUG AND ALCOHOL TESTING

Controlled substances testing is conducted by analyzing an employee's urine specimen. Split urine samples will be collected. The employee will provide a urine sample at a designated collection site. The collection site person shall pour the urine specimen into two bottles labeled "primary" and "split", seal the specimens, complete a chain of custody document and prepare the bottles for shipment to the testing laboratory for analysis.

If the employee is unable to provide the appropriate quantity of urine, the collection site person shall instruct the employee to drink not more than 40 ounces of fluids and, after a period of not more than three hours, again attempt to provide a complete sample. If the employee is still unable to provide a complete sample, the testing shall be discontinued and the company contact will be notified. The MRO shall refer the employee for a medical evaluation to determine if the employee's inability to provide a specimen is genuine or constitutes a refusal to test. For pre-employment testing, Lundy Construction Co., Inc. may elect to not have the referral made and revoke the employment offer.

Drug test results are reported directly to the MRO by the testing laboratory. The MRO reports the results to the Lundy Construction Co., Inc. designated contact person. If the results are negative, the Employer is informed and no further action is necessary. If the test result is confirmed positive, the MRO shall give the employee an opportunity to discuss the test result. The MRO must review any medical records supplied by an employee to determine if a confirmed positive test is the result of the employee having taken legally prescribed medication. The MRO shall notify each employee that the employee has 72 hours in which to request a test of the split specimen at the employee's expense.

The MRO will review the confirmed positive test result to determine whether there is an acceptable medical reason for the positive result. The MRO shall verify and report a positive test result to the Employer when there is no legitimate medical reason for a positive test result as received from the testing laboratory.

If after making reasonable efforts and documenting these efforts, the MRO is unable to reach the employee directly, the MRO will contact the designated Lundy Construction Co., Inc. contact person, who shall direct the employee to contact the MRO. If the Employer contact person is unable to contact the Employee, the Employee will be removed from duty.

The MRO may verify a test positive without having communicated directly with the employee about the test results under the following circumstances:

1. The employee expressly declines the opportunity to discuss the test results.

2. The employee has not contacted the MRO within five days of being instructed to do so by the Employer.

Lundy Construction Co., Inc. requires breath testing administered by a BAT using an EBT. Two breath tests are required to determine if a person has a prohibited alcohol concentration. Any result less than 0.02% alcohol concentration is considered a "negative" test. If the alcohol concentration is 0.02% or greater, a second confirmation test must be conducted. If any employee attempts and fails to provide an adequate amount of breath, Lundy Construction Co., Inc. will direct the employee to obtain written evaluation from a licensed physician to determine if the employees' inability to provide a specimen is genuine or constitutes a refusal to test. Alcohol test results are reported directly to the designated Lundy Construction Co., Inc. contact person.

LICENSED LABORATORY TESTING

The testing laboratory shall be certified to perform controlled substance testing according to DHHS regulations.

PROHIBITED DRUG AND ALCOHOL RELATED CONDUCT

The following alcohol and controlled substance-related activities are prohibited Lundy Construction Co., Inc.:

1. Reporting for duty or remaining on duty to perform employment related functions while having an alcohol concentration of 0.02% or greater;

2. Being on duty while the employee possesses alcohol. This includes the possession of medicines containing alcohol (prescription or over-the-counter), unless the packaging seal is unbroken;

3. Using, alcohol while performing employment related functions;

4. Performing employment related functions within four hours after using alcohol;

5. When required to take a post-accident / injury test, using alcohol or controlled substances within eight hours following the accident or injury, or using alcohol or controlled substances prior to undergoing a post-accident / injury alcohol test, whichever comes first;

6. Refusing to submit to an alcohol or controlled substance test required by post-accident / injury, random, reasonable suspicion, or follow-up testing requirements.

7. Reporting for duty or remaining on duty, requiring the performance of employment related functions, when the employee uses any controlled substance, except when instructed by a physician who has advised the employee that the substance does not adversely affect the ability to safely perform their work related functions.

8. Reporting for duty, remaining on duty or performing safety sensitive function, if the employee tests positive for controlled substances.

CONSEQUENCES TO EMPLOYEES ENGAGING IN PROHIBITED CONDUCT

Employees who have engaged in prohibited conduct are subject to the following consequences:

1. Employees shall not be permitted to perform employment-related functions;

2. Employees shall be advised by Lundy Construction Co., Inc. of the resources available to them on evaluating and resolving problems associated with misuse of alcohol or use of controlled substances;

3. Employees shall be evaluated by a substance abuse professional who shall determine what assistance, if any the employee needs in resolving problems associated with misuse of alcohol or use of controlled substances;

4. Before the employee returns to duty requiring performance of an employment-related function, he/she shall undergo a return-to-duty test with a result indicating a breath alcohol level of less than 0.02% if the conduct involved alcohol, or a controlled substance test with a verified negative result if the conduct involved controlled substance use;

5. In addition, each employee identified as needing assistance in resolving problems associated with alcohol or controlled substances shall be evaluated by a substance abuse professional to determine that the employee has followed the rehabilitation program prescribed;

6. The employee shall be subject to unannounced follow-up alcohol and controlled substance testing.

Lundy Construction Co., Inc. requires that in the event of an alcohol test result over 0.02% but less than 0.04%, an employee shall not be permitted to perform employment-related functions for not less than 24 hours.

REFUSAL TO UNDERGO TESTING AND CONSEQUENCES OF REFUSAL

All applicants and employees have the right to refuse to undergo drug and alcohol testing. If an individual refuses to undergo drug and alcohol testing required by this policy, no such test shall be given.

An applicant who refuses to take a drug test shall be disqualified from further consideration for the conditionally offered position.

An employee refusing to take a drug and alcohol test required by this policy will not be permitted to perform safety sensitive functions and will be considered insubordinate and will be subject to disciplinary action including termination.

EMPLOYEE / APPLICANT RIGHTS

All applicants and employees subject to the drug testing provisions of this policy have the right to request, at the employee or applicant expense, a retest of the split urine sample within 72 hours of receiving notice of a confirmed positive test result.

If the employee requests an analysis of the split specimen within seventy-two (72) hours of having been informed of a verified positive test, the MRO shall direct, in writing, the laboratory to provide the split specimen to another DHSS-certified laboratory for analysis. If an employee has not contacted the MRO within seventy-two (72) hours, the employee may present to the MRO information documentation that serious illness, injury, inability to contact the MRO, lack of actual notice of the verified positive test, or other circumstances unavoidably prevented the employee from timely making contact. If the MRO concludes that there is a legitimate explanation for the employee's failure to contact within seventy-two (72) hours, the MRO shall direct the analysis of the split specimen.

If the confirming retest is negative, no adverse action will be taken against the employee and an applicant will be considered for employment.

DISCIPLINE

Any person found to be in violation of this policy is subject to discipline up to and including immediate discharge. Nothing in this policy limits or restricts the right of Lundy Construction Co., Inc. to discipline or discharge an employee for conduct which violates Lundy Construction Co., Inc. policies or rules provided the employee is not tested for controlled substances or alcohol. Lundy Construction Co., Inc. may, at their sole discretion, elect not to discharge an employee that receives a verified positive drug or alcohol test result.

LUNDY
CONSTRUCTION CO. INC.

If you are injured on the job, follow this procedure.

1. If you sustain a serious or life threatening injury, call or have someone call 911.

2. If you are able to safely transport yourself, then you must see one of the providers on the list on the next page. If you tell the foreman they can call the office and set up an appointment for you.

Lundy Construction, Inc. - Williamsport (17701)
(02/01/2011)

NOTICE TO EMPLOYEES IN CASE OF WORK-RELATED INJURIES

Eastern Alliance Insurance Group
PO Box 83777
Lancaster, PA 17608-3777
(717) 396-7095
(888) 654-7100

1. If you suffer a work-related injury, your employer or its insurance company must pay for reasonable surgical and medical services and supplies, orthopedic appliances and prosthesis, including training in their use.
2. In order to insure that your medical treatment will be paid for by your employer or the insurance company, you must select from one of the following health care providers.
3. You must continue to visit one of the physicians listed below, if you need treatment, for ninety (90) days from the date of your first visit.
4. If one of the persons below refers you to another licensed specialist, your employer or their insurer will pay the bill for these services.
5.. After this ninety-.(90) day period, if you still need treatment and your employer has provided a list as set forth below, you may choose to go to another health care provider for treatment. You should notify your employer of this action within five days of your visit to said provider.
6. If a physician on the list prescribes invasive surgery, you may obtain a second opinion from any physician of your choice. If the second opinion is different than the listed physician's opinion, you may determine which course of treatment to follow; however, the second opinion must contain a specific and detailed treatment plan. If you choose the second opinion, the procedures in that opinion must be performed by one of the physicians on the list for the first ninety- (90) days. Therefore, in this situation, the employee may be required to treat with an employer designated provider for up to 180 days.
7. If you are faced with a medical emergency, you may secure assistance from a hospital, physician, or health care provider of your choice for your work-related injury. However, when the emergency is resolved, you must seek treatment from a provider listed below.

PLEASE CALL EASTERN ALLIANCES SCHEDULING SERVICES TOLL FREE AT 1-866-695-3265 FOR ASSISTANCE IN SCHEDULING WITH MRI'S, PHYSICAL / OCCUPATIONAL THERAPY OR CHIROPRACTIC REHABILITATION

Name	Address	Scheduling	Area of Specialty
Midstate Occupational Health	2605 Reach Road Williamsport, PA 17701	570-327-8790	Occupational Medicine
The Work Center	1100 Grampian Blvd. Williamsport, PA 17701	570-320-7444	Occupational Medicine
West Branch Orthopedic & Sports Medicine	699 Rural Avenue Suite 101 Williamsport, PA 17701	570-322-3640	Orthopedics
Dr. Durriya Esaa	1201 Grampian Blvd Suite 2C Williamsport, PA 17701	570-322-9948	Ophthalmology
Lycoming Neurosurgical Associates - Dr. Rodwan Rajjob	904 Campbell Street Suite 104 Williamsport, PA 17701	570-326-2035	Neurosurgery
Hani J. Tuffaha, MD	904 Campbell Street Williamsport, PA 17701	570-323-5352	Neurology
Able Therapy Services, Inc.	2605 Reach Road Suite A Williamsport, PA 17701	570-322-2251	Physical Therapy
Twin Hills Health Center	2796 Lycoming Mall Drive Muncy, PA 17756	570-546-5454	Occupational Medicine
Solley Health First	580 East 3rd Street Williamsport, PA 17701	570-322-2225	Chiropractic
MRI Network	Call Toll Free for Closest Location	1-866-695-3265	MRI's
Medical Services Company (MSC)	Call Toll Free for Closest Location	1-800-848-1989	DME / Supplies
Progressive Medical	Call Toll Free for Closest Location	1-800-777-3574	DME / Supplies
KeyScripts	Call Toll Free for Closest Location	1-866-446-2848	Pharmacy

LUNDY
CONSTRUCTION CO. INC.

NOTICE TO LUNDY CONSTRUCTION EMPLOYEE'S ABOUT WORKERS' COMPENSATION

Workers' Compensation is designed to provide wage loss benefits and reimbursement for reasonable medical care for one who is injured on the job. Your employer shall provide payment for reasonable surgical and medical services, services rendered by physicians or other health care providers, medicines and supplies, as and when needed.

Your employer, in compliance with the Workers' Compensation Act, has posted a list of at least six (6) medical providers from which you are to select. You are to obtain treatment from one of the providers of your choice for ninety (90) days from the date of your first visit.

If you are faced with an immediate medical emergency, you may secure assistance from the closest hospital, physician or other health care provider of your choice. If follow up treatments is needed, you must then seek treatment from a physician or other health care provider listed on your employer's physician panel list for the first ninety (90) days from the date of your first treatment.

If during the initial 90-day period you wish to change medical providers, you must once again re-visit your employer's panel and select a new physician. If you do not seek treatment from a provider on the panel list for the initial 90 days following your first visit, your employer will not have to pay for the services rendered.

If one of the listed providers recommends invasive surgery, you are entitled to a second opinion from a physician of your choice. Should your physician's opinion differ, and you choose that opinion, the panel physician will abide by same for 90 days.

After the initial 90-day period, if additional or continued treatment is needed, you may now choose to go to another physician or health care provider of your choice. Should you decide to change providers, you must notify your employer within five (5) days of y our first visit with your new provider. Failure to notify your employer will relieve your employer of the responsibility for the payment of the services rendered if such services are determined to have been reasonable or unnecessary.

Any person who knowingly and with intent to defraud any insurance company or other person files an application for insurance or statement of claim containing any materially false information or conceals for the purpose of misleading, information concerning any fact material thereto commits a fraudulent insurance act, which is a crime and subjects such person to criminal and civil penalties.

Lundy Construction Co., Inc. will vigorously pursue any fraudulent workman's compensation claims.

NOTICE TO LUNDY CONSTRUCTION EMPLOYEE'S ABOUT WORKERS' COMPENSATION

Part 2

Workers' Compensation Information

(1) The workers' compensation law provides wage loss and medical benefits to employees who cannot work, or who need medical care, because of a work related injury.

(2) Benefits are required to be paid by your employer when self-insured, or through insurance provided by your employer. Your employer is required to post the name of the company responsible for paying workers' compensation benefits and its primary place of business and at its sites of employment in a prominent and easily accessible place, including, without limitation, areas used for the treatment of injured employees or for the administration of first aid.

(3) You should report immediately any injury or work-related illness to your employer.

(4) Your benefits could be delayed or denied if you do not notify your employer immediately.

(5) If your claim is denied by your employer, you have the right to request a hearing before a workers' compensation judge.

(6) The bureau of Workers' Compensation cannot provide legal advice. However, you may contact the Bureau of Workers' Compensation for additional general information at: Bureau of Workers' Compensation, 1171 South Cameron Street, Room 103, Harrisburg, Pennsylvania 17104-2501; telephone number within Pennsylvania (800) 482-2383; telephone number outside of this Commonwealth (717) 772-4447; TTY (800) 362-4228 (for hearing and speech impaired only); www.state.pa.us, PA Keyword: workers comp.

(7) On the following page is a copy of the worker's compensation act form you were given upon hiring. If you have not seen this form before, please notify the office immediately, You will also notice that the second part of the form is re-affirming that you will be signing this form in the event you have suffered an "on the job injury". Please make sure that you ask for a copy when you stop at the office to complete the injury report.

Your signature on this form that you understand your rights and duties under the above provisions of the Workers' Compensation Act.

I hereby acknowledge that I have been informed of an understand my rights and duties under the Workers' Compensation Act.

Employee Written Name	Employee Signature	Date

****

Employee acknowledgement of receipt of worker's compensation information at or soon after the time of claimed work injury.

I hereby acknowledge that I have again received and re-read the workers' compensation information provided herein.

Employee Written Name	Employee Signature	Date

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LUNDY
CONSTRUCTION CO. INC.

"READ THIS"

"COMPETENT PERSON NOTICE"

ALL EMPLOYEES AND SUBCONTRACTORS ON JOBSITE ARE REQUIRED TO KNOW WHAT A **"COMPETENT PERSON"** IS AND WHO HE IS.

COMPETENT PERSON: ONE WHO IS CAPABLE OF IDENTIFYING EXISTING AND PREDICTABLE HAZARDS IN THE SURROUNDINGS OF WORKING CONDITIONS WHICH ARE UNSANITARY, HAZARDOUS, OR DANGEROUS TO EMPLOYEES. ALSO, ONE WHO HAS THE AUTHORIZATION TO TAKE PROMPT CORRECTIVE MEASURES TO ELIMINATE THEM.

COMPETENT PERSON: _____

ASSISTANT _____

LUNDY CONSTRUCTION CO INC

JOHN C. LEHMAN
GENERAL SUPERINTENDENT

LUNDY
CONSTRUCTION

ARCH STREET AT REACH ROAD
PO BOX 3276
WILLIAMSPORT PA 17701-0276
570-323-8451
FAX NO. 570-323-8535
request@lundyconstruction.com

CORPORATE POLICY REGARDING
WASTE MANAGEMENT POLICY

Waste is defined as any product that is no longer needed or cannot be used for its intended purpose. A used product that is being stored for future use is not a waste unless it is stored past its shelf life or is spilled.

OBJECTIVE:

To minimize waste and dispose of all waste generated by Lundy Construction in adherence to federal, state and local laws and to protect the environment.

Means:

Waste generation should be kept a minimum through the use of accepted waste minimization techniques.

1. Source Reduction
2. Recycling (paper, cans, bottles, batteries, fluorescent bulbs, scrap metal, tires, etc.)
3. Disposal by approved haulers or Lundy Construction permitted trucks to approved local landfills.

Waste Handling should follow these guidelines:

1. Waste should always be containerized and labeled correctly.
2. Waste should be stored in designated areas.
3. Wastes should never be mixed.
4. Maximize the use of approved roll off containers.
5. Waste oil will be disposed of through an approved recycling facility.
6. Paint – maximum control to stop excess – old materials must be dried and sent to approved facility. Left over paint to be stored in approved paint storage room and utilized on the next job.

SAFETY:

1. Employees and contractors working with and around waste must wear proper PPE and take necessary protective measures.

2. When transporting or disposing of waste, only approved waste haulers and waste disposal/recycling facilities with appropriate contracts should be used.

3. Hazardous materials (lead or asbestos, etc.), if encountered unexpectedly please contact your supervisor for instructions. No employee is to handle hazardous materials.

LUNDY
CONSTRUCTION CO. INC.

October 3, 2011

POLICY ON AUTOMOBILE AND GAS REIMBURSEMENT

For jobs under 30* mile radius from the Lundy office

- The employee will be expected to transport himself and his tools to and from the jobsite
- Individuals and foreman who may be called upon to undertake extra miles and or trips at the direction of the general superintendent or project manager for these "under 30 mile projects" will be compensated by either gas from the company stores or from "gas stations" whereby they will be reimbursed upon presentation of receipts. These amounts will be pre-approved by the PM or Gen Supt.

Jobs beyond 30* mile radius from the Lundy office

- Travel pay per day may be established
- Crew cab may be supplied when available and depending on distance and conditions. Gas and expenses for crew cab will be borne by company, and smoking is not permitted in crew cab.
- On jobs with crew cab, crew cab shall be designated runner truck for minor supply runs.

*30 miles based on secondary roads traveled rather than 50 miles on good roads

LCC Policy 10-3-2011, fbl3

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SAFETY & HEALTH
EMPLOYEE REFERENCE MANUAL

Lundy Construction Co., Inc.
200 Arch St.
Williamsport, Pennsylvania
17701

LUNDY
CONSTRUCTION

Provided By
SAFETY
SERVICES
COMPANY

Local Emergency Phone Numbers

911

OSHA: 1-800-321-OSHA

Ambulance: _____

Fire/Rescue: _____

Hospital: _____

Police: _____

Alternate: _____

*In the event of any emergency, at least one of the following personnel must be contacted immediately after emergency assistance has been summoned.

Place calls in listed order of priority

1. Contact: _____
   Phone: _____

2. Contact: _____
   Phone: _____

3. Contact: _____
   Phone: _____

Company Insurance Carrier

Name: _____
Contact: _____
Phone: _____

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29 CFR § 1903.1 – The Purpose and Scope of OSHA

The OSH Act requires, in part, that every employer covered under OSHA to furnish to his employees a place of employment which is free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees. OSHA also requires that employers comply with occupational safety and health standards and that employees comply with standards, rules, regulations, and orders issued which are applicable to their own actions and conduct.

Key Points of the OSH Act

The United States Congress finds that personal injuries and illnesses arising out of work situations impose a substantial burden upon, and are a hindrance to, interstate commerce in terms of lost production, wage loss, medical expenses, and disability compensation payments.

The United States Congress declares it to be its purpose and policy, through the exercise of its powers to regulate commerce and to provide for the general welfare, to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources in the following manner:

- By encouraging employers and employees in their efforts to reduce the number of occupational safety and health hazards at their places of employment and to stimulate employers and employees to institute new and to perfect existing programs for providing safe and healthful working conditions.
- By providing that employers and employees have separate but dependent responsibilities and rights with respect to achieving safe and healthful working conditions.
- By authorizing the Secretary of Labor to set mandatory occupational safety and health standards applicable to businesses affecting interstate commerce.
- By building upon advances already made through employer and employee initiative for providing safe and healthful working conditions.
- By providing medical criteria which will assure insofar as practicable that no employee will suffer diminished health, functional capacity, or life expectancy as a result of his work experience.
- By providing for the development and promulgation (Enacting into Law) of occupational safety and health standards.
- By providing an effective enforcement program which will include a prohibition against giving advance notice of any inspection and sanctions for any individual violating this prohibition.
- By encouraging the States to assume the fullest responsibility for the administration and enforcement of their occupational safety and health laws.
- By providing for appropriate reporting procedures with respect to occupational safety and health which procedures will help achieve the objectives of OSHA and accurately describe the nature of the occupational safety and health problem.
- By encouraging joint labor-management efforts to reduce injuries and disease arising out of employment.

29 USC 654 – Duties (The General Duty Clause)

- Each employer will furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees.
- Each employer will comply with occupational safety and health standards promulgated under OSHA.
- Each employee will comply with occupational safety and health standards and all rules, regulations, and orders issued pursuant to OSHA Act which are applicable to his own actions and conduct.

NOTE: From 29 USC 652 "Definitions" – The term "occupational safety and health standard" means a standard which requires conditions, or the adoption or use of one or more practices, means, methods, operations, or processes, reasonably necessary or appropriate to provide safe or healthful employment and places of employment.

Safety Program Procedures

1. Post the General Safety Rules in a prominent location at each location as well as your main facility.
2. Provide a copy of the Safety Program for all workplaces.
3. Add map of facility and evacuation route to the Emergency Response Program.
4. Post the Request for Training in a conspicuous location.
5. **Note** Accident Investigation Forms are included.
6. **Note** OSHA Log 300 included (On CD).
7. Bloodborne Pathogen section is included (annual training needs to be done for employees).
8. CPR & First Aid section included (this information is general in nature; no individual should ever exceed their level of first aid training).
9. Sample Material Safety Data Sheet included. Be sure to compile MSDSs for any chemicals the Company uses and make available to all employees in the office and at the workplace. Your Company is responsible for maintaining a current chemical inventory list.
10. Orientation Checklist - Initial Orientation must be conducted for all employees. (English/Spanish Orientation included). These forms are to be included and signed by all new hires. (Make copies for employees to sign at the orientation meeting.)
11. Safety Meeting Minutes. After any Safety Training, have employees sign the training roster, 3-hole punch the form, and file it in the manual.

The designated safety coordinator for Lundy Construction Co., Inc. is:

The Safety Coordinator

Safety & Health Policy Statement

The safety and health of our employees is the first consideration in operating this business. Without question, it is every employee's responsibility at all levels.

It is the intent of this Company to comply with all laws. To do this, we must constantly be aware of conditions in all work areas that can produce injuries. No employee is required to work at a job they know is not safe or healthful. Your cooperation in detecting hazards and, in turn, controlling them, is a condition of your employment. Inform your supervisor immediately of any situation beyond your ability or authority to correct.

Prevention of occupationally-induced injuries and illnesses is of such consequence that it will be given precedence over operating productivity, whenever necessary. To the greatest degree possible, management will provide all mechanical and physical activities required for personal safety and health, in keeping with the highest standards.

We will maintain an occupational safety and health program conforming to the best practices of organizations of this type. To be successful, such a program must embody proper attitudes towards injury and illness prevention on the part of supervisors and employees. It also requires cooperation in all safety and health matters, not only between supervisor and employee, but also between each employee and their co-workers.

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

Our safety and health program includes:

- Providing mechanical and physical safeguards to the maximum extent possible.
- Conducting a program of safety and health inspections to find and eliminate unsafe working conditions or practices, to control health hazards, and to fully comply with OSHA safety and health standards for every job.
- Training all employees in good safety and health practices.
- Providing necessary personal protective equipment, and instructions for proper use and care.
- Developing and enforcing safety and health rules, and requiring that employees cooperate with these rules as a condition of employment.

- Investigating, promptly and thoroughly, every accident to find out what caused it, and correct the problem so it will not happen again.

We recognize that the responsibilities for occupational safety and health are shared:

This employer accepts responsibility for leadership of the safety and health program, for its effectiveness and improvement, and for providing the safeguards required to ensure safe work conditions.

Supervisors are responsible for developing proper attitudes toward safety and health in themselves and in those they supervise, and for ensuring that all operations are performed with the utmost regard for the safety and health of all personnel involved, including themselves.

Employees are responsible for wholehearted, genuine operations of all aspects of the safety and health program – including compliance with the rules and regulations – and for continuously practicing safety and health while performing their duties.

Lundy Construction Co., Inc. will see that all employees are properly instructed and supervised in the safe operation of any machinery, tools, equipment, process, or practice which they are authorized to use or apply while at work.

Production is never so urgent that we cannot take the time to do our work safely.

Program Goals

The primary goal of Lundy Construction Co., Inc. is to continue operating a profitable business while protecting employees from injuries or illness. This can be achieved by delegating responsibility and accountability to all involved in this Company's operation.

Responsibility: Having to answer for activities and results.

Accountability: The actions taken by management to insure the performance of responsibilities.

To reach our goal of a safe workplace everyone needs to take responsibility and be held accountable.

Employee Involvement

Employees are required to work in compliance with the safety rules, report all accidents and near misses, and report all unsafe conditions or unsafe practices. To demonstrate this employer's commitment to support the employees in these responsibilities, the employer will do the following:

Communication System:

- Encourage employees to inform the employer about workplace hazards without fear of reprisal.
- Establish and maintain a centrally located "Safety Bulletin Board" where current, relevant information may be easily reviewed by employees.

- Schedule general employee meetings at which time safety is freely and openly discussed by those present. These meetings will be regular, scheduled, and announced to all employees and managers to achieve maximum attendance. The purpose of these meetings is safety, and the concentration will be on:
- Occupational accident and injury history at our work sites, with possible comparison to other locations in the Company.
- Feedback from the Safety Committee.
- Guest speakers concerned with workplace safety and health.
- When possible, brief audio-visual materials that relate to our business.
- Conduct training programs for communicating with employees.
- Provide a safety suggestion box so that employees, anonymously if desired, can communicate their concerns with management.
- Document all communication efforts to demonstrate that an effective communication system is in place.

Supervisor/Foreman

The Supervisors and/or Foremen will establish an operating atmosphere that insures that safety and health is managed in the same manner and with the same emphasis as production, cost, and quality control. This will be accomplished by:

- Regularly emphasizing that accident and health hazard exposure prevention are not only moral responsibilities, but also a condition of employment.
- Identifying operational oversights that could contribute to accidents which often result in injuries and property damage.
- Participating in safety and health related activities, including routinely attending safety meetings, reviews of the facility, and correcting employee behavior that can result in accidents and injuries.
- Spending time with each person hired explaining the safety policies and the hazards of his/her particular work.
- Ensuring that initial orientation of "new hires" is properly carried out.
- Making sure that if a "Competent Person" is required, that one is present to oversee, and instruct employees when necessary.
- Never short-cutting safety for expediency, or allowing workers to do so.
- Enforcing safety rules consistently, and following Company's discipline and enforcement procedures.
- Conducting daily job-site inspections and correcting noted safety violations.

Employees

It is the duty of each and every employee to know the safety rules, and conduct his work in compliance with these rules. Disregard of the safety and health rules will be grounds for disciplinary action up to and including termination. It is also the duty of each employee to make full use of the safeguards provided for their protection. Every employee will receive an orientation when hired and receive a copy of any COMPANY Injury & Illness Prevention Programs. Employee responsibilities include the following:

- Reading, understanding and following safety and health rules and procedures.
- Signing the Code of Safe Practices and any other policy acknowledgements.
- Wearing Personal Protective Equipment (PPE) at all times when working in areas where there is a possible danger of injury.
- Wearing suitable work clothes as determined by the supervisor/foreman.
- Performing all tasks safely as directed by their supervisor/foreman.
- Reporting ALL injuries, no matter how slight, to their supervisor/foreman immediately and seeking treatment promptly.
- Knowing the location of first aid, firefighting equipment, and safety devices.
- Attending any and all required safety and health meetings.
- Not performing potentially hazardous tasks, or using any hazardous material until properly trained, and following all safety procedures for those tasks.
- STOPPING AND ASKING QUESTIONS IF EVER IN DOUBT ABOUT THE SAFETY OF ANY OPERATION

Note: Please see our company's Safety and Health Manual for the full Program.

Policy Statement

Lundy Construction Co., Inc. Safety Committee members are:

The Safety Coordinator, Frank Lundy III, and Sean Hartranft.

The Safety Committee will meet a minimum of 4 times per year.

Introduction

Lundy Construction Co., Inc. is committed to accident prevention in order to protect the safety and health of all our employees. Injury and illness losses due to hazards are needless, costly and preventable. To prevent these losses, a joint management/worker safety committee will be established. Employee involvement in accident prevention and support of safety committee members and activities is necessary to ensure a safe and healthful workplace for all employees.

Purpose

The purpose of our safety committee is to bring workers and management together in a non-adversarial, cooperative effort to promote safety and health in the workplace. The safety committee will assist management and make recommendations for change.

Organization

There will be, in most cases, an equal number of employee and employer representatives. However, there may be more employee representatives than employer representatives if both groups agree. Employee representatives will be volunteers or elected by their peers. If no employees volunteer or are elected, they may be appointed by management. Employer representatives will be appointed. Safety committee members will serve a continuous term of at least one year. Committee membership terms will be staggered so that at least one experienced member is always on the committee.

Extent of Authority

It must be clearly understood that the safety committee advises management on issues that will promote safety and health in the workplace. Written recommendations are expected from the safety committee and they will be submitted to management. In turn, management will give serious consideration to the recommendations submitted and will respond in writing to the committee within a reasonable time.

Functions

- Committee meetings and employee involvement.
- Hazard assessment and control.
- Safety and health planning.
- Evaluation of accountability system.
- Evaluation of management commitment to workplace safety and health.
- Evaluation of accident and incident investigation program.
- Safety and health training.

Recommendations

All recommendations submitted to management must be written and should:

- Be clear and concise.
- Provide reasons for implementation.
- Give recommended options.
- Show implementation costs and recommended completion dates.
- List benefits to be gained.

Procedures

The committee's plan of action requires procedures by which the committee may successfully fulfill its role. Procedures developed should include but not be limited to:

- Meeting date, time, and location (Safety Committee Meeting Agenda).
- Election of chairperson and secretary.
- Order of business.
- Records (Safety Committee Meeting Minutes).

Duties of each member must include, but not be limited to:

- Reporting unsafe conditions and practices.
- Attending all safety and health meetings.
- Reviewing all accidents and near-misses.
- Recommending ideas for improving safety and health.
- Working in a safe and healthful manner.
- Observing how safety and health is enforced in the workplace.
- Completing assignments given to them by the chairperson.
- Acting as a work area representative in matters of health and safety.
- Others as determined by COMPANY safety and health needs.

Note: Please see our company's Safety and Health Manual for the full Program.

The Safety Coordinator is responsible for the implementation and enforcement of the following safety rules. Disciplinary procedures will be enforced.

Employee Safety Training & Disciplinary Procedures

OSHA requires that employees be trained in the safe methods of performing their job. Lundy Construction Co., Inc. is committed to instructing all employees in safe and healthful work practices. Awareness of potential hazards, as well as knowledge of how to control them, is critical to maintaining a safe and healthful work environment and preventing injuries. To achieve this goal, we will provide training to each employee on general safety issues and safety procedures specific to that employee's work assignment.

- Every new employee will be given instruction by their foreman in the general safety requirements of their job.
- A copy of our Code of Safe Practices will also be provided to each employee.
- Tailgate or toolbox safety training will be conducted at least every 10 working days.
- All training will be documented on the forms provided.
- Managers, supervisors, and foremen will be trained at least twice per year on various accident prevention topics.

Training provides the following benefits:

- Makes employees aware of job hazards.
- Teaches employees to perform jobs safely.
- Promotes two way communication
- Encourages safety suggestions.
- Creates interest in the safety program.
- Fulfills OSHA requirements.

Employee training will be provided at the following times:

- All new employees will receive a safety orientation their first day on the job.
- All new employees will be given a copy of the Code of Safe Practices and required to read and sign for it.
- All field employees will receive training at tailgate or toolbox safety meetings held at the jobsite.
- All employees given a new job assignment for which training has not been previously provided will be trained before beginning the new assignment.
- Whenever new substances, processes, procedures, or equipment that represent a new hazard are introduced into the workplace.
- Whenever the Company is made aware of a new or previously unrecognized workplace hazard.

- Whenever management believes that additional training is necessary.
- After all serious accidents.
- When employees are not following safe work rules or procedures.

Training topics will include, but not be limited to:

- Employee's safety responsibilities
- General safety rules
- Code of Safe Practices
- Safe job procedures
- Use of hazardous materials
- Use of equipment
- Emergency procedures
- Safe lifting and material handling practices
- Use of boom and scissor lifts
- Use of fall-protection
- Contents of safety program

Safety Communication

Employee safety communication procedures are designed to develop and maintain employee involvement and interest in the Injury & Illness Prevention Program. These activities will also ensure effective communication between management and employees on safety related issues that is of prime importance to The Company.

The following are some of the safety communication methods that may be used:

- Tailgate/Toolbox safety training with employees that encourage participation and open, two-way communication.
- New employee safety orientation and provision of the Code of Safe Practices.
- Provision and maintenance of employee bulletin boards discussing safety issues, accidents, and general safety suggestions.
- Written communications from management or the Safety Coordinator, including memos, postings, payroll stuffers, and newsletters.
- Anonymous safety suggestion program.

Employees will be kept advised of highlights and changes relating to the safety program. The Foremen will relay changes and improvements regarding the safety program to employees, as appropriate. Employees will be involved in future developments and safety activities, by requesting their opinions and comments, as necessary.

All employee-initiated safety related suggestions will be properly answered, either verbally or in writing, by the appropriate level of management. Unresolved issues will be relayed to The Safety Coordinator, The Safety Coordinator.

All employees are encouraged to bring any safety concerns they may have to the attention of management. Lundy Construction Co., Inc. will not discriminate against any employee for raising safety issues or concerns.

The Company also has a system of anonymous notification whereby employees who wish to inform the Company of workplace hazards without identifying themselves may do so by phoning or sending written notification.

Disciplinary Action

The failure of an employee to adhere to safety policies and procedures established by The Company can have a serious impact on everyone concerned. An unsafe act can threaten not only the health and well being of the employee committing the unsafe act but can also affect the safety of his/her coworkers and/or customers. Accordingly, any employee who violates any of the Company's safety policies will be subject to disciplinary action.

Note: Failure to promptly report any on-the-job accident or injury, on the same day as occurrence, is considered a serious violation of The Company's Code of Safe Practices. Any employee who fails to immediately report a work-related accident or injury, no matter how minor will be subject to disciplinary action.

Employees will be disciplined for infractions of safety rules and unsafe work practices that are observed, not just those that result in an injury. Often, when an injury occurs, the accident investigation will reveal that the injury was caused because the employee violated an established safety rule and/or safe work practice(s).

In any disciplinary action, the foreman should be cautious that discipline is given to the employee for safety violations, and not simply because the employee was injured on the job or filed a Workers' Compensation claim.

Violations of safety rules and the Code of Safe Practices are to be considered equal to violations of other Company policy. Discipline for safety violations will be administered in a manner that is consistent with The Company's system of progressive discipline. If, after training, violations occur, disciplinary action will be taken as follows:

- Oral warning. Document it, including date and facts on the "Safety Warning Report" form. Add any pertinent witness statements. Restate the policy and correct practice(s).
- Written warning. Retrain as to correct procedure/practice.
- Written warning with suspension.
- Termination

As in all disciplinary actions, each situation is to be carefully evaluated and investigated. The particular step taken in the disciplinary process will depend on the severity of the violation, employee history, and regard to safety. Foremen and supervisors should consult with the office if there is any question about whether or not disciplinary action is justified. Employees may be terminated immediately for willful or extremely serious violations. Union employees are entitled to the grievance process specified by their contract.

Note: Consistency in the enforcement of safety rules will be exercised at all times.

NOTE: In the "Attachments" Chapter of this Safety and Health Program you will find a master copy of the following forms for Company use:

- Disciplinary Safety Warning
- Code of Safe Practices Receipt

GENERAL SAFETY RULES

Lundy Construction Co., Inc. employees will follow these safe practice rules, render every possible aid to safe operations, and report all unsafe conditions or practices to their supervisor.

Failure to abide by the Code of Safe Practices may result in disciplinary action up to and including termination.

Supervisors will insist that employees observe and obey every rule, regulation, and order necessary to the safe conduct of the work, and will take such action necessary to obtain compliance.

If you are unsure of the safe method to do your job, STOP and ask your supervisor. Ignorance is no excuse for a safety violation.

All employees will be given frequent accident prevention instructions. Instructions, practice drills and articles concerning workplace safety and health will be given at least once every 10 working days.

No one will knowingly be permitted to work while the employee's ability or alertness is impaired by fatigue, illness, and prescription or over the counter drugs. Employees who are suspected of being under the influence of illegal or intoxicating substances, impaired by fatigue or an illness, will be prohibited from working.

Anyone known to be under the influence of alcohol and/or drugs will not be allowed on the job while in that condition. Persons with symptoms of alcohol and/or drug abuse are encouraged to discuss personal or work-related problems with their supervisor/employer.

Employees should be alert to see that all guards and other protective devices are in proper places and adjusted, and will report deficiencies. Approved protective equipment will be worn in specified work areas.

Horseplay, scuffling, fighting and other acts that tend to have an adverse influence on the safety or well being of the employees are prohibited. Do not run in the workplace or in the shop or office area.

Work will be well-planned and supervised to prevent injuries when working with equipment and handling heavy materials. When lifting heavy objects, employees should bend their knees and use the large muscles of the leg instead of the smaller muscles of the back. Back injuries are the most frequent and often the most persistent and painful type of workplace injury.

Workers will not handle or tamper with any electrical equipment, machinery or air or water lines in a manner not within the scope of their duties, unless they have received instructions from their supervisor. Do not operate equipment that you are not familiar with. Do not attempt to use such equipment until you are fully trained and authorized.

Keep your work area clean, free of debris, electrical cords, and other hazards. Immediately clean up spilled liquids.

Always notify all other individuals in your area who might be endangered by the work you are doing.

A red tag system identifies equipment that is NOT to be operated, energized, or used. All lockout/tagout notices and procedures must be observed and obeyed.

Do not block exits, fire doors, aisles, fire extinguishers, first aid kits, emergency equipment, electrical panels, or traffic lanes.

Do not leave tools, materials, or other objects on the floor that might cause others to trip and fall.

Do not distract others while working. If conversation is necessary, make sure eye contact is made prior to communicating.

Employees will not enter manholes, underground vaults, chambers, tanks, silos, or other similar places that receive little ventilation, unless it has been determined that it is safe to enter.

Materials, tools, or other objects will not be thrown from buildings or structures until proper precautions are taken to protect others from the falling objects.

Employees will cleanse thoroughly after handling hazardous substances, and follow special instructions from authorized sources.

Gasoline or other flammable liquids will not be used for cleaning purposes.

No burning, welding, or other source of ignition will be applied to any enclosed tank or vessel, even if there are some openings, until it has first been determined that no possibility of explosion exists, and authority for the work is obtained from the foreman or superintendent.

Any damage to scaffolds, falsework, or other supporting structures will be immediately reported to the foreman and repaired before use.

Possession of firearms, weapons, illegal drugs or alcoholic beverages on Company or customer property or the workplace is strictly prohibited.

All injuries will be reported promptly to your supervisor so that arrangements can be made for medical and/or first-aid treatment.

Specific Safety Rules

Electrical Safety

Only trained, qualified, and authorized employees are allowed to make electrical repairs or work on electrical equipment or installations.

All electrical equipment and systems will be treated as energized until tested or otherwise proven to be de-energized.

All energized equipment and installations will be de-energized prior to the commencement of any work. If the equipment or installation must be energized for test or other purposes, special precautions will be taken to protect against the hazards of electric shock.

All equipment will be locked 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 bearing a lock.

Safety grounds will always be used where there is a danger of shock from back feeding or other hazards.

Polyester clothing or other flammable types of clothing will not be worn near electrical circuits. Cotton clothing is much less likely to ignite from arc blast. Employees working on live circuits will be provided Nomex or equivalent fire resistant clothing.

Suitable eye protection must be worn at all times while working on electrical equipment.

Always exercise caution when energizing electrical equipment or installations. Take steps to protect yourself and other employees from arc blast and exploding equipment in the event of a fault.

All power tools will be grounded or double insulated. Tools with defective cords or wiring will not be used.

Metal jewelry should not be worn around energized circuits.

Extension and temporary power cords must be heavy duty and grounded. Frayed or defective cords will not be used.

Suitable temporary barriers or barricades will be installed when access to opened enclosures containing exposed energized equipment is not under the control of an authorized person.

Electrical installations must be protected from accidental contact by enclosures or tight fitting covers.

Circuits will not be overloaded with equipment or extension cords.

Metal measuring tapes, fish tapes, ropes or other metal devices are prohibited where they may contact energized parts of equipment or circuits.

Personal Protective Equipment (PPE)

Use the correct PPE for each job assignment. If you do not know, ask.

PPE will be maintained in good condition and cleaned regularly.

PPE will be stored properly when not in use to protect it from damage.

Damaged or broken PPE must be returned to your foreman for replacement.

Hard hats must be worn on jobsites, when required.

ANSI approved safety glasses must be worn when working with power tools, compressed air or gasses, chemicals or any other item that creates an eye injury hazard.

Face shields with safety glasses are recommended when grinding or working with hazardous chemicals.

Employees must wear industrial work shoes in the shop and on the jobsite. The shoes must have complete leather uppers and skid resistant soles and be in good condition. Steel toe protection is recommended.

Athletic style shoes, tennis shoes, open toe shoes, plastic or vinyl shoes or shoes with decorative accessories are not allowed.

Hearing protectors must be worn when working with loud equipment such as cut off saws, chain saws, air hammers or grinders.

Back support belts should be worn for heavy lifting tasks. They do not help you lift more, but may provide some protection from back injuries.

Be sure the protective clothing you wear will not hamper or restrict freedom of movement due to improper fit.

Long pants of heavy-duty material must be worn. No shorts or sweat pants are allowed.

Do not wear loose, torn or frayed clothing, dangling ties, finger rings, dangling earrings, jewelry items, or long hair unless contained in a hair net, while operating any machine that could cause entanglement.

If required, wear NIOSH approved respirators when applying adhesives, paint, welding, grinding or working with chemicals. Read the MSDS to find out which types of respirators are required. Facial hair may not be permitted in certain circumstances.

Hazardous Materials and Chemicals

Read all warning labels and Material Safety Data Sheets (MSDS) before using any chemicals. MSDS contain personal protective equipment and safety information and are available from your foreman.

Hazardous materials will be handled in accordance with the MSDS and label. If protective equipment is required, use it.

Eye protection must be worn when working with hazardous materials or chemicals.

Mixing of chemicals is prohibited at all times unless required by the label. Before you mix - review all MSDS.

Always wash your hands thoroughly after handling chemicals and before eating or smoking, even if you were wearing protective gloves.

Never use solvents for hand cleaning. Use the non-toxic hand cleaners provided.

Store all hazardous materials properly in suitable containers that are properly labeled.

Use chemicals only in well-ventilated areas.

When using secondary containers, ensure that they are labeled as to their contents and hazards.

Do not disturb any asbestos. STOP work and tell your foreman. If you are not sure, STOP and ask.

Do not cut or weld stainless steel or galvanized metal without respiratory protection. These items create toxic fumes.

Work with lead, asbestos, cadmium, and other toxic compounds require special precautions. Do not attempt to perform this work without special equipment and training.

Fire Prevention and Housekeeping

Always take precautions to prevent fires which may be started, particularly from oily waste, rags, gasoline, flammable liquids, acetylene torches, improperly installed electrical equipment, and trash.

Firefighting equipment is to be inspected on a regular basis. All discharged, damaged or missing equipment is to be immediately reported to a supervisor. Tampering with fire equipment is prohibited.

Access to fire extinguishers must be kept clear at all times. Make note of the location of firefighting equipment in your work area.

Never use gasoline or flammable solvents for cleaning purposes.

Smoking is prohibited within 20 feet of where flammable substances are present.

In case of fire, employees will consider the safety of themselves and other individuals before saving property.

Keep your work areas free of debris. Remove useless material from the work area as fast as required to help reduce tripping hazards.

Maintain awareness of potential hazards when walking about the workplace.

Keep tools, materials and equipment out of walkways and stairways at all times.

Sharp wires or protruding nails must be kept bent.

Place tools and equipment so they will not fall from elevated areas.

Tie materials down at day's end so the wind will not blow it off the roof.

Fall Protection

Fall protection, such as standard railings or a safety harness and lanyard, will be used at all times, when working 7 ½ feet or more above the level below.

Floor and wall openings, unfinished balconies, elevator shafts and similar areas must be railed, covered, or barricaded to prevent falls.

Never remove fall protection rails, covers, or barricades without permission from your foreman and special precautions. Always replace these items when finished with your task.

All safety harnesses will be the full body type with a shock-absorbing lanyard attached to a substantial anchorage capable of supporting twice the maximum load. Lanyards will be attached at the wearer's upper back. Body belts are not to be worn as fall protection.

Read and obey all manufacturers' instructions relating to your fall arrest system (safety harness and lanyard).

Inspect all components of your harness and lanyard prior to each use and after a fall. Defective equipment is not to be used. Lanyards must be destroyed after a fall and never reused.

Safety harnesses and lanyards should limit free fall distance to less than 4 feet and prevent contact with any level or objects below you.

Never use any part of a fall arrest system, such as a harness or lanyard, to hoist materials or for any other purpose.

Safety harnesses and shock absorbing lanyards are required to be worn at all times while in boom lifts.

Ladder Safety

Inspect the ladder before using it. If it is broken, throw it out. Never repair a broken ladder, get a new one. Keep portable stairways, ladders, and step stools in good condition and use them only in a safe manner.

Use the proper ladder for the job. Do not use "A" frame ladders as straight ladders. Make sure the ladder is tall enough to reach the work area. Do not use metal ladders for electrical work.

Do not place ladders in passageways, doorways, or any location where they might be hit or jarred, unless protected by barricades or guards.

Ladders should only be placed on hard level surfaces. Make sure the ladder feet are not placed on sandy, slippery, or sloping surfaces. Clean or sweep the area where the ladder feet will be and make sure the rubber feet are in good shape.

Ladder rungs and steps must be kept free of grease, oil, mud, or other slippery substances.

Arrange your work so you are able to face the ladder and use both hands while climbing. Do not carry tools or equipment while climbing a ladder. Climb the ladder, and then hoist the tools or equipment with a line or a hoisting device.

Avoid temporary ladders. Always use a commercially made, construction grade ladder of the proper length for the work being performed.

Secure portable ladders in place and at a pitch so the leveling indicator is in alignment or the distance from the wall to the base of the ladder is at least 1' for every 4' of height.

Straight ladders will be tied off the top of the ladder to prevent slipping.

Be aware of objects below you, move or cover sharp objects in case you fall. Cap or bend all rebar.

Do not stand on or work from the 2nd rung from the top or above. Also do not reach too far from the ladder. Keep your belt buckle between the side rails.

Extension ladders will extend at least 36" above the level being accessed.

On all ladders, do not step on cross bracing that is not intended to be used for climbing.

Scaffolds

Scaffolds are to be erected, dismantled, altered, or repaired by the scaffold contractor ONLY.

Inspect scaffolds prior to use and report any damage immediately to your foreman. Do not use damaged scaffolds.

You are not permitted to ride on rolling scaffolds being moved.

Always use guard railings on all scaffolds regardless of height.

Use only high quality planking on scaffolds and be sure the planks are secure to prevent shifting.

Always apply caster brakes and use outriggers when scaffolds are stationary.

Do not use planks, buckets, ladders. guard rails or other equipment as a temporary means of obtaining greater height off the scaffold.

Be aware of the objects below you; move or cover sharp objects in case you fall. Cap or bend all rebar.

Lockout/Tagout

All machinery and electrical equipment will be locked out and tagged prior to repair, cleaning, or adjustment unless power is necessary to perform the work. If so, other precautions, specified by your foreman, will be taken.

Use your own lock and key. No one else should have a key for your lock. Destroy all duplicate keys.

Maintain control of your key at all times to prevent unauthorized use.

Never remove another employee's lock or energize tagged equipment.

If multiple employees are working on the same equipment, each employee should install their own lock.

Notify all affected employees that lockout/tagout is required and reasoning.

If the equipment is operating, shut it down by the normal stopping procedure (depress stop button, open toggle switch, etc.).

Operate the switch, valve or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, etc.) is disconnected or isolated from the equipment.

Stored energy, such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas or water pressure, etc. must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc.

Lock-out all energy isolation devices with an individual lock.

After ensuring that no employees are exposed and as a check of having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate.

CAUTION: Return operating controls to neutral position after the test. The equipment is now locked-out. Install red lock-out tag on operating controls.

After repair is complete and the equipment is ready for testing or normal operation, check the equipment to see that all cover plates and safety devices have been reinstalled.

When the equipment is clear, remove all locks and tags. The energy isolating devices may be operated to restore energy to the equipment.

Boom and Scissor Lifts

Only trained and authorized employees are allowed to use boom or scissor lifts. If you are not trained, stay off.

Read and obey all manufacturers' instructions and safety precautions.

Inspect all lifts prior to use. Defective equipment will not be used.

A safety harness with shock absorbing lanyard must be worn while using boom lifts. Harnesses are not required for scissor lifts, provided guardrails are adequate and you do not leave the work platform.

Always stay inside the platform railing. Do not use planks or ladders to extend your reach.

Always lower the lift before moving.

Never use scissor lifts on uneven ground. They are designed for use primarily on concrete floors.

Hand and Power Tools

Proper eye protection must be worn when using hand and power tools.

Know your hand and power tool applications and limitations. Always use the proper tool for the job.

Inspect cords and tools prior to use. Do not use tools that are faulty in any way. Exchange them for safe tools immediately.

Power tools must be grounded or double insulated. All power tools are to be plugged into a grounded GFCI outlet.

Do not use power tools in damp, wet, or explosive atmospheres.

Do not lift, lower or carry portable electrical tools by the power cord.

Keep all safety guards in place and in proper working order.

Use clamps or vises to secure work pieces.

Do not force hand power tools. Apply only enough pressure to keep the unit operating smoothly.

Return all tools and other equipment to their proper place after use.

Unplug all power tools before changing bits and/or grinding disks.

Never leave chuck keys in the tool during operation.

Do not use a screwdriver as a chisel.

Before using sledges, axes, or hammers, be sure the handles are securely fastened with a wedge made of sound material.

Do not use a handle extension or 'cheater" on any wrench.

Files should be equipped with handles and should not be used as a punch or pry.

Trenching and Excavation

All excavations and trenches 5 feet deep or greater must be shored, sloped or benched to protect workers from hazards of moving earth. All trenching must be done in accordance with OSHA regulations.

Always locate underground utilities before digging. Also contact regional notification center in advance.

Do not work under loads handled by lifting or digging equipment.

Ladders will be provided for access to trenches and excavations 4 feet deep or greater. Use them.

Keep all spoil piles a minimum of 2 feet from the edge of the trench.

Barricade trenches or use caution tape to warn others of their presence.

Inspect all trenches and excavations daily, before work, to look for signs of shifting earth.

Cranes and Rigging

No employee is permitted to ride on loads, hooks, or slings of any crane, hoist or derrick.

Do not work or stand under any suspended load. Crane operators will avoid swinging loads over people.

Inspect all slings and chains prior to use. Do not use defective slings, chains, or rigging.

Welding and Cutting

Make sure your welding equipment is properly installed, grounded, and in good working condition.

Always wear protective clothing suitable for the welding or cutting to be done.

Always wear proper eye protection when welding, brazing, soldering or flame cutting. Once you remove your welding helmet, put on safety glasses.

Keep your work area clean and free of hazards. Make sure that no flammable, volatile or explosive materials are in or near the work area.

Handle all compressed gas cylinders with extreme care. Keep caps on when not in use. Make sure that all compressed gas cylinders are secured to the equipment carriage, wall or other structural supports. When compressed gas cylinders are empty close the valve, install the cap and return to correct bottle storage area.

Store compressed gas cylinders in a safe place with good ventilation. Acetylene cylinders and oxygen cylinders should be kept at least 20 feet apart.

Do not weld or cut in confined spaces without special precautions and your foreman's authorization.

Do not weld on containers that have held combustibles or flammable materials.

Use mechanical exhaust ventilation at the point of welding when welding lead, cadmium, chromium, manganese, brass, bronze, zinc or galvanized metals. These metals are highly toxic and their fumes should not be breathed.

Make sure all electrical connections are tight and insulated. Do not use cables with frayed, cracked or bare spots in the insulation.

When the electrode holder or cutting torch is not in use, hang it on the brackets provided. Never let it touch a compressed gas cylinder.

Dispose of electrode and wire stubs in proper containers since stubs and rods on the floor are a safety hazard.

Use weld curtains to shield others from the light rays produced by your welding.

Make sure all compressed gas connections are tight and check for leaks. Do not use hoses with frayed or cracked spots.

Keep your leads orderly and out of walkways. Suspend them whenever possible.

DO NOT WELD if leads or machine are in or near water.

Make sure a portable fire extinguisher is nearby.

Keep your work area clean and free of hazards. When flame cutting, sparks can travel 30-40 feet. Do not allow flame cut sparks to hit hoses, regulators or cylinders.

Use oxygen and acetylene or other fuel gases with the appropriate torches and tips only for the purpose intended.

Never use acetylene at a pressure in excess of 15 pounds per square inch. Higher pressure can cause an explosion.

Never use oil, grease, or any other material on any apparatus or thread fitting in the oxyacetylene or oxyfuel gas system. Oil and grease in contact with oxygen will cause spontaneous combustion.

Always use the correct sequence and technique for assembling and lighting the torch.

Always use the correct sequence and technique for shutting off a torch.

Company Vehicles

Only authorized employees are permitted to operate Company vehicles. Do not let anyone else drive your Company vehicle.

Company vehicles are to be used for Company business only. Personal, off duty and family use is prohibited.

Drive defensively and obey all traffic and highway laws.

Always wear your seat belt, whether the driver or a passenger.

Report all accidents to your supervisor as soon as possible and obtain a police report.

Keys must be removed from all unattended vehicles and the vehicles must be locked, unless parking inside the facility.

Do not jump from the cab or bed of Company vehicles. Always use the steps or a ladder.

Inspect your vehicle and report any defects or operating problems to your supervisor so that repairs can be made.

Smoking is prohibited during vehicle refueling.

If your driver's license is revoked or expired, immediately notify your supervisor and do not drive.

Traffic Safety

All employees exposed to traffic hazards are required to wear orange flagging garments (shirts, vests, jackets) at all times.

When possible, construction vehicles are to be placed between the employees and traffic to prevent vehicles from entering the work area and hitting members of the crew.

All traffic controls will be established in accordance with the Manual of Traffic Controls for Construction and Maintenance Work Zones.

Traffic controls are to be properly maintained throughout the workday. Signs and cones must be kept upright, visible and in their proper position at all times.

NOTE: In the "Attachments" Chapter of this Injury & Illness Prevention Program you will find a master copy of the following forms for Company use:

- Disciplinary Safety Warning
- Code of Safe Practices Receipt

Note: Please see our company's Safety and Health Manual for the full Program.

Accident Investigation Policy

Lundy Construction Co., Inc. is committed to investigating all accidents/incidents. The Safety Coordinator is responsible for ensuring that accident investigation policy is followed.

Accidents and near miss incidents that result in personal injury, property damage, chemical spill, or other emergency situations will be immediately reported to the assigned supervisor at the time of the event and Emergency Medical Service, Fire Department, or Hazmat Services will be immediately summoned. Such events will be investigated and documented on the appropriate Company form. All forms will be fully completed and submitted to The Safety Coordinator for review and for discussion at the next scheduled Safety Committee meeting. These investigations demonstrate the company's commitment to providing a safe and healthful work environment. Disciplinary Policy will be enforced.

This company will investigate all lost-time injuries. Fatalities and catastrophes must be reported to OSHA within 8 hours. Serious accidents must be reported within 24 hours.

Note: Consider the event a "serious accident" if an employee is admitted to a hospital for treatment or observation as a result of injuries suffered from a workplace accident.

Accident Causes

Accidents occur when hazards escape detection during preventive measures, such as a job or process safety assessment, when hazards are not obvious, or as the result of combinations of circumstances that were difficult to foresee. A thorough accident investigation may identify previously overlooked physical, environmental, or process hazards, the need for new or more extensive safety training, or unsafe work practices.

The primary focus of any accident investigation should be the determination of the facts surrounding the incident and the lessons that can be learned to prevent future similar occurrences. The focus of the investigation should NEVER be to place blame. The process should be positive and thought of as an opportunity for improvement.

When Accident Investigations are Required

As a general rule, investigations should be conducted for:

- All injuries (even the very minor ones).
- All accidents with potential for injury.
- Property and/or product damage situations.
- All "Near Misses" where there was potential for serious injury.

Near miss and incident reporting and investigation allow you to identify and control hazards before they cause a more serious incident. Accident/incident investigations are a tool for uncovering hazards that either were missed earlier or hazards where controls were defeated. However, it is important to remember that the investigation is only useful when its objective is to identify root causes. In other words, every contributing factor to the incident must be uncovered and recommendations made to prevent recurrence.

Accident Investigation Plan

When a serious accident occurs in the workplace, everyone will be too busy dealing with the emergency at hand to worry about putting together an investigation plan, so the best time to develop effective accident investigation procedures is before the accident occurs.

The plan should include procedures that determine:

- Who should be notified of accident?
- Who is authorized to notify outside agencies? (fire, police, etc.)
- Who is assigned to conduct investigations?
- Training required for accident investigators.
- Who receives and acts on investigation reports?
- Timetables for conducting hazard correction.

Secure the Accident Scene

For a serious accident, the first action the accident team needs to take is to secure the accident scene so material evidence is not moved or removed. Material evidence has a tendency to walk off after an accident. If the accident is quite serious, OSHA may inspect and require that all material evidence be marked and remain at the scene of the accident.

Gather Information

The next step is to gather useful information about what directly and indirectly contributed to the accident. The following tools should be used to gather as much information as possible:

- Interview eye witnesses as soon as possible after the accident. Interview witnesses separately, never as a group.
- Interview other interested persons such as supervisors, co-workers, etc.
- Review related records such as:
  - Training records
  - Disciplinary records
  - Medical records (as allowed)
  - Maintenance records
  - OSHA 300 Log (past similar injuries)
  - Safety Committee records
- Document the scene with photographs, videotape, or sketches AND appropriate measurements.

Develop a Sequence of Events

Use the information gathered to develop a detailed step by step description of the accident. Make sure the accident is documented in enough detail to enable an individual unfamiliar with the situation to envision the sequence of events. Do not just describe the accident itself; include a description of events that led up to the accident.

Analyze the Accident

The next step is to determine the cause(s) of the accident. This is the most difficult step because first the events must be analyzed to discover surface cause(s) for the accident, and then, by asking "why" a number of times, the related root causes are uncovered. Remember, surface causes are usually pretty obvious and not too difficult to determine. However, it may take a great deal more time to accurately determine the weaknesses in the management system, or root causes, that contributed to the conditions and practices associated with the accident.

Preventative Actions

This is the most important piece of any investigation. All of the work done to this point culminates with recommendations to prevent similar accidents from happening in the future. Recommendations should relate directly to the surface and root causes of the accident. These recommendations should include recommended actions such as:

- Engineering controls (for example, local exhaust ventilation or use of a lift assisting device).
- Work practice controls (for example, pre-plan work, and remove jewelry and loose fitting clothing before operating machinery).
- Administrative controls (e.g., standard operating procedures or worker rotation).
- Personal protective equipment (for example, safety glasses or respirators).

It is crucial that, after making recommendations to eliminate or reduce the surface causes, that the same procedure is used to recommend actions to correct the root causes. If root causes are not corrected, it is only a matter of time before a similar accident occurs.

Summary

A successful accident investigation determines not only what happened, but also finds how and why the accident occurred. Investigations are crucial as an effort to prevent a similar or perhaps more disastrous sequence of events. Research has shown that a typical accident is the result of many related and unrelated factors that somehow all come together at the same time. It is estimated that there are usually more than ten factors that contribute to a serious accident. Although, this combination of factors normally makes an investigation very time consuming and resource intensive, the good news is that the accident can normally be prevented by removing only a few of the contributing factors.

Note: Please see our company's Safety and Health Manual for the full Program.

Chapter 5

Emergency Response Plan & Fire Prevention Procedures

§1910.38 – Emergency Action Plans

§1910.157 – Portable Fire Extinguishers – Fire Protection & Prevention

§1926.150 – Fire Protection

Policy Statement

Lundy Construction Co., Inc. has implemented the following policy for the protection of our employees against emergency situations in the workplace such as fire/explosion hazards, and has appointed The Safety Coordinator to supervise Emergency Action Plans and Fire Protection/Prevention Programs:

Lundy Construction Co., Inc. will have an Emergency Action Plan whenever an OSHA standard requires one. Emergency Action Plans will be in writing, posted in the workplace, and available to employees for review. The names and job titles of every person in the chain of command will be posted.

The Safety Coordinator will ensure that all employees at Lundy Construction Co., Inc. are informed and trained in the following minimum elements for Emergency Action Plans:

- Procedures for reporting a fire or other emergency.
- Procedures for emergency evacuation for all areas of work, including type of evacuation and exit route assignments.
- Safe assembly areas designated for all work areas in the event of evacuation.
- Procedures to be followed by employees who remain to operate critical operations before they evacuate.
- Procedures to account for all employees after evacuation.
- Procedures to be followed by employees performing rescue or medical duties.
- The members in the chain of command who may be contacted by employees who need more information about the Plan or for an explanation of their duties under the Plan.

Lundy Construction Co., Inc. will have and maintain an employee alarm system. The employee alarm system will use a distinctive signal for each purpose.

Lundy Construction Co., Inc. will designate and train employees to assist in a safe and orderly evacuation of other employees.

The Safety Coordinator will review the Emergency Action Plan with each employee covered by the plan:

- When the plan is developed or an employee is initially assigned to a job.
- When the employee's responsibilities under the plan change.
- When any element of the Plan is changed.

All fire extinguishers will be inspected by The Safety Coordinator on a monthly basis; this inspection will be recorded and documented with the required annual maintenance check. Records of inspection will be kept on file in the office.

- The Safety Coordinator will ensure that all employees are trained in the proper operation of all types of fire extinguishers provided by the company.
- All employees will be trained in the hazards involved in incipient stage fire fighting. Employees are instructed to ensure the local emergency response service (Fire Department) is notified before attempting to extinguish any fire, and that if a fire is not immediately extinguished, or the fire recurs to evacuate immediately.
- Fire Protection/Prevention training will be required on initial hiring and annually thereafter.

Emergency Action/Response Plans

Plan for Workplace Emergencies

Emergency planning is the first step, and it can be challenging even if your workplace has few employees. You will need to determine what emergencies could affect your workplace, who will lead and make decisions during an emergency, and what procedures will ensure that employees respond appropriately. These elements are the foundation of a workplace emergency plan.

Emergency planning may not prevent emergencies, but it can protect lives, equipment, and property over the long term. This guide will help you plan for workplace emergencies so that you and your coworkers respond appropriately when an unlikely event happens.

Does OSHA Require Employers to Have Emergency Plans?

OSHA requires most employers to have emergency plans. Those that have more than 10 employees must have written plans. Those that have 10 or fewer employees do not have to put their plans in writing; however, they must ensure that their employees know what procedures to follow to protect themselves in an emergency.

Managing Workplace Emergencies

The Incident-Management System

You can learn much about planning for workplace emergencies from professional emergency responders. When someone calls 911 to report an emergency, he or she connects with a local network of fire, police, and other emergency service professionals who will respond as efficiently as possible. This network is part of a larger incident-management system that can respond to an emergency and accomplish the following:

- Identify, locate, and determine the extent of the emergency.
- Determine the resources necessary to manage and control the emergency.

- Coordinate command-and-control responsibilities between police and fire departments, hospitals and other medical service providers, government agencies, and on-site responders.
- Establish and maintain communication between on-scene emergency responders and other emergency service providers.
- Provide for the safety of victims.

An Incident-Management System for Your Workplace

With thoughtful planning, you can create a small-scale version of the incident management system used by professional responders. Your workplace will be ready to respond to any emergency – from a heart attack to an earthquake – and manage it in the most effective, efficient way possible. The essential parts of this system are your employees, your emergency plan, communication and emergency-response equipment, and your workplace.

Developing an Emergency Plan

Your goal is to create an emergency plan that ensures the well-being of everyone at your workplace in the most effective, efficient manner possible. But if you have never had to respond to a workplace emergency, how do you begin?

You begin by involving employees in the planning process, identifying emergencies that could affect your workplace, establishing an emergency chain of command, and developing emergency-response policy and procedures.

Involve Employees in the Planning Process

Perhaps the most important element of emergency planning is getting employees involved in the planning process; when employees participate, they will take the plan seriously and be more likely to respond appropriately during an emergency. From the start, they should be aware that the purpose of the plan is to ensure their safety.

Form a team to help you develop the plan; ask for volunteers to join the team.

Review the plan with your employees to ensure that they know the procedures to follow to respond safely in an emergency. Each employee should have a copy of the plan or know where to obtain one.

Encourage employees to report workplace hazards and unsafe work practices that could contribute to an emergency.

Identify Emergencies that Could Affect Your Workplace

Identify any external incident (outside your workplace) that could threaten employees or the public and any incident within your workplace that could cause an emergency.

Examples include the following:

- Earthquake: external
- Explosion: external or internal
- Fire: external or internal
- Hazardous-substance release: external or internal
- Medical: internal

- Weather-related event (hurricane, tornado, blizzard, etc.): external
- Threat of violence: external or internal

Keep in mind... Electrical, heating and cooling, and telecommunication-system failures can disrupt workplace activities and contribute to emergencies. What effect would each have on your workplace? Human error also contributes to many workplace emergencies; are your employees trained to do their jobs safely?

Establish a Chain of Command

A chain of command links one person with overall responsibility for managing an emergency to others responsible for carrying out specific emergency-response tasks. A chain of command establishes who is in charge and ensures that everyone in the chain responds to emergencies in an organized way.

At the top of the chain is the emergency scene commander, a trained employee who has overall responsibility for managing emergencies.

Just below the emergency scene commander are the volunteer emergency scene coordinators.

In an organization that has multiple buildings or workplaces, the chain of command might also include a facility manager, an emergency director, and other management units.

At many small- to medium-sized workplaces, the chain of command consists of an emergency scene commander and one or two volunteer emergency scene coordinators.

The Responsibilities of the Emergency Scene Commander

The emergency scene commander has overall command of a workplace emergency, including the following responsibilities:

- Assessing incidents to determine if it is necessary to order emergency response.
- Supervising emergency scene coordinators' activities during an emergency.
- Coordinating the activities of professional responders such as ambulance, police, and fire departments.
- Directing shutdown of critical workplace equipment or operations.
- Determining if an evacuation is necessary and managing an evacuation.

Keep in mind... The emergency scene commander should be an employee who has experience managing others, assessing complex events, and making effective decisions under difficult circumstances.

The Role of the Emergency Scene Coordinators

Emergency scene coordinators are responsible for coordinating other employees' activities during an emergency (guiding them to appropriate exits and safe areas during an evacuation, for example) and for other emergency-response tasks for which they have volunteered and been properly trained.

Generally, each coordinator should be responsible for about 20 employees within a designated work area, as shown in the following table.

Number of Emergency Scene Responders for Typical Workplaces

Total Employees in Workplace	Emergency Scene Commander	Emergency Scene Coordinator
11-19	1	1
20-49	1	1-2
50-99	1	2-5
100-249	1	5-12
250+	1	12+

Emergency scene coordinators must know how to respond to all emergencies identified in your emergency plan, the evacuation procedures for your workplace, and how to use emergency communication equipment. They should also know CPR, first aid, and how to respond to threats of violence. Their primary responsibilities include the following:

- Checking rooms and other enclosed spaces for employees who may be trapped or unable to evacuate during an emergency.
- Knowing who may need assistance during an evacuation and how to assist them.
- Coordinating the emergency activities of employees.
- Ensuring that employees understand how to respond to workplace emergencies.
- Knowing the workplace layout, appropriate escape routes, and areas that employees must not enter during an evacuation.
- Verifying that employees are in designated safe areas after an evacuation.

Keep in mind... Establishing a chain of command minimizes confusion during an emergency. An effective chain of command helps ensure that responders manage an emergency in the most efficient way possible.

Develop a Policy and Procedure for Responding to Emergencies

The Policy

Create a short written policy that states the purpose of the plan and emphasizes that you are committed to ensuring the safety of employees and others at your workplace during an emergency. The following is an example:

"It is the policy of this organization to protect employees from physical harm, harassment, and intimidation. To provide a safe working environment for all employees, this organization is committed to establishing an effective emergency plan. The plan is based on an "Incident Management System" (IMS) that consists of volunteer employees trained to respond to any workplace emergency. The system is modeled on the IMS system used by fire, police, and emergency medical-service responders. It provides for overall command and control of any emergency incident. It improves communication between IMS personnel and the fire, police, and medical personnel who respond to a call for help.

And it provides appropriate emergency assistance during the first few minutes it takes for emergency responders to arrive."

The Procedures

Procedures are instructions for accomplishing specific tasks. Emergency procedures are important because they tell employees exactly what to do to ensure their safety during an emergency. If your workplace has more than 10 employees, your emergency plan must describe in writing how you will accomplish each of the following tasks:

- Report emergencies to local fire and police departments.
- Inform the emergency chain of command of an emergency.
- Warn employees about an emergency.
- Conduct an orderly, efficient workplace evacuation.
- Assist employees, with disabilities or limited English-speaking skills during an evacuation.
- Shut down critical equipment, operate fire extinguishers, and perform other essential services during an evacuation.
- Account for employees at a designated safe area after an evacuation.
- Perform rescue and first aid that may be necessary during an emergency.

Keep in mind... If your workplace has 10 or fewer employees, you do not have to put these procedures in writing; however, you must ensure that employees know what procedures they must follow to protect themselves.

Other Critical Information

Include the following in your procedures:

- The names of the emergency scene commander, the emergency scene coordinators and others responsible for carrying out the plan, and how to contact them during an emergency.
- The name of the person who has the authority to order a workplace evacuation (typically, the emergency scene commander).
- The names and phone numbers of those who understand the emergency plan and will inform others about it (typically the emergency scene commander and the emergency scene coordinators).

Planning Considerations

Accounting for Employees after an Evacuation

Designate a meeting area a safe distance away from the emergency site and ensure that employees know they must meet there after they evacuate the workplace. An emergency scene coordinator should take a "Roll-Call" to identify employees not present.

Keep in mind... You will need to determine what information or assistance employees may need if they cannot return to the workplace after an evacuation.

Alerting Employees to an Emergency

You can use a public address system, portable radio, an alarm, an air-horn, or any other means that you know will reach and warn all employees. Alarms must be distinctive, be recognizable by all employees, and have a back-up power supply in case the primary power fails.

Keep in mind... You may need alarms that employees can hear and see.

Conducting Employee Rescues

It takes more than good intentions to save lives. Would-be rescuers can endanger themselves and those they are trying to rescue. During most emergencies, leave rescue work to professional responders who are appropriately trained and equipped. The exceptions? A catastrophe, such as a severe earthquake, may delay professional emergency responders for hours or days. Also, jobs such as handling hazardous substances or working in confined spaces could result in emergencies for which fire or police departments are not trained.

Find out what kind of emergencies local responders are trained and equipped to respond to. If they are unable to respond to emergencies unique to your workplace, your employees must be trained and able to respond promptly.

Coordinating with Multi-Employer Workplaces

If you share a building or worksite with other employers, consider working with them to develop a building-wide emergency plan. If a building-wide plan is not feasible, you should ensure that your plan does not conflict with the plans of the other employers in the building.

Developing Quick-Response Teams

A quick-response team consists of volunteer employees trained to handle workplace incidents that require immediate action, such as medical emergencies, threatening or violent people, and hazardous-substance releases. Consider the following in developing quick response teams:

- Types of incidents that require immediate action
- Roles and responsibilities of team members
- Communication and response procedures for the team

Educating Employees about Emergencies and Evacuations

To protect themselves during an emergency, all employees must understand the following elements of their emergency plan:

- The roles of the emergency scene commander and coordinators.
- How to respond to threats and intimidation.
- The method(s) for warning employees of emergencies.
- The method for contacting employees' next of kin after an emergency.
- The procedure for summoning emergency responders.
- The location of safe meeting areas.
- How to respond to an emergency and to an order to evacuate.

Educate new employees about the emergency plan when you hire them and keep all employees informed about any changes to the plan.

Train emergency scene coordinators in first aid and CPR, bloodborne-pathogen protection, and how to use rescue equipment.

Schedule regular drills so that employees can practice. Include outside fire and police departments in the drills when possible. Evaluate the effectiveness of each drill and identify activities that need strengthening. Share the results with all employees.

When a workplace emergency requires an evacuation, all employees must know to leave, what emergency exits to take, and where to meet. Employees may also need to know how to shut down critical equipment during an evacuation.

Establishing Evacuation Exits

Your workplace should have a primary evacuation exit and an alternate exit. Post diagrams that show the evacuation routes and the exits where all employees will see them. Identify the exits and the exit routes in your plan. Be sure characteristics of exits:

- Are clearly marked, well lit, and visible under emergency conditions.
- Are wide enough to accommodate employees during an evacuation.
- Are unobstructed and clear of debris at all times.
- Are unlikely to expose employees to other hazards.

Exit Routes

How would you escape from your workplace in an emergency? Do you know where all the exits are in case your first choice is too crowded? Are you sure the doors will be unlocked and that the exit access behind them will not be blocked during a fire, explosion, or other crisis? Knowing the answers to these questions could keep you safe during an emergency.

Workplace Exit Routes

Usually, a workplace must have at least two exit routes for prompt evacuation. But more than two exits are required if the number of employees, size of the building, or arrangement of the workplace will not allow a safe evacuation. Exit routes must be located as far away as practical from each other in case one is blocked by fire or smoke.

Requirements for Exits

Exits must be separated from the workplace by fire-resistant materials – that is, a one-hour fire-resistance rating if the exit connects three or fewer stories, and a two-hour fire-resistance rating if the exit connects more than three floors.

Exits can have only those openings necessary to allow access to the exit from occupied areas of the workplace or to the exit discharge. Openings must be protected by a self-closing, approved fire door that remains closed or automatically closes in an emergency.

- Keep the line-of-sight to exit signs clearly visible always.
- Install "EXIT" signs using plainly legible letters.

Safety Features for Exit Routes

- Keep exit routes free of explosives or highly flammable furnishings and other decorations.
- Arrange exit routes so employees will not have to travel toward a high-hazard area unless the path of travel is effectively shielded from the high-hazard area.
- Ensure that exit routes are free and unobstructed by materials, equipment, locked doors, or dead-end corridors.
- Provide lighting for exit routes adequate for employees with normal vision.
- Keep exit route doors free of decorations or signs that obscure their visibility of exit route doors.
- Post signs along the exit access indicating the direction of travel to the nearest exit and exit discharge if that direction is not immediately apparent.
- Mark doors or passages along an exit access that could be mistaken for an exit "Not an Exit" or with a sign identifying its use (such as "Closet").
- Renew fire-retardant paints or solutions when needed.
- Maintain exit routes during construction, repairs, or alterations.

Design and Construction Requirements

- Exit routes must be permanent parts of the workplace.
- Exit discharges must lead directly outside or to a street, walkway, refuge area, public way, or open space with access to the outside.
- Exit discharge areas must be large enough to accommodate people likely to use the exit route.
- Exit route doors must unlock from the inside. They must be free of devices or alarms that could restrict use of the exit route if the device or alarm fails.
- Exit routes can be connected to rooms only by side-hinged doors, which must swing out in the direction of travel if the room may be occupied by more than 50 people.
- Exit routes must support the maximum permitted occupant load for each floor served, and the capacity of an exit route may not decrease in the direction of exit route travel to the exit discharge.
- Exit routes must have ceilings at least 7 ft., 6 in. high.
- An exit access must be at least 28 inches wide at all points. Objects that project into the exit must not reduce its width.

Providing Medical Assistance and First Aid

Is there a nearby emergency clinic or hospital that will admit victims of emergencies from your workplace? If not, make sure that emergency scene coordinators have appropriate first-aid training and supplies. The American Red Cross, insurance companies, and fire departments usually offer such training.

Recording Critical Employee Information

After a medical emergency, an employee may be unable to contact next of kin or other relatives. You should have access to employees' home telephone numbers, the names and telephone numbers of family members they want you to contact, physician names and phone

numbers, and information employees give you about their medical conditions or medications. Many employers keep this information with employees' permanent employment records and update it yearly.

Reporting Fire and Other Emergencies

Your emergency plan must have a procedure for reporting fires and other emergencies to professional responders. Report all fires by calling 911. Fires are generally not reported to fire departments by fire alarms; most fire alarms warn only building occupants.

Keep in mind... The emergency scene commander should stay in a safe location to relay relevant information to professional emergency responders.

Selecting and Using Personal Protective Equipment

Personal protective equipment includes clothing and equipment that protects emergency responders against specific hazards. Examples include work gloves, goggles, hard hats, and respirators.

Properly used, personal protective equipment offers protection against a hazard but does not eliminate the hazard. If it fails or is not appropriate for a particular task, the user risks exposure. Appropriate, effective protection depends on selecting, wearing, and using the equipment properly – which can be challenging. The following steps highlight the procedures for selecting personal protective equipment:

- Identify emergency-related hazards for which personal protective equipment may be necessary; for example, those responding to medical emergencies need protection from bloodborne pathogens.
- Determine which personal protective equipment will protect users from the hazards; for example, latex gloves and face shields may be necessary to protect responders from bloodborne pathogens.
- Determine who will use the equipment; it is critical that the equipment fit the user and not cause allergic reactions or other health problems.
- Determine the conditions under which responders will use the equipment; the equipment must not fail under those conditions.
- Ensure that emergency responders know how to use the equipment. Whether they are wearing hard hats or atmosphere-supplying respirators, responders must know how the equipment will protect them and when it will not protect them. Responders must know how to wear, use, and maintain the equipment, and how to discard contaminated equipment.

Types of Emergencies

This section highlights emergencies that could affect workplaces and summarizes what to do when responding to them. Consider factors such as workplace size and location, number of employees, and the nature of their work in determining how to respond.

Earthquake

During an earthquake, people in most workplaces are at greatest risk from collapsing ceilings, windows, light fixtures, and other falling objects. If you are indoors, the safest response is to take cover under sturdy furniture or to brace yourself against an inside wall. Stay away from windows, skylights, bookcases, and other heavy objects. Protect your head and neck.

What to do:

- If indoors, stay there. Take cover under sturdy furniture or against inside walls.
- Do not use elevators.
- Stay away from windows, skylights, and other objects that could fall.
- Use stairways to leave the workplace if the order is given to evacuate.
- Be ready to rescue victims; professional responders may not be able to respond; remove victims to a triage area if possible.

Explosion

Any workplace that handles, stores, or processes flammable gasses, liquids, and solids is vulnerable. Explosions offer no warnings, causing disorganization and panic.

What to do:

- Try to establish communication with emergency scene coordinators.
- Assess damage to the workplace and estimate human casualties.
- Administer first aid if it is safe to do so.
- Do not use elevators.
- Evacuate following an established procedure.

Fire

Invite a local fire department representative to your workplace to help you identify fire hazards and to discuss how your workplace should respond to a fire. It is the byproducts of fire – smoke and fire gasses – that kill. A quick, orderly evacuation is the most effective response to an out-of-control fire.

What to do:

- Pull the fire alarm (or set off the predetermined signal).
- Call 911; tell the dispatcher the location and the nature of the emergency.
- Inform an emergency scene coordinator.
- Do not use elevators.
- Permit only trained responders to use fire extinguishers.

Keep in mind... If you permit emergency scene coordinators or other employees to use fire extinguishers, train them or ensure that they are properly trained in their use.

Hazardous-Substance Release

Hazardous substances include solvents, pesticides, paints, petroleum products, and heavy metals - any substance hazardous to health. Even if your workplace does not use hazardous substances, could it be affected by a nearby release or an accident on a local freeway? If so, make sure your emergency plan describes how the scene commander and coordinators will respond and notify fire and police departments.

What to do:

- Inform the emergency scene commander.
- Evacuate the area surrounding the release.
- Call 911; tell the dispatcher the location and the nature of the emergency.

If your workplace uses hazardous chemicals, OSHA's hazard communication rule requires you to inventory them, keep the manufacturer-supplied material safety data sheets, label the chemical containers, and train employees to protect themselves from the chemicals' hazards.

If your workplace is involved in hazardous-waste operations or responds to emergencies involving hazardous substances, you must have a written plan that describes how you will respond to hazardous-substance emergencies.

If employees must wear personal protective equipment during an emergency - chemical suits, gloves, hoods, boots, or respirators, for example - make sure that equipment will be available when they need it, that it fits them, and that they know how to use it.

Medical

The most likely workplace emergency is a medical emergency. A serious medical emergency such as cardiac arrest requires immediate attention - response time is critical. It is essential that medical first responders know how to perform first aid/CPR.

What to do:

- Call 911. Tell the dispatcher the location and the nature of the emergency.
- Do not move the victim.
- Notify an emergency scene coordinator for CPR or other first-aid tasks.
- Inform the emergency scene commander.
- Assist professional medical responders when they arrive.
- Inform the victim's supervisor.

Consider purchasing an automatic external defibrillator (AED) to treat victims in cardiac arrest. Until recently, AEDs were used primarily in hospitals and ambulances. Now they are portable, more affordable, and can be used by just about anyone after a short training session.

Weather-Related Event

Hurricanes, tornadoes, blizzards, and floods are likely to be the cause of weather-related workplace emergencies. Many communities experience floods following warm spring rain. Winter storms often bring strong winds, freezing rain, and snow that can cause structural damage and power outages.

What to do:

- Wait for instructions from the emergency scene commander; a power failure will slow communication.
- Tune a battery-powered radio to a station that broadcasts local news.
- Do not evacuate the workplace unless ordered to do so.

Threats of Violence

Threats of violence may be delivered in any form: face-to-face, by fax, e-mail, phone, or in writing. Threats can be directed toward the workplace or toward a specific person. Police departments, mental health professionals, and employee-assistance program counselors offer prevention information, security inspections, and employee training that help reduce the risk of workplace violence.

What to do:

- Inform an emergency scene coordinator.
- Activate a silent alarm if your workplace has one.
- Isolate the threatening person if it is possible to do so safely.
- Inform the emergency scene commander.

Bomb Threats

Take threats seriously. Do not use fire alarms or phones in the building – they generate radio waves that could trigger a bomb. If someone finds a package that may contain or that may be a bomb, he or she should note its size, shape, and whether it emits a sound, then notify the emergency scene commander. Call 911 from outside the building to report the emergency and determine if an evacuation is necessary. Use a communication method that does not generate radio waves to order the evacuation.

Consider offering threat-management training to one or more emergency scene coordinators and creating a threat quick-response team.

Terrorism

Although terrorist acts pose minimal risks to most workplaces, the devastating effects of recent acts have changed the perception of a "secure workplace" and added a new dimension to emergency planning. What distinguishes terrorist acts is the use of threats and violence to intimidate or coerce. Factors to consider in emergency planning include the following:

How do others perceive the mission of your organization in the following contexts?

- Political activities
- Economic activities
- Business activities
- Social responsibilities

How vulnerable are your critical resources from terrorist attack?

- Production machinery and equipment
- Mail and HVAC systems
- Electronic communication, power, data, and systems hardware
- Real estate and other physical property
- Finance and administrative transactions
- Employees at the workplace or at other locations

Do You Need an Emergency Plan?

Keep in mind... If your workplace has more than 10 employees, the plan must be in writing. If your workplace has 10 or fewer employees, the plan does not have to be written; however, you must ensure that employees know what procedures they must follow to protect themselves in an emergency.

Note: Please see our company's Safety and Health Manual for the full Program.

§1926.50 - Medical Services & First Aid

Medical Services & First Aid

Lundy Construction Co., Inc. is committed to the safety and health of our employees and ensures the ready availability of medical personnel for advice and consultation on matters of workplace health.

In the absence of an infirmary, clinic, or hospital in near proximity to the workplace which is used for the treatment of all injured employees, a person or persons will be adequately trained to render first aid. Adequate first aid supplies will be adequately stocked and readily available to all employees.

First aid kits are located in/at: In the company vehicles.

Policy Statement

It is the policy of Lundy Construction Co., Inc. that training in first aid response is not a general requirement for employment, but that local emergency medical services are utilized for primary emergency medical care.

Medical services for employee evaluations, employment requirements, and special conditions of work are provided to employees at no cost as specified by OSHA.

In areas where 911 service is not available, employees will be notified of phone numbers to contact local emergency response medical services. The Safety Coordinator will be responsible for posting of emergency phone numbers at all workplaces. The phone numbers will be conspicuously posted in all work locations.

Injured employees are to be transported to medical facilities by emergency medical services. If emergency medical service is not available in a timely manner, the injured employee will be transported to the nearest medical service in a company vehicle by the job foreman.

The Safety Coordinator is the designated first aid provider and is responsible for rendering first aid in the event of an injury requiring immediate response when emergency medical services are not available, and will also be responsible for first aid training of any employee required.

Eye wash bottles are available wherever eye wash stations are not, for any employee required to work in an environment where exposure to eye hazards may exist. Wash facilities or drench barrels are available at each jobsite for employees.

First Aid Responsibility

Lundy Construction Co., Inc. will ensure that first-aid trained personnel are available to provide quick and effective first aid.

The Safety Coordinator is responsible for making sure that first-aid training contains required subjects.

- First aid training will be kept current and documented.
- Ensure appropriate first-aid supplies are stocked and readily available.
- First aid stations will be provided when required.
- Ensure emergency washing facilities are functional and readily accessible.
- Inspect and activate emergency washing facilities.
- Make sure supplemental flushing equipment provides sufficient water.

First Aid Kit Contents

During any serious injury situation, the first aid kit becomes the most vitally important toolbox at the workplace. Even if your people have had the finest first aid skills training available, these talents are mostly negated by the lack of emergency medical supplies to use when most needed.

The OSHA rule states: "First aid supplies will be easily accessible when required. The contents of a first aid kit will be placed in a weather proof container with sterile, individually sealed packages for each type of item and will be checked by the employer before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced." In the event of an emergency medical situation caused by a serious injury accident, proper and prompt treatment can greatly reduce the severity of the injury and possibly prevent the death of a co-worker.

The suggested contents of an excellent first aid kit include:

- Decent quality first aid handbook with illustrations. This is your important quick reference guide.
- PPE: 3-Pair latex gloves; surgical masks, dust masks, or other needed face protection; clear eye protection or face shield.
- Large, sterile gauze pads (6 each: 2X2's, 3X3's, and 4X4's), compress dressings (4X8), 3 each.
- Rolled gauze bandages: 2" and 3" wide, 3 each.
- Woven Bandages, Knuckle Bandages, Fingertip Bandages, and large box assorted sizes "Band-Aids."
- Two elastic wrap bandages (ace wrap).
- 6 burn treatment single-use packages, 0.5 g. application.
- 1 eye covering bandages (for two eyes)
- Alcohol, peroxide, alcohol swabs, antiseptic spray and ointment, burn gel or cream, pain relief tabs, cotton balls and Q-tips, Ammonia Inhalant.
- Surgical or athletic tape; 1" and 2" wide, 2 rolls each.
- Self-activating cold packs, 4x5 inches
- Good quality eye-wash solution, with eye cup. Liquid antiseptic hand soap.

- Mouth-to-mouth barrier for CPR
- Blunt-nose surgical scissors, tweezers, safety pins, and BioHazard Bags.

Although no official inventory list exists, thoughtful consideration should be given to the specific working conditions the people will be directed to and adjustments to your Company's first aid supplies should be made. Knowing what to do in a medical emergency is important, but so is knowing what not to do. Be sure you always know where your first aid kit is.

NOTE: All personnel using CPR & First Aid techniques should be certified in an appropriate training format before using these skills. Never exceed the level of your first aid training.

Note: Please see our company's Safety and Health Manual for the full Program.

§1910.1030 – Bloodborne Pathogens

§1910.1028 – Hazard Communication Standards for Employers

Policy Statement

Lundy Construction Co., Inc. is committed to the safety and health of our employees and prohibiting the spread of bloodborne pathogens. Therefore, the following bloodborne pathogens safety plan has been adopted. In the event an employee is exposed to bloodborne pathogens all measures within this program will be provided to eliminate the spread of disease.

Lundy Construction Co., Inc. has implemented this plan to ensure that no employee is exposed to hazardous Bloodborne Pathogens in the workplace. The Safety Coordinator is the Company administrator who has the overall supervisory responsibility for the effectiveness of this program and for maintaining medical and training records.

Lundy Construction Co., Inc. will ensure that a copy of the Exposure Control Plan is kept at the office, in the workplace (if required), and available to employees at all times in accordance with §1910.1020(e).

- Upon initial hiring, all employees will be trained in exposure awareness and prevention techniques for bloodborne pathogens. Employees will receive refresher training annually, or if observed to commit unsafe acts regarding potentially infectious material, or when changing job conditions or assignments warrants it. Training records will include date of training, training content, attendance records including job title, and will be kept on file at the office for a minimum of 3 years.
- Employees with occupational exposure for the construction industry are limited to job duties that require workers to administer first aid and/or CPR when necessary. Employees trained in first aid and CPR and designated as First Aid Responders are considered at risk of occupational exposure due to the nature of these duties (e.g., assisting bleeding victims, resuscitation). Occupational exposure is defined as reasonably anticipated contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.
- The exposure determination will be made without regard to the use of personal protective equipment. All employees who, as a result of performing their job duties, must engage in activities where exposure to blood or other potentially infectious materials is reasonably anticipated are considered to have occupational exposure to bloodborne pathogen. Employees will take necessary precautions to avoid direct contact with body fluids.

- Personal Protective equipment will be available at all times to prevent exposure to infectious material for employees required to handle potentially hazardous material, perform first aid procedures, or to perform routine duties which may bring an employee into contact with potentially infectious material.
- Employees in job classifications in which they may possibly have occupational exposure to bloodborne pathogens, or material possibly containing bloodborne pathogens, will be given the opportunity to participate in the hepatitis B vaccine program.
- Universal precautions will be observed. Under circumstances in which differentiation between body fluids is difficult or impossible, all body fluids will be considered potentially infectious. The term "universal precautions" refers to a method of bloodborne disease control that requires all human blood and other potentially infectious materials to be treated as if known to be infectious HIV, HBV or other bloodborne pathogens.
- Any exposed sharp edges or devices which may cause laceration or puncture on machines, tools, or equipment will be eliminated or protected to prevent injury to personnel. All machine guards will be inspected daily to ensure that they are in place and secure to prevent injury to personnel and the spread of bloodborne pathogens.
- Any injury to personnel must be reported immediately to a supervisor, and unauthorized personnel will be restricted from the area where the injury occurred until it is determined that no threat of infection is present, or until properly trained personnel can dispose of any infectious material.
- If provision of handwashing facilities is not feasible, Lundy Construction Co., Inc. will provide either an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes. All employees are allowed access to proper restroom and sanitary facilities. Hand washing and disinfecting supplies are always available to employees either at restroom facilities or upon request.
- Blood-soaked bandages or other potentially infectious materials form the accident site must be put in properly marked, leak-proof bags for handling.
- Proper disposal containers for potentially infectious material are available as needed. Any such containers will be properly marked for biohazards and disposed of properly.
- Employees medical records are available to the employee to which they pertain, records will be kept confidential for company use only, unless release is authorized in writing by the employee.

Engineering and work practice controls will be used to eliminate or minimize employee exposure. Company assigned first aid responders will be trained in universal precautions and proper PPE use when giving first aid. Engineering controls will be examined and maintained or replaced on a regular schedule to ensure their effectiveness.

PPE is provided to our employees at no cost to them when the possibility of occupational exposure is present. PPE will be used unless, under rare circumstances, the employee(s) temporarily declined to use PPE.

Training in the use of the appropriate PPE for specific tasks or procedures is provided by Lundy Construction Co., Inc. PPE may be obtained by contacting The Safety Coordinator, who is responsible for ensuring that PPE is available.

All employees using PPE must observe the following precautions:

- Wash hands as soon as feasible after removing gloves or other PPE.
- Remove PPE after it becomes contaminated and before leaving the work area.
- Contaminated PPE must be properly handled or disposed of in properly marked, leak-proof bags. When PPE is to be decontaminated, proper handling precautions and procedures will be observed during this process.
- Wear appropriate gloves when it is reasonably anticipated that there may be hand contact with blood or OPIM, and when handling or touching contaminated items or surfaces; replace gloves if torn, punctured or contaminated, or if their ability to function as a barrier is compromised.
- Wear appropriate face and eye protection when splashes, sprays, spatters, or droplets of blood or OPIM pose a hazard to the eye, nose, or mouth.
- Remove immediately or as soon as feasible any garment contaminated by blood or OPIM, in such a way as to avoid contact with the outer surface.

Communication of Hazards to Employees

Labels and Bags — Biohazard labels must be affixed to bags containing any contaminated equipment or material. Bags will be disposed of as ordinary refuse unless in the rare instance when they are contaminated to the extent that they are considered regulated waste as defined by the standard.

Bags should be located in first aid kits and stocked regularly.

Information and Training

This employer will ensure that all employees with occupational exposure participate in a training program which must be provided at no cost to the employee and during working hours.

Training will be provided as follows:

- At the time of initial assignment to tasks where occupational exposure may take place.
- At least annually thereafter. Annual training for all employees will be provided within one year of their previous training.

This employer will provide additional training when changes such as modification of tasks or procedures or institution of new tasks or procedures affect the employee's occupational exposure. The additional training may be limited to addressing the new exposures created.

Material appropriate in content and vocabulary to educational level, literacy, and language of employees will be used.

The training program will contain at a minimum the following elements:

- An accessible copy of the regulatory text of this standard and an explanation of its contents.
- A general explanation of the epidemiology & symptoms of bloodborne diseases.
- An explanation of the modes of transmission of bloodborne pathogens.
- An explanation of the employer's exposure control plan and the means by which the employee can obtain a copy of the written plan.
- An explanation of the appropriate methods for recognizing tasks and other activities that may involve exposure to blood and other potentially infectious materials.
- An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and personal protective equipment.
- Information on the types, proper use, location, removal, handling, decontamination, and disposal of personal protective equipment.
- An explanation of the basis for selection of personal protective equipment.
- Information on the hepatitis B vaccine, including information on its efficacy, safety, method of administration, the benefits of being vaccinated, and that the vaccine and vaccination will be offered free of charge.
- Information on the appropriate actions to take and persons to contact in an emergency involving blood or other potentially infectious materials.
- An explanation of the procedure to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.
- Information on the post-exposure evaluation and follow-up that the employer is required to provide for the employee following an exposure incident.
- An explanation of the signs and labels and/or color coding.
- An opportunity for interactive questions and answers with the person conducting the training session.

The person conducting the training will be knowledgeable in the subject matter covered by the elements contained in the training program as it relates to the workplace that the training will address.

Recordkeeping

Medical Records

This employer will establish and maintain an accurate record for each employee with occupational exposure to Bloodborne Pathogens.

This record will include:

- The name and social security number of the employee.

- A copy of the employee's hepatitis B vaccination status including the dates of all the hepatitis B vaccinations and any medical records relative to the employee's ability to receive vaccination as required.
- A copy of all results of examinations, medical testing, and follow-up procedures as required.
- This employer's copy of the healthcare professional's written opinion.
- A copy of the information provided to the healthcare professional.

Confidentiality

This employer will ensure that employee medical records required are:

- Kept confidential.
- Not disclosed or reported without the employee's express written consent to any person within or outside the workplace except as may be required by law.

This employer will maintain the records for at least the duration of employment plus 30 years.

Employee Training Records

Training records will include the following information:

- The dates of the training sessions.
- The contents or a summary of the training sessions.
- The names and qualifications of persons conducting the training.
- The names and job titles of all persons attending the training sessions.

Employee training records will be maintained for 3 years from the date on which the training occurred.

Availability

This employer will ensure that all records required to be maintained will be made available upon request to OSHA for examination and copying.

Required employee training records will be provided upon request for examination and copying to employees, to employee representatives, and to OSHA.

Employee medical records required will be provided upon request for examination and copying to the subject employee, to anyone having written consent of the subject employee, and to OSHA.

Investigation of Exposure Incidents

All exposure incidents will be investigated and proper accident/incident investigation procedures will be followed.

Note: Please see our company's Safety and Health Manual for the full Program.

Chapter 8

Job Hazard Assessment

Lundy Construction Co., Inc. is committed to providing a safe and hazard free workplace.

The Job Superintendent will inspect all facilities and workplaces for hazards.

Hazard Assessment Plan

Lundy Construction Co., Inc. performs inspections of the facility and workplace at least Weekly. Hazard evaluations include inspection of the area as well as work practices.

During the course of inspection, if a job hazard is identified it is immediately corrected. If the hazard is not immediately correctable, all appropriate personnel are notified and the hazard is clearly identified by signs, barricades, or other warnings.

Hazard evaluations are to be appropriately documented using the following provided forms or any means necessary.

Lundy Construction Co., Inc. employees will be adequately trained in the hazard identification process up to and including the care and proper use of personal protective equipment.

What is a Job Hazard?

A Job hazard is the potential for harm. In practical terms, a job hazard is often associated with a condition or activity that, if left uncontrolled, can result in an injury or illness. Identifying job hazards and eliminating or controlling them as early as possible will help prevent injuries and illnesses.

A Job Hazard Assessment

A job hazard assessment is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level.

For a job hazard assessment to be effective, managers and supervisors must demonstrate their commitment to safety and health and follow through to correct any uncontrolled hazards identified. Otherwise, management will lose credibility and employees may hesitate to go to supervisors when dangerous conditions threaten them.

Jobs Appropriate for Hazard Assessment

A job hazard assessment can be conducted on many jobs in your workplace. Priority should go to the following types of jobs:

- Jobs with the highest injury or illness rates.
- Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents.
- Jobs in which one simple human error could lead to a severe accident or injury.

- Jobs that are new to your operation or have undergone changes in processes and procedures.
- Jobs complex enough to require written instructions.

Identifying Workplace Hazards

A job hazard assessment is an exercise in detective work. Your goal is to discover the following:

- What can go wrong?
- What are the consequences?
- How could it arise?
- What are other contributing factors?
- How likely is it that the hazard will occur?

To make your job hazard assessment useful, document the answers to these questions in a consistent manner. Describing a hazard in this way helps to ensure that your efforts to eliminate the hazard and implement hazard controls help target the most important contributors to the hazard.

Good hazard scenarios describe:

- Where it is happening? (environment)
- Who or what it is happening to? (exposure)
- What precipitates the hazard? (trigger)
- The outcome that would occur should it happen? (consequence)
- Any other contributing factors.

Rarely is a hazard a simple case of one singular cause resulting in one singular effect. More frequently, many contributing factors tend to line up in a certain way to create the hazard.

COMMON HAZARDS & DESCRIPTIONS

Hazards	Hazard Descriptions
Chemical (Toxic)	A chemical that exposes a person by absorption through the skin, inhalation, or through the blood stream that causes illness, disease, or death. The amount of chemical exposure is critical in determining hazardous effects. Check Material Safety Data Sheets (MSDS), and/or OSHA §5194 for chemical hazard information.
Chemical (Flammable)	A chemical that, when exposed to a heat ignition source, results in combustion. Typically, the lower a chemical's flash point and boiling point, the more flammable the chemical. Check MSDS for flammability information.
Chemical (Corrosive)	A chemical that, when it comes into contact with skin, metal, or other materials, damages the materials. Acids and bases are examples of corrosives.
Explosion (Chemical Reaction)	Self explanatory.
Explosion (Over Pressurization)	Sudden and violent release of a large amount of gas/energy due to a significant pressure difference such as rupture in a boiler or compressed gas cylinder.
Electrical (Shock/Short Circuit)	Contact with exposed conductors or a device that is incorrectly or inadvertently grounded, such as when a metal ladder comes into contact with power lines. 60Hz alternating current (common house current) is very dangerous because it can stop the heart.
Electrical (Fire)	Use of electrical power that results in electrical overheating or arcing to the point of combustion or ignition of flammables, or electrical component damage.

Electrical (Static/ESD)	The moving or rubbing of wool, nylon, other synthetic fibers, and even flowing liquids can generate static electricity. This creates an excess or deficiency of electrons on the surface of material that discharges (spark) to the ground resulting in the ignition of flammables or damage to electronics.
Electrical (Loss of Power)	Safety-critical equipment failure as a result of loss of power.
Ergonomics (Strain)	Damage of tissue due to overexertion (strains and sprains) or repetitive motion.
Ergonomics (Human Error)	A system design, procedure, or equipment that is error-provocative. (A switch goes up to turn something off).
Fall (Slip, Trip)	Conditions that result in falls (impacts) from height or traditional walking surfaces (such as slippery floors, poor housekeeping, uneven walking surfaces, exposed ledges, etc.)
Fire/Heat	Temperatures that can cause burns to the skin or damage to other organs. Fires require a heat source, fuel, and oxygen.
Mechanical/ Vibration (Chaffing/ Fatigue)	Vibration that can cause damage to nerve endings, or material fatigue that results in a safety-critical failure. (Examples are abraded slings and ropes, weakened hoses and belts.)
Mechanical Failure	Self explanatory; typically occurs when devices exceed designed capacity or are inadequately maintained.
Mechanical	Skin, muscle, or body part exposed to crushing, caught-between, cutting, tearing, shearing items or equipment.
Noise	Noise levels (>85 dBA 8 hr TWA) that result in hearing damage or inability to communicate safety-critical information.
Radiation (Ionizing)	Alpha, Beta, Gamma, neutral particles, and X-rays that cause injury (tissue damage) by ionization of cellular components.
Radiation (Non-Ionizing)	Ultraviolet, visible light, infrared, and microwaves that cause injury to tissue by thermal or photochemical means.
Struck By (Mass Acceleration)	Accelerated mass that strikes the body causing injury or death. (Examples are falling objects and projectiles.)
Struck Against	Injury to a body part as a result of coming into contact of a surface in which action was initiated by the person. (An example is when a screwdriver slips.)
Temperature Extreme (Heat/Cold)	Temperatures that result in heat stress, exhaustion, or metabolic slow down such as hypothermia.
Visibility	Lack of lighting or obstructed vision that results in an error or other hazard.
Weather Phenomena (Snow/Rain/ Wind/Ice)	Self explanatory.

JOB HAZARD ASSESSMENT CHECKLIST

The scope of your self-inspections should include the following:

Processing, Receiving, Shipping and Storage — equipment, job planning, layout, heights, floor loads, projection of materials, materials-handling and storage methods, and training for material handling equipment.

Building and Grounds Conditions — floors, walls, ceilings, exits, stairs, walkways, ramps, platforms, driveways, and aisles.

Housekeeping Program — waste disposal, tools, objects, materials, leakage and spillage, cleaning methods, schedules, work areas, remote areas, and storage areas.

Electricity — equipment, switches, breakers, fuses, switch-boxes, junctions, special fixtures, circuits, insulation, extensions, tools, motors, grounding, and national electric code compliance.

Lighting — type, intensity, controls, conditions, diffusion, location, and glare and shadow control.

Heating and Ventilation — type, effectiveness, temperature, humidity, controls, and natural and artificial ventilation and exhaust.

Machinery — points of operation, flywheels, gears, shafts, pulleys, key ways, belts, couplings, sprockets, chains, frames, controls, lighting for tools and equipment, brakes, exhausting, feeding, oiling, adjusting, maintenance, lockout/tagout, grounding, work space, location, and purchasing standards.

Personnel — experience training, including hazard identification training; methods of checking machines before use; type of clothing; personal protective equipment; use of guards; tool storage; work practices; and methods of cleaning, oiling, or adjusting machinery.

Hand and Power Tools — purchasing standards, inspection, storage, repair, types, maintenance, grounding, use, and handling.

Chemicals — storage, handling, transportation, spills, disposals, amounts used, labeling, toxicity or other harmful effects, warning signs, supervision, training, protective clothing and equipment, and hazard communication requirements.

Fire Prevention — extinguishers, alarms, sprinklers, smoking rules, exits, personnel assigned, separation of flammable materials and dangerous operations, explosive-proof fixtures in hazardous locations, and waste disposal.

Maintenance, including tracking and abatement of preventive & regular maintenance — regularity, effectiveness, training of personnel, materials and equipment used, records maintained, method of locking out machinery, and general methods.

Personal Protective Equipment — type, size, maintenance, repair, storage, assignment of responsibility, purchasing methods, standards observed, training in care and use, rules of use, and method of assignment.

Transportation — motor vehicle safety, seat belts, vehicle maintenance, and safe driver programs.

Review — evacuation routes, equipment, and personal protective equipment.

Note: Please see our company's Safety and Health Manual for the full Program.

Policy Statement

Lundy Construction Co., Inc. has adopted the following policy to deal with any violence that may occur on the Company's premises and to ensure the safety of our employees.

The Safety Coordinator is responsible for the implementation and enforcement of the workplace violence prevention program. In the event this policy is violated disciplinary procedures will be enforced and legal action taken as needed.

- Threats, threatening behavior, or acts of violence against employees, visitors, guests, or other individuals by anyone on Lundy Construction Co., Inc. property **will not be tolerated**.
- Any person who makes threats, exhibits threatening behavior, or engages in violent acts on Company property will be removed from the premises as quickly as safety permits and will remain off Company premises and/or jobsites pending the outcome of an investigation.

Reporting

- Management has assigned The Safety Coordinator as the contact person to report all incidents pertinent to this policy.
- Management and employees are responsible for notifying the contact person of any threats they have witnessed, received, or have been told that another person has witnessed or received. Personnel should also report behavior they regard as threatening or violent if that behavior is job-related or might be carried out on a company-controlled site.
- Lundy Construction Co., Inc. response to incidents of violence will be fully investigated and documented as well as proper authorities being notified.
- Employees who apply for or obtain a protective or restraining order that lists company locations as protected areas must provide a copy of the petition and declarations used to seek the order and a copy of any temporary or permanent protective or restraining order that is granted. Lundy Construction Co., Inc. has confidentiality procedures that recognize and respect the privacy of the reporting employee(s).

Compliance

- Our safety policies are based on past experience and current standards, and are also an integral part of the company's personnel rules. This means that compliance with the policies is a condition of employment and must be taken seriously.

- Failure to comply with the company policy regarding Workplace Violence or the Code of Safe Practices is sufficient grounds for disciplinary action up to and including termination.
- Management will conduct a risk assessment to evaluate the risks of workplace violence and the strengths and weaknesses of the existing policies.

General Communication/Workplace Procedures

These guidelines will be used to assist in training management and employees in the implementation of our program:

- BE POLITE.
- Do not get excited.
- Do not argue.
- Request a supervisor when feeling stressed or pressured.
- Utilize all training procedures.
- Report all incidents to the appropriate supervisor.
- Be observant of "strangers" in work areas.
- Be observant of persons with packages and other abnormalities.
- Escort the clients to their destination.
- Identify and communicate previous aggressive behavior or threats.
- Program emergency phone numbers into the telephone.
- Maintain a log of incidents with all relevant information.
- Utilize the "buddy system" when confronted with aggressive behavior.
- Interact in open and public areas with potentially violent persons.
- Request counseling after a stressful incident.
- Inform co-workers/supervisor of activity itinerary.
- Provide escorts for potential victims outside of the controlled work area.

Warning signs of potentially violent individuals:

- Written, oral, or implied threats or intimidation.
- Fascination with weaponry or acts of violence.
- Theft or sabotage of projects or equipment.
- Alcohol or drug abuse in the workplace.
- Expressions of hopelessness or heightened anxiety.
- Intention to hurt self or others.
- Lack of concern for the safety of others.
- Externalization of blame.
- Irrational beliefs and ideas.
- Romantic obsession.
- Displays of excessive or unwarranted anger.
- Feelings of victimization.
- Inability to take criticism.
- New or increased sources of stress at home or work.
- Productivity and/or attendance problems.

What to do

- Project calmness. Move and speak slowly, quietly, and confidently.
- Listen attentively and encourage the person to talk.
- Let the speaker know that you are interested in what he or she is saying.
- Maintain a relaxed yet attentive posture.
- Acknowledge the person's feelings and indicate that you can see he is upset.
- Ask for small, specific favors such as asking the person to move to a quieter area.
- Establish ground rules. State the consequences of violent or threatening behavior.
- Employ delaying tactics that give the person time to calm down. For example, offer a glass of water.
- Be reassuring and point out choices.
- Help the person break down big problems into smaller, more manageable problems.
- Accept criticism. When a complaint might be true, use statements such as; "You're probably right" or "It was my fault."
- If the criticism seems unwarranted, ask clarifying questions.
- Arrange yourself so that your exit is not blocked.
- Make sure there are three to six feet between you and the other person.

What not to do

- Do not make sudden movements that may seem threatening.
- Do not speak rapidly, raise your volume, or use an accusatory tone.
- Do not reject all demands.
- Do not make physical contact, jab your finger at the other person, or use long periods of eye contact.
- Do not pose in challenging stances: directly opposite someone, hands on hips, or with arms crossed.
- Do not challenge, threaten, or dare the individual. Never belittle the other person.
- Do not criticize or act impatient.
- Do not attempt to bargain with a threatening individual.
- Do not try to make the situation seem less serious than it is.
- Do not make false statements or promises you cannot keep.
- Do not try to impart a lot of technical or complicated information when emotions are high.
- Do not take sides or agree with distortions.
- Do not invade the individual's personal space.

Note: Please see our company's Safety and Health Manual for the full Program.

§1910.1200 – Hazard Communication

Policy Statement

Lundy Construction Co., Inc. has implemented this program to ensure that employees are informed of any chemical hazards and hazardous or toxic substances in their workplace:

The Safety Coordinator is the administrator of the Company Hazard Communication Program, and will document all necessary training of employees. Employees will be trained at the time of initial hiring in the safe use, and hazards of any chemicals they are required to use on the job.

Employees will be notified of any hazardous substances used by any company other than Lundy Construction Co., Inc. in the workplace, and make MSDS available to employees.

All containers used on the job will be labeled for content, and precautions if substance contained is hazardous. Materials will be left in their manufacturer's container, returned to the container immediately after use, or any unused portion disposed of properly. If labels become illegible for any reason, a new label will be affixed containing all required precautionary information, or the material disposed of properly. See examples of precautionary labeling at the end of this section.

A list of all chemicals known to be used at the workplace by Company employees will be available for review at the jobsite and in the office. MSDS for all chemicals used in the workplace by Lundy Construction Co., Inc. are available to employees at the worksite from the job foreman or in the office.

The Safety Coordinator will ensure that each container of hazardous chemicals in the workplace is labeled, tagged, or marked with the following information:

- Identity of the hazardous chemical(s) contained therein.
- Appropriate hazard warnings, or alternatively, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under this Hazard Communication Program. Employees will be provided with the specific information regarding the physical and health hazards of the hazardous chemical.
- Name and address of the chemical manufacturer, importer, or other responsible party.

The Safety Coordinator will ensure that labels or other forms of warning in English, are legible, and prominently displayed on the container, or readily available in the work area throughout each work shift.

When Lundy Construction Co., Inc. has employees who are non-English speaking, information will be presented in their language as well.

Changes of job assignments, changes in materials used, or any non-routine tasks involving hazardous substances or conditions will require notification and/or retraining of effected employees. The Safety Coordinator will inform or retrain employees of any new or additional hazards, detail methods of hazard abatement or elimination, and provide proper personal protective equipment or engineering controls necessary for the job. Notifications and retraining will be documented as to name of employee, date, description of action taken, and verification by The Safety Coordinator.

A copy of the company's hazard communication program is available to all employees, and will be kept at the job-site by the foreman in charge, or in the office. Translations of the hazard communication program are available to non-English speaking employees upon request from The Safety Coordinator.

Introduction to the Hazard Communication Standard

OSHA's Hazard Communication Standard (HCS) is based on a simple concept – that employees have both a need and a right to know the hazards and identities of the chemicals they are exposed to when working. They also need to know what protective measures are available to prevent adverse effects from occurring. OSHA designed the HCS to provide employees with the information they need to know.

The HCS addresses the issues of evaluating and communicating hazards to workers including issues such as chemical labeling, Material Safety Data Sheets (MSDS), a written program, and employee training requirements.

OSHA requires that all employers develop a written Hazard Communication Program and train their workers on the aspects the program covers. This is a difficult task for many companies since jobsites,workplaces and tasks change frequently. In addition, other employers at the workplace affect employees' chemical exposures and necessitate clear communication between employers to ensure employee protection.

The HCS requires the development of a comprehensive list of hazardous chemicals used at the workplace as well as MSDS for these chemicals. Normal "consumer products" such as those available at local retail or home improvement stores are exempt from the labeling, MSDS, and training requirements of the HCS when used in the same quantity and manner as a normal consumer. For example, can of spray paint used with the same frequency or duration as would be expected at home would not be covered. However, the same spray paint used every day as part of the production process would be subject to the requirements of the hazard communication standard including MSDS, labeling, and training. Frequently overlooked items usually covered by HCS requirements in a workplace include: adhesives, gasoline, paint thinner, grease, cleaners, solvents, and sealers.

MSDS are usually very easy to obtain. **Retail stores (including hardware and home improvement stores) selling hazardous chemicals to employers having a commercial account are *required* to provide MSDS upon request.** MSDS are also usually available on manufacturers' web sites. In addition, there are a number of MSDS repositories available to the public on the internet including the following:

http://www.siri.org http://www.msds.com
http://www.msdsprovider.com

HAZARD COMMUNICATION PROGRAM

General Information

The management staff of Lundy Construction Co., Inc. is committed to the prevention of incidents, exposures, or happenings that result in injury and/or illness and to comply with all applicable federal and state health and safety rules. In order to comply with the Occupational Safety and Health Administration (OSHA) the following written hazard communication program has been established.

All employees of this Company will participate in the Hazard Communication Program. A copy of this written program will be available at The Company's main office for review by any interested employee.

Container Labeling

The Safety Coordinator is responsible for container labeling procedures, reviewing, and updating. The labeling system to be used is as follows:

Lundy Construction Co., Inc. will rely primarily on the use of the manufacturers' labels to meet the labeling requirement of the standard.

All chemicals on site will be stored in their original container with manufacturers' label attached.

Workers may dispense chemicals from original containers in small quantities for immediate use by a single employee on a single shift. These secondary containers will be labeled with at least the generic name of the product dispensed (e.g., paint, thinner, etc.). Excess chemical will be returned to the original container at the end of the shift or given for proper handling to the Safety Coordinator.

The Safety Coordinator will ensure that all containers are labeled with the manufacturers' label or equivalent containing the following information:

Chemical Name; Manufacturers' Name and Address; and Appropriate hazard warnings such as "Flammable", "Toxic", etc.

No unmarked containers of any size will be left in the work area unattended.

Hazardous Chemical List & Material Safety Data Sheets

Copies of MSDS for all hazardous chemicals to which employees of this Company may be exposed and a master list of all the hazardous chemicals used in the workplace will be maintained by The Safety Coordinator.

This list of chemicals and MSDS will be available for employee review at any time.

Anyone purchasing new chemicals must request a copy of the MSDS. The Safety Coordinator will ensure that new MSDS are distributed to the appropriate workplaces. If MSDS are not available or new chemicals in use do not have an MSDS, immediately contact The Safety Coordinator.

Employee Information and Training (Document training using provided forms)

Prior to starting work, each new employee will attend a health and safety orientation and will receive information and training on the following:

- An overview of the requirements in OSHA's Hazard Communication Standard.
- Chemicals present at their workplace.
- Location and availability of the MSDS file and the written hazard communication program.
- Physical hazards and health effects of the hazardous chemicals.
- Methods used to determine the presence or release of hazardous chemicals in the work area.
- Methods to reduce or prevent exposure to these hazardous chemicals including safe work practices and personal protective equipment.
- Steps Lundy Construction Co., Inc. has taken to reduce or prevent exposure to these chemicals.
- Safety emergency procedures to follow if the employee is exposed to these chemicals.
- How to read labels and review MSDS to obtain appropriate hazard information.

Prior to introducing a new hazardous chemical into any operational section of Lundy Construction Co., Inc., affected employees will be given updated information and training for new chemical as outlined above.

Hazardous Non-Routine Tasks

Periodically, employees must perform hazardous non-routine tasks. Before starting work on such projects, each affected employee will be given information by their supervisor about hazardous chemicals to which he or she may be exposed during such activity.

This information will include:

- Specific chemical hazards.
- Protective/safety measures employees can take.
- Measures THE COMPANY has taken to reduce the hazards, including ventilation, respirators, presence of another employee, and emergency procedures.

Informing Other Employers

It is the responsibility of The Safety Coordinator to insure all employers on the workplace exchange the following information:

- Hazardous chemicals which employees may be exposed while on the workplace.
- Procedures for obtaining MSDSs from each employer
- Precautions employees should take to lessen the possibility of exposure.
- Location of written Hazard Communication programs for each Company.
- Contact information for the safety coordinator for each Company.

Each employer will be responsible for providing necessary hazard information to their affected employees.

NOTE: In the "Attachments" Chapter of this Safety & Health Manual you will find a master copy of the following form for Company use:

- Hazardous Chemical List
- Hazardous Communication Training Acknowledgement and Updated Training
- Example MSDS Sheet

UNDERSTANDING MATERIAL SAFETY DATA SHEETS

Employer Responsibility

All employers with hazardous chemicals in their workplaces must prepare and implement a written hazard communication program. Employers must ensure that all containers are labeled, that employees are provided access to MSDS, and that an effective training program is conducted for all potentially exposed employees.

A vital part of an effective "Hazard Communication Program" is maintaining Material Safety Data Sheets (MSDS) and insuring employees have the necessary training to understand the terminology contained in MSDS. The following pages provide brief explanations of terminology that can be used during employee training.

Manufacturers, importers, distributors, and suppliers are required to provide you with Material Safety Data Sheets (MSDS) for each of their hazardous chemicals. As an employer or contractor, you are required to maintain a file of MSDS for the hazardous chemicals you use. According to OSHA, you will be able to determine if a substance is hazardous by referring to the MSDS and the label. The OSHA Standard specifies the information required on each data sheet, and all information must be written in English.

Review the MSDS you receive for accuracy and completeness, and make sure you have the latest version on file. When an MSDS includes new information or a new compound has been added to it, additional employee training is required.

To ensure proper recordkeeping and maintenance of MSDS, you should:

- Make sure any employee who purchases supplies for your Company is on the lookout for MSDS.
- Include a request for an MSDS and a label that meets the requirements of the Hazard Communication Standard on all purchase orders.
- Ask for an MSDS for materials with labels indicating they are hazardous unless an MSDS is already on file.

To deal with a multi-employer situation, other contractors on the site may be asked to provide hazardous substance information for the chemicals they bring to the site.

While MSDS will appear in many different formats, they will contain essentially the same information. **An MSDS should contain the following information:**

Identification

- Chemical name, as it appears on the label.
- Manufacturer's name and address.
- Emergency phone number in case of an emergency involving the substance.
- Date prepared and the signature of the preparer.

Hazardous Ingredients/Identity Information

- **Hazardous Components**: Contains the specific chemical identity, its formula, and any common names it is known by.
- **OSHA Permissible Exposure Limits (PELs):** PEL is the permissible maximum amount or concentration of the chemical a person may be safely exposed to without harm.
- **American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV):** The TLV is the concentration of a chemical in the air that can be inhaled for five consecutive eight-hour workdays by most persons without harmful effects. It is generally expressed in parts per million or milligrams per cubic meter of air.
- **Other Exposure Limits:** Any other recommended limitation on the use of the chemical by any agency, scientific group, or organization should be included.

Physical/Chemical Characteristics

- **Boiling Point:** The temperature at which a liquid boils.
- **Vapor Pressure (mm Hg):** Vapor pressure measures a liquid's tendency to evaporate. The higher the vapor pressure, the faster it will evaporate.
- **Vapor Density:** Indicates the weight of the vapor compared with the weight of an equal volume of air. If a vapor is heavier than air (vapor density greater than 1), it will sink to the ground. If it is lighter than air (vapor density less than 1), it will rise. For example, with flammable materials, when the vapor density is greater than 1, vapors tend to collect in the lowest spot. A contractor must be alert to vapors traveling to an ignition source, then flashing back to the vapor source. Under some circumstances chemical vapors may displace oxygen.
- **Solubility in Water:** Indicates whether the chemical can mix with water in any ratio without separating.
- **Appearance and Odor:** A brief description of the chemical's color and smell.
- **Specific Gravity:** Ratio of a material's weight to the weight of an equal volume of water. The specific gravity determines whether the material floats or sinks in water. Specific gravity values less than or equal to one indicate that water should NOT be used to extinguish a fire involving the substance unless the water comes from automatic sprinklers.
- **Melting Point:** Indicates the temperature at which a solid changes to a liquid.
- **Evaporation Rate:** Indicates temperatures at which a substance evaporates.

Fire and Explosion Hazard Data

- **Flash Point:** Indicates the lowest temperature at which a liquid gives off enough vapor to ignite in air when exposed to flame. When the flash point is between 100 and 110° Fahrenheit (F), extra care must be taken in hot environments. The liquid's temperature could be high enough to be ignitable if an ignition source is introduced. Such sources might be cigarette smoking, electrical equipment and wiring, cutting and welding, or static electricity. A red diamond label is required on all liquids classified by OSHA as flammable (flash point values of 99.9° F or below).
- **Flammable Limits:** Indicates the range of vapor concentrations, which will explode when an ignition source is present. The "Lower Explosive Limit" (LEL) is the minimum amount of vapor in the air that can be ignited. The "Upper Explosive Limit" (UEL) is the maximum amount of vapor in the air that will sustain fire.
- **Extinguishing Media:** Materials suitable for putting-out a fire involving the identified chemical. These fire-fighting agents are water, fog, foam, alcohol foam, carbon dioxide, and dry chemical.

The four classes of fires are:

Class A -	paper, wood, straw, cloth
Class B -	flammable and combustible liquids
Class C -	fire involving energized electrical equipment
Class D -	combustible metals

Testing laboratories classify fire extinguishers based on the class of fire they are designed to put out. Each extinguisher type may contain a different extinguishing agent. For example:

Class A -	contain water
Class B -	contain carbon dioxide, foam, or dry chemical agents
Class C -	contain carbon dioxide or dry chemical agents
Class D -	contain highly specialized extinguishing compounds

- **Special Fire Fighting Procedures:** Indicates the chemical's special characteristics when it comes in contact with fire, such as whether it is difficult to put out; whether it will re-ignite spontaneously; whether it is extinguished by water or other fire-fighting agents. This subsection will also indicate any required protective equipment needed when fighting the fire. It will describe toxic materials given off by the chemical when it is burned.
- **Unusual Fire and Explosion Hazards:** Indicates any special types of hazards requiring attention. The description will indicate whether the chemical is difficult to extinguish, will re-ignite spontaneously, and how it reacts with water and other extinguishing agents. For example, if water is applied to a combustible liquid with a flash point above 212° F, it may foam violently or boil over, endangering workers and firefighters.

Reactivity Data

- **Stability:** Indicates conditions that contribute to the stability or instability of a chemical when it is exposed to heat, pressure, or excessive shock during storage, use, misuse, or transport. Look to this section to identify specific conditions to be avoided. These warnings, for example, may be "reacts violently with water" or "avoid sudden shock."
- **Incompatibility (materials to avoid):** Indicates various materials or conditions you must keep the chemical away from to avoid adverse reactions. For example, a substance which ignites or explodes when it comes in contact with the chemical.
- **Hazardous Decomposition or By-products:** Indicates gases, or vapors, which are released when the chemical is burned or decomposes. It tells you what hazardous substances your employees may be exposed to as a result of heating, working with, or burning the chemical.

- **Hazardous Polymerization:** Polymerization is a chemical reaction where molecules of the chemical combined with molecules of another material to form a different material. This reaction is accompanied by the release of large amounts of energy that can produce fire or other hazards. Polymerization can occur when the chemical comes in contact with certain plastics, rubber, or coatings. This section of the MSDS will indicate possible storage conditions that could result in polymerization. It will also indicate any inhibitor—chemicals that can be added to prevent or delay polymerization—and the expected time period in which an inhibitor is used up.

Health Hazard Data

- **Route(s) of Entry:** A chemical may enter the body either through inhalation, by contact with the skin or eyes, or by being swallowed.
- **Health Hazards:** Indicates any long-term (chronic) or short-term (acute) effects of a chemical on the human body.
- **Carcinogenicity:** Indicates whether the chemical causes cancer. It is important that your employees understand that not all hazardous substances cause cancer when an individual is exposed to them.
- **Signs and Symptoms of Exposure**: Indicates and describes the effects of exposure to the chemical (employee's appearance/behavior), the most common resulting sensations (headache, dizziness or nausea).
- **Medical Conditions Severely Aggravated by Exposure:** Indicates how the chemical will affect any pre-existing medical conditions.
- **Emergency and First Aid Procedures:** Indicates first aid procedures to use in order to reduce the hazardous effects of the chemical. The techniques covered will deal only with inhalation, eye contact, or skin contact with the chemical. You must emphasize that these are emergency procedures only. Exposed employees should be examined by a doctor immediately.

Precautions for Safe Handling and Use

- **Steps to be Taken in Case Material is Released or Spilled:** Indicates precautions such as: "avoid breathing gases or vapors"; "avoid contact with liquids and solids"; "remove ignition sources"; "use special equipment for cleanups". This section also gives recommended techniques to use in controlling land or water spills.
- **Waste Disposal Methods:** Indicates how to dispose of the chemical and contaminated materials.
- **Precautions to Take in Handling and Storing:** Indicates safe handling and storage procedures to be taken to avoid hazardous reactions. This section will emphasize incompatibility and polymerization hazards, which could occur during storage or handling of the chemical.
- **Other Precautions:** Indicates special precautions to use in handling or disposing of the chemical.

Control Measures

The measures described below should be taken whenever the chemical is handled or disposed of during normal use. They are not solely intended for emergencies or accidental spills.

- **Respiratory Protection:** If needed, specifies type of respirators required by OSHA when the chemical is used, even as a precautionary measure in non-emergency situations.
- **Ventilation:** Indicates ventilating systems needed to prevent over-exposure to the chemical. "Local exhaust ventilation" is a system with high speed and low volume that will capture a chemical quickly after it has been released. The objective is to prevent the substance from reaching the employee's breathing zone. "Mechanical (general) ventilation" is used to heat and/or cool an enclosed area in a permanent facility.
- **Protective Gloves:** Indicates whether or not gloves must be worn when the chemical is handled. If gloves are required for skin protection, the type of material they should be made of will be indicated.
- **Eye Protection:** Indicates appropriate eye protection such as face shields, safety goggles or glasses.
- **Other Protective Clothing or Equipment:** Indicates protective equipment (aprons and boots) and what material it should be made of to prevent skin contact.

NOTE: In the "Attachments" Chapter of this Safety & Health Manual you will find a master copy of the following form for Company use:

- Hazardous Chemical List
- Hazardous Communication Training Acknowledgement and Updated Training
- Example MSDS Sheet

The sample labels show the type of information you must list on containers of hazardous chemicals. You can copy and use these labels or you can make your own.

Be sure your labels contain the following information:

- Name of Chemical
- Physical Hazards
- Health Hazards, Target Organs or Systems
- Optional information, such as Personal Protective Equipment or Safe Handling

Note: Please see our company's Safety and Health Manual for the full Program.

29 CFR-1910.132 - Personal Protective Equipment

The following list of personal protective equipment (PPE) is available to all employees and will be used as required by Federal, State, or Local regulations:

Hard hats, dust masks, hearing protection, gloves, and safety glasses.

Employees can request PPE equipment from The Job Superintendent.

Policy Statement

Lundy Construction Co., Inc. has implemented this safety program to ensure the protection of personnel from hazards on the job that may be safeguarded against by the proper use of Personal Protective Equipment. The Job Superintendent is the supervisor responsible for ensuring the following work practices are enforced.

The Job Superintendent will ensure that all employees are properly trained in the recognition and assessment of hazards and hazardous situations, the proper selection and use of personal protective equipment required for the hazard and to avoid, prevent, or abate such hazards.

Employees will be trained on initial hiring to use, maintain, clean and disinfect, store, and service PPE properly. Employees will receive refresher training on PPE at least annually, or as work requirements, changing job assignments, changing equipment, or environment warrants it. Any employee who demonstrates a lack of knowledge or understanding of any aspect of PPE use or maintenance will be re-trained. An employee must verify his/her understanding of training content as a condition of employment.

The Job Superintendent will do a hazard assessment of each jobsite prior to commencement of work to ascertain if hazards are present or likely to be encountered, what engineering controls may be implemented to minimize hazards, and what PPE is necessary for the performance of the job. Affected employees will be notified of hazards, engineering controls needed, and PPE required.

PPE will be provided for all work required by Lundy Construction Co., Inc. and employees are required by Company Policy to use only proper company PPE at all times when required on the job or on company property. Failure to use PPE will result in disciplinary action against the violating employee.

PPE will be issued and fitted to each affected employee individually. Employees must demonstrate proficiency in donning and doffing equipment, and proper techniques of cleaning and maintaining their respective equipment.

PPE must be used, stored, and maintained in a sanitary condition. All PPE must be cleaned, disinfected, and stored according to manufacturer's recommendations.

Defective or damaged PPE will be immediately tagged "OUT OF SERVICE", removed from service, and replaced with serviceable equipment. PPE will be inspected by the individual employee at the beginning of each work shift.

OSHA Personal Protective Equipment Standards

Introduction

The Occupational Safety and Health Administration (OSHA) require that employers protect their employees from workplace hazards that can cause injury. Controlling a hazard at its source is the best way to protect employees. Depending on the hazard or workplace conditions, OSHA recommends the use of engineering or work practice controls to manage or eliminate hazards to the greatest extent possible. For example, building a barrier between the hazard and the employees is an engineering control; changing the way in which employees perform their work is a work practice control. When engineering, work practice and administrative controls are not feasible or do not provide sufficient protection, employers must provide "Personal Protective Equipment" (PPE) to their employees and ensure its use. Personal protective equipment, commonly referred to as "PPE", is equipment worn to minimize exposure to a variety of hazards. Examples of PPE include such items as gloves, foot and eye protection, protective hearing devices (earplugs, muffs) hard hats, respirators and full body suits.

This information will help both employers and employees do the following:

- Understand the types of PPE.
- Know the basics of conducting a "Hazard Assessment" of the workplace.
- Select appropriate PPE for a variety of circumstances.
- Understand what kind of training is needed in the proper use and care of PPE.

The following information is general in nature and does not address all workplace hazards or PPE requirements. The information, methods and procedures in this guide are based on the OSHA requirements for PPE.

Important Note: This guide does not address PPE requirements related to respiratory protection as this information is extensive and is covered in detail in the "Respiratory Protection" Chapter.

Requirement for PPE

To ensure the greatest possible protection for employees in the workplace, the cooperative efforts of both employers and employees will help in establishing and maintaining a safe and healthful work environment.

In general, employers are responsible for:

- Performing a "hazard assessment" of the workplace to identify and control physical and health hazards.
- Identifying and providing appropriate PPE for employees.
- Training employees in the use and care of the PPE.
- Maintaining PPE, including replacing worn or damaged PPE.
- Periodically reviewing and evaluating the effectiveness of the PPE program.

In general, employees should:

- Properly wear PPE.
- Attend training sessions on PPE.
- Care for, clean, and maintain PPE.
- Inform a supervisor of the need to repair or replace PPE.

Specific requirements for PPE are presented in many different OSHA standards, published in 29 CFR. Some standards require that employers provide PPE at no cost to the employee while others simply state that the employer must provide PPE.

Selecting PPE

All PPE clothing and equipment should be of safe design and construction, and should be maintained in a clean and reliable fashion. Employers should take the fit and comfort of PPE into consideration when selecting appropriate items for their workplace. PPE that fits well and is comfortable to wear will encourage employee use of PPE.

Most protective devices are available in multiple sizes and care should be taken to select the proper size for each employee. If several different types of PPE are worn together, make sure they are compatible. If PPE does not fit properly, it can make the difference between being safely covered or dangerously exposed. It may not provide the level of protection desired and may discourage employee use.

OSHA requires that many categories of PPE meet or be equivalent to standards developed by the American National Standards Institute (ANSI). ANSI has been preparing safety standards since the 1920s, when the first safety standard was approved to protect the heads and eyes of industrial workers. Employers who need to provide PPE in the categories listed below must make certain that any new equipment procured meets the cited ANSI standard. Existing PPE stocks must meet the ANSI standard in effect at the time of its manufacture or provide protection equivalent to PPE manufactured to the ANSI criteria. Employers should inform employees who provide their own PPE of the employer's selection decisions and ensure that any employee-owned PPE used in the workplace conforms to the employer's criteria, based on the hazard assessment, OSHA requirements, and ANSI standards.

OSHA requires PPE to meet the following ANSI standards:

- Eye and Face Protection: ANSI Z87.1-1989
- Head Protection: ANSI Z89.1-1986.
- Foot Protection: ANSI Z41.1-1991.

For hand protection, there is no ANSI standard for gloves but OSHA recommends that selection be based upon the tasks to be performed and the performance and construction characteristics of the glove material. For protection against chemicals, glove selection must be based on the chemicals encountered, the chemical resistance, and the physical properties of the glove material.

Note: Please see our company's Safety and Health Manual for the full Program.

29-CFR-§1910.134 – Respiratory Protection

Policy Statement

Lundy Construction Co., Inc. has implemented this policy to ensure that no employee is exposed to airborne hazards in excess of permissible exposure limits (PELs), or oxygen deficient atmospheres. The Safety Coordinator is the supervisor responsible for ensuring the following engineering controls and work practices are enforced.

The Safety Coordinator is the respiratory program administrator for Lundy Construction Co., Inc. and will be responsible for the periodic evaluation of the program. The evaluation will be based on results of the air quality monitoring program, medical evaluations, changing work environment, equipment changes, work requirements, and employee responses. Respiratory equipment will be NIOSH certified only, and selection will be made by The Safety Coordinator based on identified and potential hazards, estimated exposures, and contamination information.

Lundy Construction Co., Inc. will ensure that employees are trained in the proper selection for situation and fit, use, storage, and cleaning of respiratory equipment, and can demonstrate knowledge of at least the following:

- Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator.
- What the limitations and capabilities of the respirator are.
- How to use the respirator effectively in emergency situations, including situations in which the respirator malfunctions.
- How to inspect, put on and remove, use, and check the seals of the respirator.
- What the procedures are for maintenance and storage of the respirator.
- How to recognize medical signs and symptoms that may limit or prevent the effective use of respirators.
- The general requirements of OSHA §1910.134 Respiratory Protection.

Retraining will be done annually, and when the following situations occur:

- Changes in the workplace or the type of respirator render previous training obsolete.
- Inadequacies in the employee's knowledge or use of the respirator indicate that the employee has not retained the requisite understanding or skill.
- Any other situation arises in which retraining appears necessary to ensure safe respirator use.

Proper respiratory equipment, replacement elements, and any parts or equipment necessary for the functioning of the respiratory equipment will be available to employees at no cost.

Respiratory equipment will be maintained, cleaned, stored, and serviced per manufacturer's recommendations. Job foremen will supervise and ensure proper methods are used.

A medical examination for employees required to use respiratory equipment is required before use of the equipment, and will be provided at no cost to the employee. The medical questionnaire provided in Appendix C is mandatory for employees required to use respiratory protection.

Fit testing of the equipment to individual employees will follow OSHA guidelines listed in §1910.134 (f)(1-8) and is required before use of the equipment. Facial hair, glasses, etc. which might affect the seal of the respirator face piece are prohibited, and seal must be checked each time equipment is donned.

Periodic monitoring of the air quality in work areas will be performed to determine if, or where respiratory equipment will be required.

If employees are required to work in Immediately Dangerous to Life or Health (IDLH) atmospheres, the following procedures and controls must be in place:

- One employee or more is located outside the IDLH atmosphere.
- Visual, voice, or signal line communication is maintained between the employee(s) in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.
- The employee(s) located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.
- The Safety Coordinator is notified before personnel enter the IDLH atmosphere, or before employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue.
- Employee(s) located outside the IDLH atmospheres will be equipped with:
  - Pressure demand or other positive pressure SCBA.
  - Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres.

SAR and SCBA equipment will only be filled by certified refilling facilities using grade D or better air.

Where possible, ventilation will be required for all enclosed work areas to ensure that airborne hazards do not exceed permissible limits.

The least hazardous or toxic materials which will allow the job required to be accomplished will be used in the performance of work.

The Safety Coordinator will document and keep all records of the respiratory program including medical, fit testing, air monitoring, and the current written program.

MANDATORY INFORMATION: For employees using respirators when not required under OSHA standards

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Respiratory Program Procedures

General

All employees will be provided a medical evaluation to determine the employee's ability to use a respirator, before the employee is fit tested or required to use the respirator in the workplace.

The Company may discontinue an employee's medical evaluations when the employee is no longer required to use a respirator.

General Requirements

We will identify and evaluate the respiratory hazard(s) in the workplace; this evaluation will include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form.

If we cannot identify or reasonably estimate the employee exposure, we will consider the atmosphere to be IDLH (atmospheres Immediately Dangerous to Life or Health). An appropriate respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability. We will select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user. The Company will select a NIOSH-certified respirator. The respirator will be used in compliance with the conditions of its certification.

INFORMATION FOR EMPLOYEES USING RESPIRATORS

When Not Required Under 29 CFR 1910.134	
To the employer: The statement below must be read by all employees using respirators not required under the Respiratory Protection Standard	
To the employee: Can you read? Yes ☐ No ☐	
Your employer is required to have you read the statement below if you are using respirators not required under the Respiratory Protection Regulation. Ensure you keep a copy of this form for your personal records.	
EMPLOYEE INFORMATION	
Employee Name:	Work Location:
Facility:	ID/Clock Number:
Job Title:	Dept./Phone:
CERTIFICATION: I certify that I have read and understand the below Respiratory Protection Statement as required by the Occupational Safety and Health Administration (OSHA).	
Employee Signature: **Date:**	

OSHA RESPIRATORY PROTECTION STATEMENT

To The Respirator User:

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, of if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You Should Do The Following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.

2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.

3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.

Keep track of your respirator so that you do not mistakenly use someone else's respirator.

FORM RETENTION INFORMATION		ATTACHMENTS
Retention File:	Location:	*Yes ☐ No ☐
Date Filed:	Filed By:	*See Following Pages ☐

Note: Please see our company's Safety and Health Manual for the full Program.

29 CFR-§1910.95 – Occupational Noise Exposure

Policy Statement for Occupational Noise Exposure

Lundy Construction Co., Inc. has implemented this policy to ensure that no employee is exposed to noise levels in excess of the action levels as listed in the following regulations. The following engineering controls and work practices will be enforced.

Upon initial hiring, employees will be trained in the hazards presented by excessive noise levels in the workplace, and the use and care of hearing protection devices. Training will be repeated annually and updated to reflect changes in personal protective equipment (PPE) and work requirements.

Employees will be required to wear hearing protection in work areas whenever employee noise exposures equal or exceed an 8-hour time-weighted average sound level (TWA) of 85 decibels measured on the A scale (slow response) or, equivalently, a dose of fifty percent.

Audio monitoring will be implemented if it is believed noise levels in work areas are approaching or exceed action level limits. If monitoring results indicate exposures equaling or exceeding safe limits, an employee will be included in a hearing conservation program. A baseline audiogram will be done within 6 months of exposure with the employee required to cease work and avoid high noise levels for at least 14 hours prior to the test. An audiogram will be performed at least annually on employees in the hearing conservation program, and if comparison indicates a standard threshold shift, the employee will be notified of this fact, in writing, within 21 days of the finding.

If a standard threshold shift occurs, the following procedures will be implemented:

- Employees not using hearing protectors will be fitted with hearing protectors, trained in their use and care, and required to use them.
- Employees already using hearing protectors will be refitted and retrained in the use of hearing protectors and provided with hearing protectors offering greater attenuation if necessary.
- The employee will be referred for a clinical audiological evaluation or an otological examination, as appropriate, if additional testing is necessary or if it is suspected that a medical pathology of the ear is caused or aggravated by the wearing of hearing protectors.
- The employee will be informed of the need for an otological examination if a medical pathology of the ear that is unrelated to the use of hearing protectors is suspected.

Audiometric evaluation and testing conducted by a licensed physician using the guidelines contained in OSHA 1910.95 (g), is available to all employees whose work requirements equals or exceeds an 8 hr. time-weighted average 85 decibels on a regular basis at no cost to the employee.

Hearing protection is available at no cost to all employees upon request from the job-site foreman or Company office.

A record of all audio testing and monitoring will be kept at the Company office and maintained as required. Evaluations will be done for suitable hearing protection from the noise levels encountered in the workplace. These records, as well as information on these OSHA regulations and appendices will be available to employees upon request.

Introduction

This chapter describes what you can do at your workplace to control noise that can damage your coworkers' or employees' hearing. It is about developing ***strategies*** to prevent or control workplace noise and is organized in four sections.

- ***Sound and Noise*** — gives you basic information about sound and noise.
- ***Controlling Workplace Noise*** — describes noise-control tools and suggests how to use them to develop a noise-control strategy for your workplace.
- ***Your Program for Success*** — shows you how to fit a noise-control strategy into a successful workplace safety-and-health program.
- ***Rules to Work by*** — gives you an overview of OSHA's hearing conservation requirements.

Sound and Noise: Overview

Sound

Sound is what you hear. Of course, a dog can hear sounds that you cannot and you can feel the sound of a jet as it prepares to take off. However, most of us, in our everyday lives, relate sound with what we hear.

Noise

Noise is sound that you do not want to hear. One person's noise may be another person's music, but there is a point at which noise becomes a problem for all of us: when it is so loud that it destroys our ability to hear sounds that we want to hear.

About this Section: This section tells you about the following topics:

- How is sound measured?
- How does hearing work?
- How loud is too loud?
- What happens when noise is too loud?
- How can I tell if my hearing is damaged?
- How can I tell when workplace noise is dangerous?

How is sound measured?

Sound is measured in two ways: ***decibels*** and ***frequency.***

Decibels

Decibels indicate the pressure of sound. Sound waves transfer that pressure from place to place and are measured in units on a *logarithmic* scale, shown below.

Decibels	*Increase in Sound Intensity*
100	10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 = 10,000,000,000
90	10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 = 1,000,000,000
80	10 x 10 x 10 x 10 x 10 x 10 x 10 x 10 = 100,000,000
70	10 x 10 x 10 x 10 x 10 x 10 x 10 = 10,000,000
60	10 x 10 x 10 x 10 x 10 x 10 = 1,000,000
50	10 x 10 x 10 x 10 x 10 = 100,000
40	10 x 10 x 10 x 10 = 10,000
30	10 x 10 x 10 = 1,000
20	10 x 10 = 100
10	10 x 1 = 10
1	1

For each 10 decibel increase in sound level, you increase sound intensity by a factor of 10.

Frequency

Frequency is related to a sound's ***pitch*** and is measured in units called ***hertz (Hz),*** or cycles per second. The pitch of a sound — how high or low it seems — is how you perceive its frequency.

The higher a sound's pitch, the higher its frequency. Children usually have the best hearing and can often distinguish frequencies ranging from the lowest note on a pipe organ (about 20 Hz), to the trill of a dog whistle (20,000 Hz).

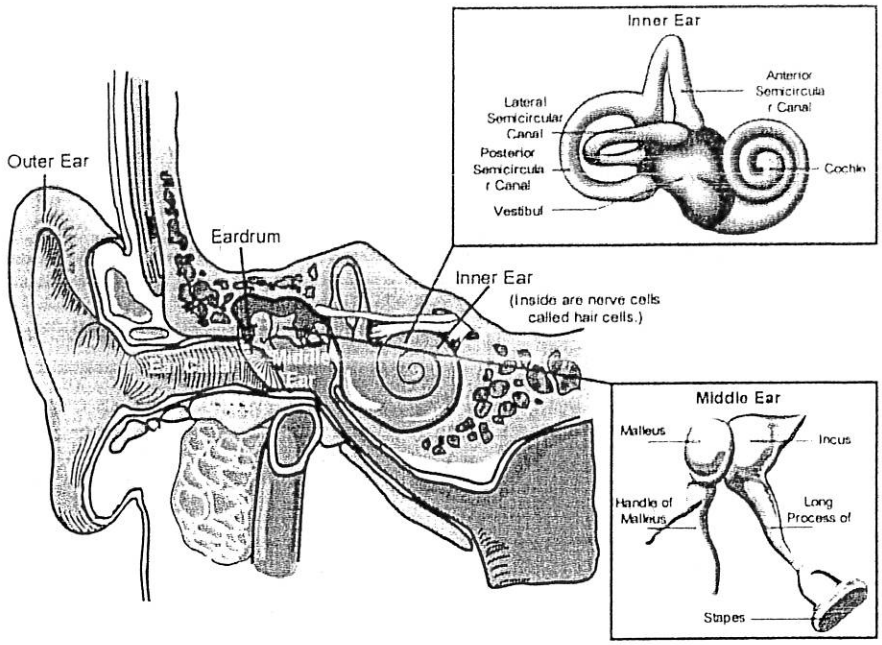
Human hearing is most sensitive to frequencies between 3,000 to 4,000 Hz. That is why those with damaged hearing have difficulty understanding higher-pitched voices and other sounds in the 3,000- to 4,000-Hz range.

How does hearing work?

The ear has three main parts: ***the outer ear, middle ear,*** and ***inner ear.*** The outer ear opens to the ear canal. The ***eardrum*** separates the ear canal from the middle ear. Small bones in the middle ear transfer sound to the inner ear. The inner ear contains the nerve endings that lead to the brain.

Waves and Vibrations

All sounds produce waves. Sound waves, which funnel through the opening in your outer ear, travel down the ear canal, and strike your eardrum, causing it to vibrate. The vibrations pass the small bones of the middle ear, which transmit them to sensory cells — called ***hair cells*** — in the inner ear. The vibrations become nerve impulses and go directly to the brain, which interprets the impulses as sound.



How loud is too loud?

Guidelines

People differ in their sensitivity to noise and there is no way to determine who is at risk for hearing damage. Factors such as sound pressure, frequency, and exposure time all play a role in determining whether noise is harmful or just annoying.

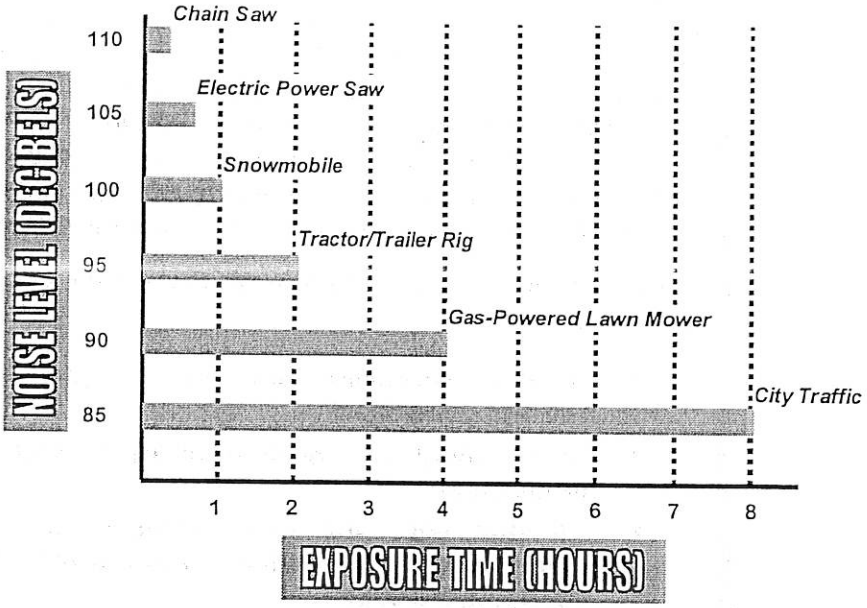
You should consider your hearing at risk if noise affects you in one of the following ways:

- You have to shout above noise to make yourself heard
- You have ringing in your ears for several hours after exposure to noise
- You have difficulty hearing normal sounds for several hours after exposure to noise

Exposure Times and Noise Levels

Most hearing specialists agree: You can damage your hearing if you are continually exposed to noise levels greater than 85 decibels over an eight-hour period. As noise levels rise above 85 decibels, the safe exposure time falls dramatically, as shown below.

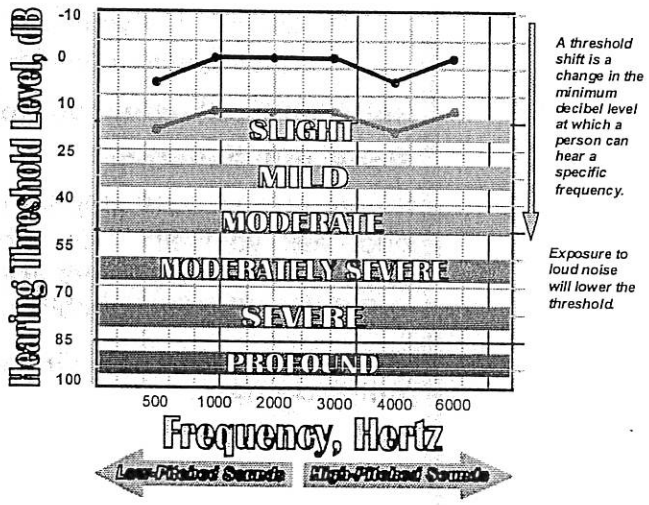
Maximum Exposure Times, Without Hearing Protection for Common Noise Sources



What happens when noise is too loud?

Shifting Thresholds

When noise is too loud, it can damage the sensitive hair cells in your inner ear. Those hair cells are the foot soldiers for your hearing. As the number of damaged hair cells increases, your brain receives fewer impulses to interpret as sound. When you damage hair cells, you damage hearing.



While a single exposure to loud noise — such as a shotgun blast — can damage your hair cells, it probably will not destroy them. You may experience ringing in your ears and some sounds may be muffled, but your hair cells will recover and so will your hearing. This is called a temporary threshold shift.

On the other hand, repeated exposures to loud noise — hundreds of shotgun blasts — will damage hair cells to the point that they cannot recover. Because the damage is permanent, the result is called a permanent threshold shift. There is no treatment — no medicine, no surgery, not even a hearing aid — that will restore it. When you destroy hair cells, you destroy hearing.

How can I tell if my hearing is damaged?

Signs and Symptoms

Hearing loss is painless and gradual. It usually develops over several years — you might not even notice the loss during those years. Sometimes overexposure to loud noise can trigger ringing or other sounds in your ears, called tinnitus. While tinnitus may be a symptom of damaged hearing, it can also be caused by infections, medications, and impacted ear wax. The only way to know for sure if noise has damaged your hearing is to have a hearing examination by a certified audiometric technician, audiologist, otolaryngologist, or physician.

If you can answer "yes" to any of the following questions, your hearing may be at risk.

- At your workplace, are you exposed to loud noise without hearing protection?
- Do you shout to a coworker at arm's length because of the noise around you?
- Off the job, are you exposed to noise from firearms, motorcycles, snowmobiles, power tools, or loud music without hearing protection?
- Do you need to turn up the television or radio volume to hear it?
- Do you ask people to repeat sentences?
- Do you feel your hearing is not as good as it was 10 years ago?
- Have family members noticed a problem with your hearing?

How can I tell when workplace noise is dangerous?

Signs and Symptoms

If you are not sure whether the noise in your workplace is dangerously loud, ask yourself: "Is normal conversation difficult because of the noise?" "Have coworkers also complained about the noise?" These are symptoms of a noise problem.

Note: Please see our company's Safety and Health Manual for the full Program.

OSHA 29 CFR-§1926.300 - Tools, Hand & Power

OSHA 29 CFR-§1926.301 - Hand Tools

OSHA 29 CFR-§1926.302 - Power Operated Hand Tools

ELECTRIC TOOLS

Regulation Rules To be Followed:

- Electric power operated tools will either be of the approved double-insulated type or grounded in accordance with OSHA CFR Regulations.
- The use of electric cords for hoisting or lowering tools will not be permitted.

Safety Basics

- Read and understand the manufacturer's instructions before operating any new or unfamiliar electric tool.
- Make sure that all electric tools are properly grounded or double-insulated.
- Ground fault circuit interrupters (GFCIs) must be used with any portable electric tool operated outdoors or in wet locations.
- Always disconnect the tool from the power source before making adjustments or changing attachments,
- Never remove or tamper with guards or other safety devices.
- Always wear eye protection when operating electric tools.
- Wear hearing protection when operating tools in confined spaces or for prolonged periods.
- Hold the tool firmly and secure the material properly before turning on the tool.

Hand Tools

Regulation Rules to be Followed:

- Tools having mushroomed heads, split or defective handles, worn parts, or other defects that impair their strength or render them unsafe for use will be removed from service and will not be reissued until the necessary repairs have been made.
- Tools not needed for the work to be done will not be left on scaffolds, ladders, or overhead levels. When work is being performed overhead on scaffolds, ladders, or on other surfaces, positive methods will be used to prevent tools from falling.

Hand Saws

Select the right saw for the job. A 9 point is not meant for crosscutting hardwood. It can jump up and severely cut the worker's hand or thumb.

For this kind of work the right choice is an 11 point (+).When starting a cut, keep your thumb up high to guide the saw and avoid injury.

For cutting softwood, select a 9 point (-). The teeth will remove sawdust easily and keep the saw from binding and bucking.

Ripping requires a ripsaw.

Wood Chisels

Most injuries with this tool can be prevented by keeping the hand that holds the work behind, not in front of, the chisel.

- A dull or incorrectly sharpened chisel is difficult to control and tedious to work with.
- Chisels not in use or stored in a toolbox should have protective caps.
- Wood chisels are tempered to be very hard. The metal is brittle and will shatter easily against hard surfaces.
- Never use a chisel for prying.
- Repeatedly striking the chisel with the palm of your hand may lead to repetitive strain injury.
- With chisels and other struck tools, always wear eye protection. Gloves are recommended to help prevent cuts and bruises.

Cold Chisels

Cold chisels are used to cut or shape soft metals as well as concrete and brick.

In time the struck end will mushroom. This should be ground off. Don't use chisels with mushroomed heads. Fragments can fly off and cause injury.

Axes and Hatchets

In construction, axes are mainly used for making stakes or wedges and splitting or shaping rough timbers.

- Unless it has a striking face, don't use the hatchet as a hammer. The head or the wooden handle can crack and break.
- Hatchets with striking faces are meant only for driving common nails, not for striking chisels, punches, drills, or other hardened metal tools.
- Never use an axe or hatchet as a wedge or chisel and strike it with a hammer.
- Most carpenters prefer a hatchet with a solid or tubular steel handle and a hammer head with a slot for pulling nails.

Sledgehammers

Sledgehammers are useful for drifting heavy timbers and installing and dismantling formwork. They can knock heavy panels into place and drive stakes in the ground for bracing.

- Sledgehammers can also be used to drive thick tongue-and-groove planking tightly together. Use a block of scrap wood to prevent damage to the planks.
- The main hazard is the weight of the head. Once the hammer is in motion it's almost impossible to stop the swing. Serious bruises and broken bones have been caused by sledgehammers off-target and out of control.
- Missing the target with the head and hitting the handle instead can weaken the stem. Another swing can send the head flying.
- Always check handle and head. Make sure head is secure and tight. Replace damaged handles.
- As with any striking or struck tool, always wear eye protection.
- Swinging a sledgehammer is hard work. Avoid working to the point of fatigue. Make sure you have the strength to maintain aim and control.

Claw Hammers

These are available in many shapes, weights, and sizes for various purposes. Handles can be wood or steel (solid or tubular). Metal handles are usually covered with shock-absorbing material.

- Start with a good quality hammer of medium weight (16 ounces) with a grip suited to the size of your hand.
- Rest your arm occasionally to avoid tendinitis. Avoid overexertion in pulling out nails. Use a crow bar or nail puller when necessary.
- When nailing, start with one "soft" hit, that is, with fingers holding the nail. Then let go and drive the nail in the rest of the way.
- Strike with the hammer face at right angles to the nailhead. Glancing blows can lead to flying nails. Clean the face on sandpaper to remove glue and gum. Don't use nail hammers on concrete, steel chisels, hardened steel-cut nails, or masonry nails.
- Discard any hammer with a dented, chipped, or mushroomed striking face or with claws broken, deformed, or nicked inside the nail slot.

Utility Knives

Utility knives cause more cuts than any other sharp-edged cutting tool in construction.

- Use knives with retractable blades only.
- Always cut away from your body, especially away from your free hand. When you're done with the knife, retract the blade at once. A blade left exposed is dangerous, particularly in a toolbox.

Screwdrivers

Screwdrivers are not intended for prying, scraping, chiseling, scoring, or punching holes.

The most common abuse of the screwdriver is using one that doesn't fit or match the fastener. The results are cuts and punctures from slipping screwdrivers, eye injuries from flying fragments of pried or struck screwdrivers, and damaged work.

Always make a pilot hole before driving a screw. Start with one or two "soft" turns, that is, with the fingers of your free hand on the screw. Engage one or two threads, make sure the screw is going in straight, then take your fingers away.

You can put your fingers on the shank to help guide and hold the screwdriver. But the main action is on the handle, which should be large enough to allow enough grip and torque to drive the screw. Power drivers present obvious advantages when screws must be frequently or repeatedly driven.

Note: All cross-point screws are not designed to be driven by a Phillips screwdriver.

Phillips screws and drivers are only one type among several cross point systems. They are not interchangeable.

Hand Planes

Hazards include the risk of crush and scrape injuries when the hand holding the plane strikes the work or objects nearby. Cuts and sliver injuries are also common.

The hand plane requires some strength and elbow grease to use properly. The hazards of overexertion and tendinitis can be aggravated by using a dull iron or too short a plane.

- Only use a plane suited to the job and keep the iron sharp.
- For long surfaces like door edges, use a fore plane 18" long and 2 3/8" wide or a jointer plane 24" long and 2 5/8" wide.
- For shorter surfaces, use a jack plane 15" long and 2 3/8" wide or a smoothing plane 10" long and 2 3/8" wide.
- Remember that sharp tools require less effort and reduce the risk of fatigue, overexertion, and back strain.
- Work can also be easier with a door jack and supports on your work bench.

Plumb Bobs

The weight of a mercury-filled plumb bob will surprise you. Designed for use in windy conditions, the bob has considerable weight in proportion to its surface area.

The weight and point of the bob can make it dangerous. Ensure that all is clear below when you lower the bob.

Don't let it fall out of your pocket, apron, or tool bag. The same goes for the standard solid bob.

Crow Bars

Any steel bar 10-60 inches long and sharpened at one end is often called a crow bar.

The tools include pry bars, pinch bars, and wrecking bars. Shorter ones usually have a curved claw for pulling nails and a sharp, angled end for prying.

Nail Pulling

Pulling out nails can be easier with a crow bar than a claw hammer.

In some cases, a nail-puller does the job best. The hand holding the claw must be kept well away from the striking handle.

Lifting - Loads levered, lifted, or shifted by bars can land on fingers and toes.

- Make sure to clear the area and maintain control of the load.
- Have enough rollers and blocking ready.
- Never put fingers or toes under the load.

General

- Try to avoid prying, pulling, wedging, or lifting at sharp angles or overhead.
- Wherever possible, keep the bar at right angles to the work.
- Wear eye protection and, where necessary, face protection.

Note: Please see our company's Safety and Health Manual for the full Program.

29 CFR-§1910.147 – The Control of Hazardous Energy

Company Policy for the Control of Hazardous Energy

Lundy Construction Co., Inc. has adopted this program for Lockout/Tagout procedures for the control of hazardous energy threats.

Lundy Construction Co., Inc. will enforce the following engineering controls and work practices in order to eliminate or minimize the hazards of an unexpected release of hazardous energy:

Lundy Construction Co., Inc. will provide training to ensure that the purpose and function of the energy control program are understood by employees and that the knowledge and skills required for the safe application, usage, and removal of the energy controls are acquired by employees.

Training will include the following:

Each authorized employee will receive training in the recognition of applicable hazardous energy sources, the type and magnitude of the energy possible in the workplace, and the methods and means necessary for energy isolation and control.

Each employee will be instructed in the purpose and use of the energy control procedure.

All other employees whose work operations are, or may be, in an area where energy control procedures are utilized, will be instructed in the procedure, and about the prohibition relating to attempts to restart or reenergize machines or equipment which are locked out or tagged out.

Retraining will be provided for all employees whenever there is a change in their job assignments, a change in machines, equipment or processes that present a new hazard, or when there is a change in the energy control procedures. Additional retraining will also be conducted whenever a periodic inspection reveals, or when the employer has reason to believe, that there are deviations from or inadequacies in the employee's knowledge or use of the energy control procedures. The retraining will reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

The employer will certify that employee training has been accomplished and is being kept up-to-date. The certification will contain each employee's name and dates of training.

The Lockout /Tagout procedures for Lundy Construction Co., Inc. are administered by The Safety Coordinator and will be those described in the procedures defined in this chapter.

Each employee is responsible for ensuring that proper procedure is used on his/her specific job, the program is under the direct supervision of the job foreman at each work location.
In situations in which lockout or tagout devices must be temporarily removed from the energy isolating device and the machine or equipment energized to test or position the machine, equipment or components, the following sequence of actions will be followed:

- Clear the machine or equipment of tools and materials.
- Remove employees from the machine or equipment area.
- Remove the lockout or tagout devices.
- Energize and proceed with testing or positioning.
- De-energize all systems and reapply lockout according to proper procedure to continue the servicing and/or maintenance.

When service or maintenance is performed by a crew or other group, they will use the job foreman's lock for lockout procedure to ensure a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device. Each member of the crew will attach his/her personal lock to the foreman's lock at the beginning of the procedure required, and remove their personal lock as their part in the procedure is complete. In the event a shift change is required during a lockout procedure, the affected employee will secure his/her lock on the control before removal of the previously used lock.

Failure to comply with proper Lockout/Tagout procedures is grounds for disciplinary action. It will be grounds for immediate termination of employment with Lundy Construction Co., Inc. for any unauthorized removal of warning tags or lockout devices. The performance of Lockout/Tagout procedures will be inspected/evaluated at least annually by The Safety Coordinator for compliance with company policy. Inspections will be documented and date, equipment, and employee(s) reviewed will be recorded.

Lockout procedures are to be utilized over tagout procedures, where possible.

Locks used for (LOTO) will be clearly marked with identification of the employee applying the device.

Purpose

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

Compliance with this Program

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance will not attempt to start, energize, or use that machine or equipment.

Company Lockout/Tagout Policy

Purpose

Lundy Construction Co., Inc. has established this "Lockout/Tagout Policy and Procedure" to provide maximum safety protection to our employees whenever they must service or perform maintenance on machinery and equipment.

Scope

These procedures must be used by all employees authorized to service or maintain our equipment to ensure that machines or equipment is completely isolated from all potentially hazardous energy sources. All employees affected in any way by servicing and maintenance activities must also be knowledgeable of lockout/tagout procedures.

Application

These procedures must be followed whenever unexpected energizing, star-up or release of stored energy could cause injury. These procedures do not apply when servicing or maintenance of equipment during normal production operations unless:

- Guards, or other safety devices, must be removed or bypassed.
- An employee places him/herself in an area where work on materials, etc., is actually being performed.
- An employee places him/herself in any area considered dangerous during the normal operating cycle.

Compliance

All supervisors are responsible and accountable for the use of safe lockout/tagout procedures by all employees under their supervision. Compliance with lockout/tagout procedures is mandatory. Non-compliance with these procedures is considered a violation of an employee's condition of employment.

Authorization

Employees who are properly trained and certified on equipment maintenance and lockout/tagout procedures, and approved by the facility manager, are authorized to implement lockout/tagout procedures as appropriate.

Lockout/Tagout Procedures

Preparation for Lockout

Review

Prior to lockout, the authorized employee(s) will review the lockout/tagout procedures for each machine/piece of equipment. As a minimum the following information will be reviewed:

- Types and magnitudes of energy.
- Hazards posed by that energy.
- Methods to effectively control the energy.

Particularly close attention must be given to energies (such as gravity, electrical, high pressure) that can be stored or re-accumulated after shut-down.

Notification

Prior to shutdown all affected employees will be notified to clear their work area and/or any other area that might be hazardous.

Lockout/Tagout

Shutdown

Machinery and equipment will be shut down in an orderly manner using the shutdown checklist procedures on the associated lockout;/tagout procedures for each machine/piece of equipment. If more than one authorized employee is involved in shutdown, the maintenance team leader will make sure all assistants have accomplished their tasks and are aware that shutdown will occur.

Isolation

All energy isolation devices will be located and operated to completely de-energize and isolate the equipment. The authorized employee, or team leader will verify operation of each energy isolation device.

Applying Lockout/Tagout Devices

Lockout devices — will be used to secure energy isolating devices unless the machinery or equipment is not capable of being locked out. Only authorized employees will affix lockout/tagout devices. Lockout devices must be able to hold energy isolation devices in a "safe" or "off" position.

Tagout devices — will be used only if machinery or equipment is not capable of being locked out. Tags will clearly state that moving energy isolating devices from the "safe" or "off" position is strictly prohibited. If a tag cannot be affixed to the energy isolating device, it will be located as close as safely possible to the device so that the tag is obvious to anyone attempting to operate the device.

Lockout/Tagout materials and hardware — will be provided by the employer. Each lockout/tagout device will be used only for lockout/tagout.

Lockout devices will have the following characteristics:

- Capable of withstanding harsh environments
- Standardized within the Company. Same color, shape, size, etc.
- Prevent removal without excessive force
- Singularly identify the user
- Uniquely keyed

In addition, tagout devices will also have the following characteristics:

- Non-reusable
- Attachable by hand
- Self-locking
- Non-releasable with not less than 50 LB locking strength
- Design/characteristics at least equivalent to a one-piece, all environment-tolerant nylon cable tie.

Stored Energy — Immediately after applying lockout or tagout devices, the authorized employee will ensure all potentially hazardous stored or residual energy is relieved, disconnected, restrained, and otherwise rendered safe.

If stored energy can be re-accumulated, the authorized employee will verify that the energy is isolated until maintenance is complete or the energy no longer exists.

Verification of Isolation — Before starting work on a machine or equipment that is locked or tagged out, the authorized employee will verify that the machinery or equipment is actually isolated and de-energized.

Release from Lockout or Tagout

The authorized employee will follow the procedures below prior to removing lockout or tagout devices and restoring energy:

- **Equipment** — Make sure machinery or equipment is properly re-assembled. Inspect machinery or equipment to make sure nonessential items have been removed.
- **Employees** — Make sure all employees are safely positioned outside danger zones. Notify affected employees that lockout/tagout devices have been removed and that energy is going to be re-applied.
- **Removing lockout/tagout devices** — Only the authorized employee who applied the lockout/tagout device may remove that device. Exception: When the authorized employee is not at the facility and all reasonable efforts have been made to inform the employee that their lockout/tagout device has been removed:
  - The owner is authorized and will remove the device following procedures in this section.
  - Each owner will be trained in proper lockout/tagout procedures.
  - The owner will ensure the authorized employee has this knowledge before he/she resumes work.

Testing/Positioning Machines or Equipment

Whenever lockout/tagout devices are removed to test or position machines and equipment, or their components, the authorized employee will complete the following procedures in the sequence presented:

- Clear the machine or equipment of tools and materials.
- Remove employees from danger zones.
- Remove lockout/tagout devices.
- Energize and proceed with testing or positioning.
- De-energize all systems and re-apply lockout/tagout devices.

Outside Personnel (Contractors, etc.)

- Outside servicing personnel contracted to perform maintenance or other services covered by these lockout/tagout procedures will not begin work until the owner is satisfied that their lockout/tagout procedures are at least equivalent to Company procedures.
- The owner will also ensure Company employees understand and comply with contracted personnel lockout/tagout procedures.

Shift/Personnel Changes

When a shift change occurs during a lockout/tagout procedure, the following procedures will be followed:

- The on-coming authorized employee(s) will attach lockout/tagout devices and verify complete isolation.
- The on-coming authorized employee(s) will receive a comprehensive briefing on the maintenance being performed from the off-going authorized employee(s).
- The off-going authorized employee(s) will remove their lockout/tagout devices.

Special Procedure: In the event that communication between off-going and on-coming authorized employee(s) is impossible and work is to be done on the equipment/machinery by the on-coming authorized employee(s), then the following procedures must be followed:

- The off-going authorized employee(s) will each check out a "department" lock from the maintenance department and record in the checkout log the status and condition of the equipment in question.
- The off-going authorized employee(s) will attach the "department" lock to the equipment/machinery and remove their personal lock.
- The on-coming authorized employee(s), upon realization the there is a "department" lock in place on the equipment/machinery to be worked on, will go to the maintenance department and read the checkout log, and sign for the appropriate key.
- The on-coming authorized employee(s) will attach their personal lock to the equipment/machinery and remove the "department" lock.
- The on-coming authorized employee(s) will immediately return the "department" lock and key to the maintenance department and sign in the key and lock.

Training

Training in Lockout/Tagout — will be provided to all employees who may be in an area where energy control procedures are used. This training will make sure that the purpose and function of the energy control program are understood and that employees gain the needed knowledge and skills to safely apply, use, and remove energy controls. As a minimum, training will include:

- Authorized employees must be able to recognize: hazardous energy sources, type and magnitude of energy in the workplace, and methods and means necessary to isolate and control the energy.
- Affected employees must be able to recognize: purpose and use of the energy control procedures.
- Other employees must be able to recognize: procedures and prohibitions of the energy control program.

Training for Tagout Devices — Further training on tagout systems need to emphasize that:

- Tags are warning devices only and do not provide a physical restraint that lockout devices provide.
- Tags must not be removed without the authorized employee's approval, and should never be bypassed, ignored, or otherwise defeated.
- Tags must be legible, and understandable by all employees.
- Tags must be able to withstand environmental conditions in the workplace.
- Tags may give employees a false sense of security.
- Tags must be securely attached to prevent being accidentally detached during use.

Retraining — Employees will be retrained at the following times:

- Initial assignment.
- Change in job assignment.
- Change in machinery or equipment.
- Change in operating procedures.

Inspections

Annual inspection on lockout/tagout procedures will be conducted by an authorized employee other than the one(s) using the control procedure being inspected.

- The purpose of the inspection is to correct any deviations or inadequacies in the procedures.
- The inspector and authorized employee must review responsibilities under the energy control procedure.
- The owner will certify that the inspection was conducted. Elements of the certification include:
  - Identification of equipment or machinery.
  - Date of inspection.
  - Employees included in the inspection.
  - Person performing inspection.

Purpose

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

Compliance with this Program

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is locked out to perform servicing or maintenance will not attempt to start, energize, or use that machine or equipment.

Note: Please see our company's Safety and Health Manual for the full Program.

Chapter 16

Ladder & Stairway Safety

§1926.1053 - Ladders

§1926.1060 - Training Requirements

The Safety Coordinator is responsible for the implementation and enforcement of the following safety rules as they apply to ladder & stairway safety.

Lundy Construction Co., Inc. will ensure that each employee has been trained by a competent person in the following areas.

- The nature of all fall hazards in the work area.
- The maximum intended load-carrying capacities of ladders and the correct procedures for erecting, maintaining, and disassembling the fall protection systems to be used.
- The proper construction, use, placement, and care in handling of all stairways and ladders.

Introduction

Most ladder falls involve portable ladders that move, tilt, or shift while a worker is climbing or descending. Unstable or slippery base surfaces are the primary reasons ladders fail.

Other reasons include a misstep or a slip of the foot, loss of balance, an overreach, and being struck by a vehicle or other object.

Workers can reduce ladder fall risks by doing the following:

- Frequently inspect & maintain ladders.
- Match tasks to appropriate ladders.
- Set up ladders correctly.
- Climb & descend ladders properly.

Employers, too, have a responsibility for training workers so they understand these safe work practices and can use them effectively. This chapter will help promote safe work practices for portable ladders, and we encourage you to use it as a basic reference.

Ladder Ratings

There are many types of portable ladders, but they all receive one of four ratings, based on their maximum working load (the maximum weight they can safely support). Before you use a ladder, check its rating and be sure not to subject it to a load greater than its rated capacity.

Rating	*Working Load*
Extra heavy duty (I-A)	300 pounds
Heavy duty (I)	250 pounds
Medium duty (II)	225 pounds
Light duty (III)	200 pounds

Types of Portable Ladders

Portable ladders are either non-self-supporting (such as the straight ladder) or self-supporting (such as the standard step ladder). Within one of these two categories, you are likely to find the right size, shape, and type of ladder to accomplish your task.

Non-Self-Supporting Ladders

Single Portable or Straight Ladder

The single portable or straight ladder is indispensable for general use. It is the most common type of portable ladder and has the widest range of applications. When used on slippery surfaces, this ladder must have slip-resistant feet or be secured to prevent it from sliding.

Rubber or neoprene ladder shoes are recommended for smooth, dry surfaces, and spikes are recommended for snow or ice. Single portable ladders must not be longer than 30 feet and are intended for use by only one worker at a time. Such ladders are available in wood, metal, and reinforced fiberglass.

Extension or Section Ladder

Extension ladders offer the greatest length in a general purpose ladder. The ladder consists of two or more sections that travel in guides or brackets, allowing adjustable lengths. The sections must be assembled so that the sliding upper section is on top of the lower section. Each section must overlap its adjacent section a minimum distance, based on the ladder's overall length.

The overall length is determined by the lengths of the individual sections, measured along the side rails. The table shows the minimum overlap for ladders up to 60 feet long.

Ladder Length	*Overlap*
Up to and including 36 feet	3 feet
Over 36 through 48 feet	4 feet
Over 48 through 60 feet	5 feet

Note: Install positive stops on individual ladder sections to ensure the required overlap.

Extension ladders are made of wood, metal, or reinforced fiberglass. Wood ladders cannot have more than two sections and must not exceed 60 feet. Metal and fiberglass ladders can have as many as three sections; however, the overall length must not exceed 72 feet. Individual sections of any extension ladder must not be longer than 30 feet. Extension ladders are for use by only one person at a time.

Make sure extension ladders have non-slip bases if there is a chance the ladder can slip. Cord-face ladder shoes are recommended for wet surfaces, rubber or neoprene ladder shoes for smooth dry floor surfaces, and steel spikes for ice or snow. Be careful if you use an extension ladder on oily, metal, or concrete surfaces. Place the ladder securely and tie it off to prevent it from slipping.

Self-Supporting Ladders

Standard Stepladder

The standard stepladder, a general purpose ladder, has flat steps and a hinged back. It is self-supporting and nonadjustable. An industrial model, designed for heavy service demands, has oversize back legs, heavy-duty flat steps, and knee braces that increase rigidity and durability.

Standard stepladders should be used only on surfaces that offer firm, level footing such as floors, platforms, and slabs. They are available in metal, wood, or reinforced fiberglass versions, and are intended to support only one worker at a time. Remember not to stand on, or work from, the top step. The ladders must have a metal spreader or locking arms. They cannot be longer than 20 feet, measured along the front edge of the side rails.

Two-Way Stepladder

The two-way stepladder is similar to the industrial standard stepladder; however, each side of this ladder has a set of steps. The extra set of steps offers convenience and versatility: One person can work from either side or two people can work from the ladder at the same time — one on each side.

Platform Ladder

The platform ladder is a special-purpose ladder that has a large stable platform from which you can work at the highest standing level. The ladder's length is determined by the length of the front edge of the side rail from the bottom of the ladder to the base of the platform. The length of a platform ladder cannot exceed 20 feet.

Trestle Ladder

A trestle ladder is a self-supporting portable ladder that has two sections hinged at the top, forming equal angles with the base. A variation of the trestle ladder, the extension trestle ladder, includes a vertically adjustable single ladder that can be locked in place. (The single extension section must lap at least three feet into the base section.) Trestle ladders are used in pairs to support planks or staging. The rungs are not intended to be used as steps.

The angle of spread between open front and back legs must be 5 ½ inches per foot of length. The length cannot be more than 20 feet, measured along the front edge of the side rails. Rails must be beveled at the top and have metal hinges to prevent spreading. Metal spreaders or locking devices are also required to keep the rails in place.

Selecting Ladders

Ladders come in different types because workers who use them have different needs. In the previous section, major types of portable ladders were identified and the tasks for which they are appropriate. However, many of the special-purpose ladders were omitted, which are usually variations of general purpose ladders, designed to meet a special need.

Examples include: platform, trolley, side-rolling, shaft, and manhole ladders. The important point: You are likely to save time and energy and reduce your risk of injury if you choose the right ladder for your task or job.

Using Ladders

Ladders are easier and safer to use when you match them with the appropriate task. Still, most portable-ladder accidents happen when workers do one or more of the following: fail to inspect ladders regularly, place ladders inappropriately, or ignore safe practices when climbing or descending. The guidelines below address each of these issues.

At the Beginning of Each Job

- Select the appropriate ladder for your task or job.

- Inspect the ladder before you use it. Make sure it is in sound condition — clean and undamaged.

Placing a Ladder

- Move the ladder near the work you are doing.
- Angle the ladder properly. The base should extend not less than one-fourth the ladder's length. The minimum slope should be 50 degrees.
- Place a solid rest for the rail tops across window openings.
- Protect the base of a tall, occupied ladder if it could be struck by vehicles or pedestrians.

Avoid

- Never place a ladder in front of an unlocked, unguarded door.
- Never place a ladder on boxes, tables, trucks, or other moveable objects.

Securing a Ladder

- Nail or lash a ladder in place if it will be used repeatedly in the same spot.
- Select a ladder that will extend at least 36 inches above the access area it is serving.

Avoid

- Working on ladders in exposed areas during a severe storm or strong wind.
- Working on ladders covered with ice or snow.
- Using a portable ladder if an approved stairway could be used instead.

Ascending and Descending

- Face the ladder at all times.
- Grasp the side rails with both hands; you have a better chance of avoiding a fall if a rung or step fails.
- Raise and lower heavy, awkward loads with a hand line or hoist.
- Attach light, compact tools or materials to the ladder or to yourself.

Avoid

- Sliding down the ladder.
- Climbing when your hands or shoes are slippery.
- Using your hands for carrying items.
- Carrying awkward loads when ascending or descending a ladder.
- Placing tools or materials on a ladder if they could fall off.

Metal Ladders

Make sure steps and rungs have a skid-resistant surface that minimizes the risk of slipping. ("Skid resistant" means corrugated, knurled, dimpled, or coated with skid-resistant material.)

Avoid

Using any ladder with conductive side rails near exposed, energized equipment. (Such ladders must be permanently, legibly marked with the words, **"WARNING — Do Not Use Around Energized Electrical Equipment."**

Precautions

- Place both feet firmly on the ladder rungs and steps.
- Make sure only one person stands on, or works from, a standard ladder. (Use a scaffold or a second ladder if two or more people are doing the same task.)
- Immediately inspect any ladder that has collapsed, tipped over, or been exposed to oil or grease. Clean and repair the ladder if necessary.
- Remove defective ladders from service. Tag or mark defective ladders with the words: "Dangerous, Do Not Use."
- Make sure an extension ladder extends at least 36 inches above an access landing.
- Keep the area around the top and bottom of a ladder free of debris.
- Keep the load on the ladder (including yourself) below its maximum load capacity.

Do Not

- Do not paint ladders. Paint conceals defects. Use transparent preservatives instead.
- Do not use ladders with broken, patched, oily, or cracked rails, rungs, or steps.
- Do not reach out over the side rails, lean, or turn excessively on a ladder.
- Do not use a ladder as guy, brace, or skid.
- Do not stand or sit on the top two steps of a stepladder.
- Do not use a self-supporting ladder without first opening it up and securing the metal spreader or locking device.
- Do not load a ladder beyond its maximum load capacity.

Transporting Ladders

Some ladders are easier to move than others. Here are a few guidelines to help you protect ladders and the people who use them.

When you hand-carry a ladder, keep the front end elevated, especially around blind corners, in aisles, and through doorways. You will reduce the chance of striking another person with the front of the ladder.

When you transport a ladder in a truck or trailer, place it parallel to the bed. Avoid tossing, throwing, or dropping it in the bed.

If you transport a long ladder on a short truck bed over long distances, support the ladder so it will not sag or bend.

Drive slowly over rough terrain. Tie the ladder securely to eliminate nicking, gouging, chafing, and road shock.

Storing Ladders

Another way to prolong a ladder's life is to store it properly. Here are some useful storage tips:

- The storage area should be well ventilated.
- Wood ladders should not be exposed to moisture or excessive heat. Avoid storing ladders near stoves, steam pipes, or radiators.
- Store straight or extension ladders in flat racks or on wall brackets. Make sure there are enough brackets to support the ladder so that it does not sag. If the ladder rails have a lateral curve, the wall brackets should match the curve.

- Store stepladders vertically, in a closed position, to reduce the risk of sagging or twisting. Secure stored ladders so that they will not tip over if they are struck.
- Store ladders, especially wood ladders, promptly after using them. Exposure to moisture and sun will shorten the life of a wood ladder.

Maintaining and Repairing Ladders

Neglected ladders quickly become unsafe ladders. Step bolts slacken, step sockets and other joints work loose, hole sizes increase — eventually the ladder becomes twisted and unstable.

Periodic maintenance extends a ladder's life and saves replacement costs. Maintenance includes regular inspection of the ladder, repairing damage and tightening step bolts and other fastenings.

Replace lower steps on wooden ladders when one-fourth of the step surface is worn away. Typically, the center of a step receives the most wear. (Mineral abrasive or other skid-resistant material reduces wear.)

- Do not use cleats to repair rung ladders.
- Do not paint a wood ladder — paint conceals defects.

Consider stocking repair parts if you use different types of ladders. Typical parts include ladder bolts, related hardware, and lower steps or rungs (which wear out faster than upper steps or rungs).

Improving Slip Resistance

Slip-resistant materials are often used on industrial ladder treads. Notable is the anti-slip treatment on metal platform ladders used in file and parts rooms, tool cribs, and frozen-food lockers. The obvious benefit of slip-resistant material is that it reduces fall risks when a worker is climbing or descending.

Ladder Hazards Checklist

Begin your work with a ladder that will not let you down. Use the checklist below to make sure the ladders you use are hazard free.

- Are ladders kept in good condition?
- Are the joints between steps and side rails tight, all hardware and fittings securely attached, and movable parts operating freely without binding or excessive play?
- Are non-slip safety feet on each single or multiple-section portable rung-type ladder?
- Are ladder rungs and steps kept free of grease and oil?
- Are workers instructed to face the ladder when ascending/descending it?
- Are workers prohibited from using ladders that have missing steps, rungs, cleats, broken side rails, or other faulty parts?
- Are workers instructed not to stand or step on the top step of any portable ladder?
- When portable ladders are used to reach elevated platforms and roofs, does the ladder extend at least 36 inches above the elevated surface?
- Are portable metal ladders legibly marked with signs reading "CAUTION — Do Not Use Around Electrical Equipment" or equivalent wording?
- Are steps, rungs, or cleats of ladders spaced no more than 12 inches apart?

- Are portable ladders secured or lashed to prevent displacement when they are used?
- Are wood cleats attached to the side rails of job-made ladders in one of the following ways:
  - By housing the cleats into the side rails by at least one-half inch.
  - By securing wood strips (same thickness as the cleats) to the side rails between each cleat.
  - By securing the cleats to the side rails with bolts.
- Is there at least seven inches of space behind the cleats to allow secure footing?

Ladder Training

Employers have a responsibility to ensure that their employees understand how to inspect and use ladders correctly. Use the following checklist to evaluate the training employees receive.

- Have you provided a training program for each employee who uses a ladder?
- Does the training enable each employee to recognize and minimize ladder hazards?
- Has each employee been trained by a competent person in the following areas, when applicable?
- The nature of fall hazards in the work area?
- How to correctly use, place, handle, and maintain ladders?
- The maximum load-carrying capacities of ladders used?
- OSHA requirements for the types of ladders that will be used?

Safety Requirements for Stairways

The rules covering stairways and their components generally depend on how and when stairs are used. Specifically, there are rules for stairs used during construction and stairs used temporarily during construction, as well as rules governing stair rails and handrails.

Stairways Used During Construction

The following requirements apply to all stairways used during construction:

- Stairways that will not be a permanent part of the building under construction must have landings at least 30 inches deep and 22 inches wide at every 12 feet or less of vertical rise.
- Stairways must be installed at least 30 degrees —and no more than 50 degrees—from the horizontal.
- Variations in riser height or stair tread depth must not exceed one-quarter inch in any stairway system, including any foundation structure used as one or more treads of the stairs.
- Doors and gates opening directly onto a stairway must have a platform that extends at least 20 inches beyond the swing of the door or gate.
- Metal pan landings and metal pan treads must be secured in place before filling.
- Stairway parts must be free of dangerous projections such as protruding nails.
- Slippery conditions on stairways must be corrected.
- Workers must not use spiral stairways that will not be a permanent part of the structure.

Temporary Stairs

The following requirements apply to stairways used temporarily during construction.

Except during construction of the stairway:

- Do not use stairways with metal pan landings and treads if the treads and/or landings have not been filled in with concrete or other materials unless the pans of the stairs and/or landings are temporarily filled in with wood or other materials. All treads and landings must be replaced when worn below the top edge of the pan.
- Do not use skeleton metal frame structures and steps (where treads and/or landings will be installed later) unless the stairs are fitted with secured temporary treads and landings.

Note: Temporary treads must be made of wood or other solid material and installed the full width and depth of the stair.

Stair Rails

The following general requirements apply to all stair rails:

- Stairways with four or more risers or rising more than 30 inches in height - whichever is less - must be installed along each unprotected side or edge. When the top edge of a stair rail system also serves as a handrail, the height of the top edge must be no more than 37 inches nor less than 36 inches from the upper surface of the stair rail to the surface of the tread.
- Top edges of stair rail systems used as handrails must not be more than 37 inches high nor less than 36 inches from the upper surface of the stair rail system to the surface of the tread. (If installed before March 15, 1991, not less than 30 inches).
- Stair rail systems and handrails must be surfaced to prevent injuries such as punctures or lacerations and to keep clothing from snagging.
- Ends of stair rail systems and handrails must be built to prevent dangerous projections, such as rails protruding beyond the end posts of the system.

In addition:

- Unprotected sides and edges of stairway landings must have standard 42-inch guardrail systems.
- Intermediate vertical members, such as balusters used as guardrails, must not be more than 19 inches apart.
- Other intermediate structural members, when used, must be installed so that no openings are more than 19 inches wide.
- Screens or mesh, when used, must extend from the top rail to the stairway step and along the opening between top rail supports.

Handrails

Requirements for handrails are as follows:

- Handrails and top rails of the stair rail systems must be able to withstand, without failure, at least 200 pounds of weight applied within 2 inches of the top edge in any downward or outward direction, at any point along the top edge.
- Handrails must not be more than 37 inches high nor less than 30 inches from the upper surface of the handrail to the surface of the tread.

- Handrails must provide an adequate handhold for employees to grasp to prevent falls.
- Temporary handrails must have a minimum clearance of 3 inches between the handrail and walls, stair rail systems and other objects.
- Stairways with four or more risers, or that rise more than 30 inches in height – whichever is less – must have at least one handrail.
- Winding or spiral stairways must have a handrail to prevent use of areas where the tread width is less than 6 inches.

Midrails

Midrails, screens, mesh, intermediate vertical members or equivalent intermediate structural members must be provided between the top rail and stairway steps to the stair rail system. When midrails are used, they must be located midway between the top of the stair rail system and the stairway steps.

Employers must train all employees to recognize hazards related to ladders and stairways, and instruct them to minimize these hazards. For example, employers must ensure that each employee is trained by a competent person in the following areas, as applicable:

- Nature of fall hazards in the work area;
- Correct procedures for erecting, maintaining and disassembling the fall protection systems to be used;
- Proper construction, use, placement and care in handling of all stairways and ladders; and
- Maximum intended load-carrying capacities of ladders used.

Note: Employers must retrain each employee as necessary to maintain their understanding and knowledge on the safe use and construction of ladders and stairs.

Note: Please see our company's Safety and Health Manual for the full Program.

§1926.501 – Duty to have Fall Protection

§1926.502 – Fall Protection Systems – Criteria and Practices

§1926.503 – Training Requirements

Company Policy for Fall Protection

Lundy Construction Co., Inc. has implemented this policy to ensure that proper safe work practices and procedures are followed to protect employees from the fall hazards. The Safety Coordinator is designated as the Program Administrator responsible for managing and supervising the Fall Protection Program. The following work practices, procedures, and engineering controls will be enforced as an integral part of our Company safety policy:

- Our Company will provide to our employees at no cost fall protection such as guardrails, safety nets, or personal fall arrest systems whenever our employees are exposed to potential falls to lower levels from heights of six feet or greater. This includes work near and around excavations.
- ***Exception:*** When the standard methods of protection are not feasible or a greater hazard would be created. Scaffolds, ladders, or vehicles will only be used when appropriate fall protection is in place.
- This Company provides a training program for each employee who might be exposed to fall hazards. Training will enable each employee to recognize the hazards of falling and will instruct each employee in the procedures to follow to minimize these hazards. The Safety Coordinator will maintain written certification records showing the following:
  - Who was trained, the types of training, and dates of training.
  - Signature of person providing training and the date it was determined training was deemed adequate.
- The Safety Coordinator will ensure that all employees who participate in work where fall hazards are present are trained in recognition of fall hazards, fall protection procedures, equipment, and work practices. Employees will be certified upon completion of training in the following areas:
  - The nature of fall hazards in the work area.
  - The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used.
  - The role of each employee in the safety monitoring system when this system is used.
  - The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, personal fall restraint systems, slide guard systems, positioning devices, and other protection to be used.
  - The limitations on the use of mechanical equipment during the performance of roofing work.

- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection.
- The role of employees in the fall protection work plan.

- Fall protection will be required at all times for employees working at heights of 6 feet or above. The fall protection system used will be appropriate for the specific work location or situation where it is required.
- The Safety Coordinator is designated the competent person in charge of the Company Fall Protection Program and will specify a fall protection system for each worksite. The Safety Coordinator will supervise implementation of the fall protection system and inspect the system prior to use.
- A "Safety Monitoring System" will be implemented where no alternative measure is feasible. In the event a conventional fall protection system is deemed inappropriate, The Safety Coordinator will designate the work area a controlled access zone, and will assign a competent person to monitor the safety of other employees and will ensure that the safety monitor complies with the following requirements. The assigned safety monitor will:
  - Be competent to recognize fall hazards.
  - Warn the monitored employees when it appears they are unaware of a fall hazard or is acting in an unsafe manner.
  - The safety monitor will be on the same walking/working surface and within visual sighting distance of the employees being monitored.
  - The safety monitor will be close enough to communicate orally with the employee being monitored.
  - The safety monitor will have no other responsibilities that could take his/her attention from the monitoring function.
- Any accidents or incidents involving Lundy Construction Co., Inc. employees will be reported immediately to the supervisor for the work location. All accidents/incidents will be investigated under the guidelines of the Company Accident Investigation Program and changes will be implemented to the Fall Protection Plan as necessary.
- All materials and equipment purchased and used for fall protection will comply with ANSI and ASTM standards required for that equipment.

What is Fall Protection?

You accomplish fall protection by doing the following:

- Make fall protection part of your workplace-safety-and-health program.
- Identify and evaluate fall hazards.
- Eliminate fall hazards, if possible.
- Train workers to recognize fall hazards.
- Use appropriate equipment to prevent falls and to protect workers if they do fall.

- Inspect and maintain fall protection equipment before and after using it.
- Become familiar with Subpart M fall protection rules.

Preventing and Controlling Falls

- What is a fall protection system?
- What to consider when selecting a fall protection system
- Personal fall-arrest systems
- Personal fall-restraint systems
- Positioning-device systems
- Guardrail systems
- Safety-net systems
- Warning-line systems for roofing work
- Safety monitoring for roofing work
- Catch platforms
- Covers for holes
- Fences and barricades
- Protecting workers from falling objects

What is a Fall Protection System?

If workers will be exposed to fall hazards that you cannot eliminate, you will need to prevent falls from occurring or ensure that if workers do fall, they are not injured. A fall protection system is designed to prevent or arrest falls. The table below shows the fall protection systems covered in §1926.500 – Subpart M.

FALL PROTECTION SYSTEMS

Type of fall protection system	What it does
Personal fall-arrest system	Arrests a fall
Personal fall-restraint system	Prevents a fall
Positioning-device system	Positions a worker and limits a fall to two feet
Guardrail system	Prevents a fall
Safety-net system	Arrests a fall
Warning-line system for roofing work	Warns a worker of a fall hazard
Slide-guard system for roofing work	Prevents workers from sliding down sloped roofs

Other Fall Protection Methods

The following methods may also be appropriate for preventing falls:

- ***Safety monitoring for roofing work*** – A method in which a person – rather than a mechanical system – warns roofers when they are in danger of falling. The monitor, who must be a competent person, is responsible for recognizing the hazards and warning workers about them.
- ***Catch platforms*** – Though not covered in Subpart M, catch platforms are an acceptable method of protecting workers from falls.
- ***Covers for holes*** – Simple and effective when they are properly installed, rigid covers prevent workers from falling through

temporary holes, openings, and skylights in walking/working surfaces.

- ***Fences and barricades*** – Use a fence or similar barricade to keep people away from wells, pits, and shafts.

What to Consider When Selecting a Fall Protection System

Appropriate fall protection systems have the following characteristics:

- They are affordable.
- They offer the least interference with workers' tasks or activities.
- They prevent falls or protect workers who do fall.

Wherever possible, eliminate fall hazards. Identify hazards that you cannot eliminate and evaluate each one. The evaluation will help you determine appropriate fall protection systems for your work site. Consider the following:

- What is the fall distance from the walking/working surface to the next lower level?
- How will the workers move – horizontally, vertically, or in both directions – to do their tasks?
- How will workers be promptly rescued if they are suspended in a personal fall-arrest system?
- How many workers are exposed to the hazard?
- What tasks and work areas are associated with the hazard?
- Are secure anchorages available or can they be easily installed near the hazard?
- Are there other hazards near the work area, such as overhead power lines?

Personal Fall-Arrest Systems

A personal fall-arrest system consists of an anchorage, connectors, and a full-body harness that work together to stop a fall and to minimize the arrest force. Other parts of the system may include a lanyard, a deceleration device, and a lifeline. The personal fall-arrest system is effective only if you know how all of the components work together to stop a fall.

Before using a personal fall-arrest system, workers must be instructed in the following:

- How to select and install a secure anchorage.
- How to select and use connectors.
- How to put on and use a full-body harness.
- How to correctly attach and use a lanyard.
- When a deceleration device is necessary.
- How to erect and use a lifeline.
- The correct procedures for using retractable devices.
- How to estimate fall distances.
- How to avoid swing falls.
- How to inspect and maintain the system.

- How you will be promptly rescued if you fall.

The Anchorage

An anchorage is a secure point of attachment for lifelines, lanyards, or deceleration devices. How can you be sure that an anchorage is secure? An anchorage for a personal fall-arrest system must support at least 5,000 pounds. Anchorages that cannot support 5,000 pounds must be designed and installed under the supervision of a qualified person and must be able to maintain a safety factor of at least two - twice the impact force of a worker free-falling six feet. If you do not know how much weight an anchorage will support, have a qualified person check it before you trust your life to it. Anchorage strength is critical, but is not the only factor to consider. Also important:

Anchorage connector - Unless an existing anchorage has been designed to accept a lanyard or lifeline, you will need to attach an anchorage connector - a device that provides a secure attachment point. Examples include tie-off adapters, hook anchors, beam connectors, and beam trolleys. Be sure that the connector is compatible with the lanyard or lifeline and appropriate for the work task.

Attachment point - The anchorage can be used only as the attachment point for a personal fall-arrest system; it cannot be used to support or suspend platforms.

Location — The anchorage should be located directly above the worker, if possible, to reduce the chance of a swing fall.

Fall distance — Because a personal fall-arrest system does not prevent a fall, the anchorage must be high enough above a worker to ensure that the arrest system, and not the next lower level, stops the fall. Consider free-fall distance, lanyard length, shock-absorber elongation, and body-harness stretch in determining the height of an anchorage. Free-fall distance is the distance a worker falls before a personal fall-arrest system begins to stop the fall.

Connectors — An anchorage, a lanyard, and a body harness are not useful until they are linked together. Connectors do the linking; they make the anchorage, the lanyard, and the harness a complete system. Connectors include carabiners, snap hooks, and D-rings.

Carabiner — This high-tensile alloy steel connector has a locking gate and is used mostly in specialized work such as window cleaning and high-angle rescue. Carabiners must have a minimum tensile strength of 5,000 pounds.

Snap hook — A hook-shaped member with a keeper that opens to receive a connecting component and automatically closes when released. Snap hooks are typically spliced or sewn into lanyards and self-retracting lifelines. Snap hooks must be high-tensile alloy steel and have a minimum tensile strength of 5,000 pounds. Use only locking snap hooks with personal fall-arrest systems; locking hooks have self-locking keepers that will not open until unlocked.

D-ring — D-rings are the attachment points sewn into a full-body harness. D-rings must have a minimum tensile strength of 5,000 pounds.

The full-body harness – The full-body harness has straps that distribute the impact of a fall over the thighs, waist, chest, shoulders, and pelvis. Full-body harnesses come in different styles, many of which are light and comfortable. Before you purchase harnesses, make sure that they fit those who will use them, that they are comfortable, and that they are easy to adjust. A full-body harness should include a back D-ring for attaching lifelines or lanyards and a back pad for support. Never use a body belt as part of a personal fall-arrest system.

When purchasing a full-body harness for a personal fall-arrest system.

Keep the following in mind:

- The harness must be made from synthetic fibers.
- The harness must fit the user. It should be comfortable and easy to adjust.
- The harness must have an attachment point, usually a D-ring, in the center of the back at about shoulder level. The D-ring should be large enough to easily accept a lanyard snap hook.
- Chest straps should be easy to adjust and strong enough to withstand a fall without breaking.
- Use only industrial full-body harnesses (not recreational climbing harnesses).
- The harness must be safe, reliable, and it should meet ANSI standards for product design, development, and production.

Lanyards

A lanyard is a specially designed flexible line that has a snap hook at each end. One snap hook connects to the body harness and the other connects to an anchorage or a lifeline. Lanyards must have a minimum breaking strength of 5,000 pounds. They come in a variety of designs, including self-retracting types that make moving easier and shock absorbing types that reduce fall-arrest forces. Do not combine lanyards to increase length or knot them to make them shorter.

Deceleration Devices

Deceleration devices protect workers from the impact of a fall and include shock-absorbing lanyards, self-retracting lifelines or lanyards, and rope grabs.

Shock-absorbing lanyard – A shock absorber reduces the impact on a worker during fall arrest by extending up to 3.5 feet to absorb the arrest force. Subpart M rules limit the arrest force to 1,800 pounds but a shock-absorbing lanyard can reduce the force even more – to about 900 pounds. Because a shock-absorbing lanyard extends up to 3.5 feet, it is critical that the lanyard stops the worker before the next lower level. Allow about 20 vertical feet between the worker's anchorage point and the level below the working surface. Always estimate the total distance of a possible fall before using a shock-absorbing lanyard.

Example: Lanyard length (6 feet) + deceleration distance (3.5 feet) + worker's height (6 feet) + safety margin (3 feet) = 18.5 vertical feet from anchorage to lower level.

Never use a shock-absorbing lanyard if the shock absorber is even partially extended or if the lanyard has arrested a fall.

Self-retracting lanyard/lifeline – Self-retracting lanyards and lifelines offer more freedom to move than shock-absorbing lanyards. Each has a drum-wound line that unwinds and retracts as the worker moves. If the worker falls, the drum immediately locks, which reduces free-fall distance to about two feet – if the anchorage point is directly above the worker. Some self-retracting lanyards will reduce free-fall distance to less than one foot. Self-retracting lanyards are available in lengths up to 20 feet.

Self-retracting lifelines, which offer more freedom, are available in lengths up to 250 feet. Self-retracting lanyards and lifelines that limit free-fall distance to two feet or less must be able to hold at least 3,000 pounds with the lanyard (or lifeline) fully extended. Self-retracting lanyards that do not limit free-fall distance to two feet must be able to hold at least 5,000 pounds with the lanyard (or lifeline) fully extended. Beware of swing falls! If you use a self-retracting lanyard or lifeline, work below the anchorage to avoid a swing fall. The farther you move away from the anchorage, the farther you will fall and the greater your risk of swinging back into a hard object.

Swing falls are hazardous because you can hit an object or a lower level during the pendulum motion.

Rope grab – A rope grab allows a worker to move up a vertical lifeline but automatically engages and locks on the lifeline if the worker falls. When using a rope grab, keep the following in mind:

- The rope grab must be compatible with the lifeline.
- The rope grab must be correctly attached to the lifeline (not upside down).
- Keep the lanyard (between the rope grab & body harness) as short as possible.
- Keep the rope grab as high as possible on the lifeline.

Lifelines

A lifeline is a cable or rope that connects to a body harness, lanyard, or deceleration device, and at least one anchorage. There are two types of lifelines, vertical and horizontal.

Vertical lifeline – A vertical lifeline is attached to an overhead anchorage and must be connected directly to a worker's full-body harness, lanyard, retractable device, or rope grab; it must have a minimum breaking strength of 5,000 pounds.

When a worker needs to move horizontally, however, a vertical lifeline can be hazardous due to the potential for a swing fall – the pendulum motion that results when the worker swings back under the anchor point. A swing fall increases a worker's risk of striking an object or a lower level during the pendulum motion.

Horizontal lifeline – Unlike a vertical lifeline, the horizontal lifeline stretches between two anchorages. When you connect a lanyard or rope grab to the horizontal lifeline, you can move about freely, thus reducing the risk of a swing fall. However, horizontal lifelines are subject to much greater loads than vertical lifelines. If horizontal lifelines are not installed correctly, they can fail at the anchorage points. For this reason, horizontal lifelines must be designed, installed, and used under the supervision of a qualified person.

Horizontal lifelines and sag angles – Any load on a horizontal lifeline will cause it to deflect, or sag. The sag angle is a horizontal lifeline's angle of deflection when it is subjected to a load, such as a falling worker. Reducing the sag angle (making a horizontal lifeline too tight) actually increases the force on the line during a fall. As you tighten a horizontal lifeline, you increase the impact load dramatically!

Example: When the sag angle is 15 degrees, the force on the lifeline and anchorages subjected to a load is about 2:1. However, if you decrease the sag angle to five degrees, the force increases to about 6:1. To reduce loads on a horizontal lifeline, increase the sag angle or connect to the lifeline with a shock-absorbing lanyard.

Safe Practices for Personal Fall-Arrest Systems

- Do not tie knots in rope lanyards and lifelines; knots can reduce strength by 50 percent.
- Do not tie lifelines or lanyards directly to I-beams; the cutting action of beam edges can reduce the rope's strength by 70 percent.
- Know how the "sag angle" of a horizontal lifeline can affect arrest forces on the anchorages.
- Remember that horizontal lifelines must be designed, installed, and used under the supervision of a qualified person.
- Think about the potential for a swing fall whenever you connect a lifeline to a personal fall-arrest system.
- Remember that a shock-absorbing lanyard will elongate before arresting a fall. The fall distance includes lanyard length (before the shock absorber extends), deceleration distance (shock-absorber extension), worker height, and a safety margin (allow three feet).

Personal Fall-Restraint Systems

Unlike the personal fall-arrest system, which is designed to stop a fall, a personal fall-restraint system prevents a worker from reaching an unprotected edge and thus prevents a fall from occurring. The system consists of an anchorage, connectors, and a body harness or a body belt. The attachment point to the body belt or full body harness can be at the back, front, or side D-rings.

The anchorage for a fall-restraint system must support at least 3,000 pounds or be designed and installed with a safety factor of at least two. If you are not sure how much an anchorage will support, have a qualified person evaluate it.

Positioning-Device Systems

Positioning-device systems make it easier to work with both hands free on a vertical surface such as a wall or concrete form. Positioning-device systems are also called Class II work-positioning systems and work-positioning systems. The components of a positioning-device system – anchorage, connectors, and body support – are similar to those of a personal fall-arrest system. However, the systems serve different purposes.

A positioning-device system provides support and must stop a free fall within two feet; a personal fall-arrest system provides no support and must limit free-fall distance to six feet.

- **Anchorage** – Positioning-device systems must be secured to an anchorage that can support at least twice the potential impact of a worker's fall or 3,000 pounds, whichever is greater.
- **Connectors** – Connectors must have a minimum strength of 5,000 pounds. Snap hooks and D-rings must be proof-tested to a minimum load of 3,600 pounds without deforming or breaking.
- **Body support** – A body belt is acceptable as part of a positioning-device system. However, it must limit the arresting force on a worker to 900 pounds and it can only be used for body support. A full-body harness is also acceptable and must limit the arrest force to 1,800 pounds. Belts or harnesses must have side D-rings or a single front D-ring for positioning.

Guardrail Systems

A guardrail system consists of a top rail, mid-rail, and intermediate vertical member. Guardrail systems can also be combined with toe-boards that prevent materials from rolling off the walking/working surface.

Retrieval/Rescue of Suspended Workers

Responding to Falls – Prompt Rescue is Required

The best strategy for protecting workers from falls is to eliminate the hazards that cause them. When you cannot eliminate the hazards, you must protect workers with an appropriate fall protection system or method. If a worker is suspended in a personal fall-arrest system, you must provide for a prompt rescue.

"Prompt" means without delay. A worker suspended in a harness after a fall can lose consciousness if the harness puts too much pressure on arteries. A worker suspended in a body harness must be rescued in time to prevent serious injury. If a fall-related emergency could happen at your work site, you should have a plan for responding to it promptly. Workers who use personal fall-arrest systems must know how to rescue themselves immediately after a fall or they must be promptly rescued.

Emergency Response Plan

The following guidelines explain plans for responding promptly to falls and other emergencies.

Effective plans do not need to be elaborate. The plan must show that you have thought about how to eliminate and control hazards and that workers know how to respond promptly if something goes wrong.

Get others involved in planning. When other workers participate, they will contribute valuable information, take the plan seriously, and be more likely to respond effectively during an emergency. Key planning objectives:

- Identify the emergencies that could affect your site.
- Establish a chain of command.
- Establish procedures for responding to the emergencies.
- Identify critical resources and rescue equipment.
- Train on-site responders.

Identify emergencies that could affect your workplace. Identify any event that could threaten worker safety or health. Two examples:

- A worker suspended in a full-body harness after a fall.
- A worker on a scaffold who contacts an overhead power line.

Identify critical resources and rescue equipment. Prompt rescue will not happen without trained responders, appropriate medical supplies, and the right equipment for the emergency.

- ***First-aid supplies.*** Every worksite needs medical supplies for common injuries. Does your site have a first aid kit for injuries that are likely to occur? Store the supplies in clearly marked, protective containers and make them available to all shifts.
- ***Rescue equipment.*** Identify on-site equipment that responders can use to rescue a suspended worker. Extension ladders and mobile lifts are useful and available at most sites. Determine where and how each type of equipment would be most effective during a rescue. Make sure the equipment will permit rescuers to reach a fall victim, that it is available when rescuers need it, and that rescuers know how to use it. Will your longest ladder reach a suspended worker? If not, what equipment will reach the worker? When equipment is needed for a rescue, will workers know where it is and how to use it? Think about seasonal and environmental conditions and how they may affect rescue equipment and those who use it. Equipment that works for summer rescues may not work for winter rescues.

Train on-site responders. An effective emergency-response plan ensures that on-site responders know emergency procedures, know how to use available rescue equipment, and – if necessary – know how to contact off-site responders. Workers who use personal fall-arrest systems and who work alone must know how to rescue themselves. Those who work at a remote site may need a higher level of emergency training than those who work near a trauma center or a fire department.

Establish a chain of command. All workers must know their roles and responsibilities during an emergency. A chain of command links one person with overall responsibility for managing an emergency to those responsible for carrying out specific emergency response tasks. Ensure that back-up personnel can take over when primary responders are not available.

Establish procedures for responding to emergencies. Procedures are instructions for accomplishing specific tasks. Emergency procedures are important because they tell workers exactly what to do to ensure their safety during an emergency. Your emergency response plan should include the following procedures - preferably in writing - that describe what people must know and do to ensure that a fallen worker receives prompt attention:

- How to report an emergency.
- How to rescue a suspended worker.
- How to provide first aid.

After an emergency, review the procedures; determine if they should be changed to prevent similar events and revise them accordingly.

Responding to Falls – Before On-Site Work Begins

- Identify emergencies that could affect your work site.
- Establish a chain of command.
- Document procedures for responding to emergencies and make sure they are available at the site.
- Post emergency-responder phone numbers and addresses at the work site.
- Identify critical resources and rescue equipment. Train on-site responders.
- Identify off-site responders and inform them about any conditions at the site that may hinder a rescue effort.
- Identify emergency entry and exit routes. Make sure responders have quick access to rescue and retrieval equipment, such as lifts and ladders.

During On-Site Work

- Identify on-site equipment that can be used for rescue and retrieval, such as extension ladders and mobile lifts.
- Maintain a current rescue-equipment inventory at the site. Equipment may change frequently as the job progresses.
- Re-evaluate and update the emergency-response plan when work tasks change.

When an Emergency Occurs

- First responders should clear a path to the victim. Others should direct emergency personnel to the scene. You can use 911 for ambulance service; however, most 911 responders are not trained to rescue a worker suspended in a personal fall-arrest system.
- Make sure only trained responders attempt a technical rescue.
- Prohibit all nonessential personnel from the rescue site.
- Talk to the victim; determine the victim's condition, if possible.
- If you can reach the victim, check for vital signs, administer CPR, attempt to stop bleeding, and make the victim comfortable.

After an Emergency

- Verbally by telephone or in person, report any work-related fatalities or the in-patient hospitalization of three or more employees as a result of a work-related incident to your Area Office of OSHA within eight hours.
- Identify equipment that may have contributed to the emergency and put it out of service.
- Have a competent person examine equipment. If equipment is damaged, repair or replace it. If the equipment caused the accident, determine how and why.
- Document in detail the cause of the emergency.
- Review emergency procedures. Determine how the procedures could be changed to prevent similar events; revise the procedures accordingly.

Note: Please see our company's Safety and Health Manual for the full Program.

§1926.450 – Subpart L – Scaffolds

§1926.451 – General Requirements

§1926.454 – Training Requirements

Policy Statement

Lundy Construction Co., Inc. has implemented this policy to ensure that no employee is exposed to hazards while doing work requiring the use of scaffold. The Job Superintendent is the supervisor responsible for ensuring the following engineering controls, training requirements, and safe work practices are enforced to protect our employees from hazards associated with the erecting and use of scaffolds:

The Job Superintendent will ensure that each employee who performs work on a scaffold is trained by a person qualified in scaffold safety. The training will enable employees to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize the hazards. Training includes the following applicable areas:

- The nature of any electrical hazards, fall hazards, and falling object hazards in the work area.
- The correct procedures for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
- The proper use of the scaffold and the proper handling of materials on the scaffold.
- The maximum intended load and the load-carrying capacities of the scaffolds used.
- Any other safety topics deemed pertinent to the particular work-site, scaffold system, or fall protection systems being used.

The Job Superintendent will ensure that each employee involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold is trained by a competent person to recognize any hazards associated with the work in question. Training includes the following applicable topics:

- The nature of scaffold hazards.
- The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold being used.
- The design criteria, maximum intended load-carrying capacity, and intended use of the scaffold.
- Any other safety topics deemed pertinent to the particular work-site, scaffold system, or fall protection systems being used.

Retraining is required when The Job Superintendent has reason to believe that an employee lacks the skill or understanding needed to safely perform work that involves the erection, use, or dismantling of scaffolds. The employee will be retrained so that the required proficiency is regained. Retraining is required in all of the following situations:

- Where changes at the worksite present a hazard about which an employee has not been previously trained.
- Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained.
- Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the required skill, knowledge, and proficiency for the work involved.

A scaffold will be designed, constructed, erected, and used in accordance with OSHA requirements. All scaffold used at Lundy Construction Co., Inc. will be designed by a qualified person.

Scaffold will not be erected, moved, dismantled, or altered, except under the supervision of a competent person.

A scaffold and its components will be capable of supporting, without failure, not less than 4 times the maximum intended load.

A scaffold will not be loaded to more than the designed working load.

The Job Superintendent will ensure that all scaffolding systems, components, and fall protection systems used will be inspected for visible defects by a competent person prior to use, before each work shift begins, after erecting or moving, periodically throughout the work day, and after any occurrence that could affect a scaffold's structural integrity. Any scaffold, including accessories such as braces, brackets, trusses, screw legs, ladders, or platforms, that is damaged or weakened from any cause will be immediately repaired or replaced. Any scaffold or accessories that are repaired will have at least the original designed strength of the scaffold or accessory.

Any system or component of a system which is found to have a defect in manufacturing or design, damage, excessive wear, weathering, or corrosion will be immediately removed from service and tagged to indicate that it is not to be used with a prominent tag which states:

- An employee on a scaffold who is exposed to an overhead hazard of falling material will be protected with overhead protection sufficient to prevent injury.

- All load-carrying wood members of scaffold framing will be a minimum of 1,500 psi fiber stress value.
- The poles, legs, or uprights of scaffolds will be plumb and will be securely and rigidly braced to prevent swaying and displacement.
- The support for a scaffold will be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Leveling jack adjusting screws, when used, will not extend more than 18 inches below the base of the scaffold.

- Scaffold poles, legs, posts, frames, and uprights will bear on base plates and mud sills or other adequate firm foundation.
- Scaffold components that are not compatible will not be intermixed.
- Unstable objects, such as barrels, boxes, pallets, brick, or concrete blocks, will not be used to support a scaffold or work platform.
- Makeshift devices such as boxes and barrels will not be used on top of scaffold platforms to increase the working level height of employees.

Ladders will not be used on a scaffold to increase the working level height of employees, except on a large area scaffold where The Job Superintendent has required the following procedures and conditions are satisfied:

- When the ladder is placed against a structure that is not a part of the scaffold, the scaffold will be secured against the sideways thrust exerted by the ladder.
- The platform units will be secured to the scaffold to prevent the units from moving.
- Either the ladder legs will be on the same platform or another means will be provided to stabilize the ladder against unequal platform deflection.
- The ladder legs will be secured to prevent them from slipping or being pushed off the platform.

Hazards created on a scaffold from the accumulation of excess tools, materials, and debris will not be permitted.

Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on a scaffold and that the employees are protected by a personal fall arrest system. Wind screens will not be used unless the scaffold is secured against the anticipated wind forces imposed.

Scaffold will be kept free of slippery conditions such as those caused by ice, snow, oil, grease, or other slippery compounds.

Employees are not permitted within 10 feet of energized electrical lines.

The Job Superintendent will ensure that before a scaffold is erected within 10 feet of an electrical line, the utility or property owner will be consulted. An electrical line or electrical apparatus will be considered energized unless the property owner or utility indicates it is de-energized and the line or apparatus is visibly grounded. If de-energizing is impractical and the equipment is exposed to contact by an employee, the minimum clearances shown in Table 1 below will be maintained between the scaffold, employee, or material, whichever is closer.

Table 1:

Insulated Lines		
Voltage	***Minimum Distance***	***Alternatives***
Less than 300 volts	3 feet	2 times the length of the line insulator, but not less than 10 feet.
300 volts to 50 kilovolts	10 feet	
More than 50 kilovolts	10 feet plus 0.4 inches for each kilovolt over 50 kilovolts	

Appropriate guardrail systems will be installed on any open side or end of a scaffold work platform that is 10 or more feet above the floor or ground.

The Job Superintendent will ensure that a competent person determines the feasibility and safety of providing fall protection for employees erecting or dismantling supported scaffolds. Lundy Construction Co., Inc. will provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of the protection is feasible and does not create a greater hazard.

If vertical lifelines are used, they will be fastened to fixed, safe points of anchorage and will be protected from sharp edges and abrasion. Safe points of anchorage include structural members of buildings, but not any of the following:

- Standpipes
- Vents
- Other piping systems
- Electrical conduit
- Outrigger beams

If horizontal lifelines are used, they will be secured to 2 or more structural members of the scaffold.

If wood planks are used for a work platform, then the planks will be scaffold-grade lumber that has a minimum of 1,500 pounds psi fiber stress value. The planks will be not less than 2 inches by 10 inches.

The platform will consist of a minimum of 2 planks laid side by side. Each platform on all working levels of scaffolds will be fully planked or decked between uprights where practicable. Spaces between the platform and the uprights will not be more than 9 ½ inches.

Platform planks will be laid with their edges together so the platform is tight and does not have spaces through which tools or fragments of materials can fall.

Planking will extend over the end bearer not less than 6 inches, but not more than 12 inches and will be cleated or otherwise fastened to prevent shifting and will be uniform in thickness. Where planks are lapped, each plank will lap its bearer not less than 6 inches to provide a minimum overlap of 12 inches. Hook-on type manufactured platforms may be used if secured to the bearer.

Where a scaffold turns a corner, the planks will be laid to prevent tipping. The planks that meet the corner bearer at an angle will be laid first and will extend over the diagonally placed bearer far enough to have a good bearing, but not far enough to tip. The planks that run in the different direction will be laid so as to extend over the rest on the first layer of planks.

When moving a platform to the next level, employees will leave the old platform undisturbed until the new platform supports have been set in place and are ready to receive the platform planks.

Wood platform components will not be covered with opaque finishes. Platform edges may be covered or marked for identification. A platform may be coated periodically with wood preservatives, fire-retardant finishes, and slip-resistant finishes. Such coating may not obscure the top or bottom wood surfaces.

The front of a platform will not be more than 14 inches from the face of the work unless a guardrail system is erected along the front edge, or unless a personal fall arrest system is used. ***Exception:*** The maximum distance from the face of the work for plastering and lathing will not be more than 18 inches.

When scaffold is occupied by employees, slippery conditions that occur on the platform will be eliminated as soon as possible after the condition occurs.

The Job Superintendent will ensure that in addition to wearing a hard hat, employees on a scaffold will be provided additional protection from falling hand tools, debris, and other small objects through the installation of toeboards, screens, or guardrail systems or the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects.

If there is a danger of tools, materials, or equipment falling from a scaffold and striking employees below, then one of the following provisions will apply:

- The area below the scaffold to which objects can fall will be barricaded and employees will not be permitted to enter the hazard area.
- Toeboards will be erected along the edge of a platform that is more than 10 feet above lower levels. The toeboards will span a distance sufficient to protect employees below. If toeboards are used, they will satisfy the following requirements:
  - Be capable of withstanding, without failure, not less than 50 pounds of force applied in any downward or horizontal direction at any point along the toeboard.
  - Be not less than 3 ½ inches high from the top edge of the toeboard to the level of the walking/working surface.
  - Toeboards will be securely fastened in place at the outermost edge of the platform and have not more than ¼ inch of clearance above the walking/working surface.

- Toeboards will be solid or have openings of not more than 1 inch in the greatest dimension.

- If tools, materials, or equipment are piled to a height higher than the top edge of the toeboard, then paneling or screening extending from the toeboard or platform to the top of the guardrail will be erected for a distance sufficient to protect employees below.
- A guardrail system will be installed with openings small enough to prevent the passage of potential falling objects.
- A canopy structure, debris net, or catch platform that is strong enough to withstand the impact forces of potential falling objects will be erected between the falling object hazard and employees.

Only qualified and competent personnel are permitted to make repairs or modifications to a scaffold system or its components. Non-qualified personnel may create more hazards. Disciplinary action for non-qualified repair or modification will be enforced.

Any violation of the above policy, misuse of scaffolds, or misconduct while working on scaffolds will be subject to disciplinary action within the scope of company policy, up to and including termination of employment.

General Scaffold Safety Policy

It will be the responsibility of all users to read and comply with the following common sense guidelines which are designed to promote safety in the erecting, dismantling and use of Scaffolds. These guidelines do not purport to be all-inclusive nor to supplant or replace other additional safety and precautionary measures to cover usual or unusual conditions. If these guidelines in any way conflict with any state, local, federal or other government statute or regulation, said statute or regulations will supersede these guidelines and it will be the responsibility of each user to comply therewith.

A Quick Tour of §1926.450 – Subpart L

§1926.450 – Subpart L requirements identify what workers and employers need to know to use all types of scaffolds safely. Specifically, the requirements:

- Regulate the design, construction, and use of scaffolds.
- Update previous scaffolding standards.
- Set performance-oriented criteria to protect workers from injury.
- Cover specific types of scaffolds.
- Allow employers flexibility in using fall protection systems.
- Extend fall protection to erectors and dismantlers.
- Strengthen training for workers.
- Identify conditions under which workers must be retrained.

Note: Please see our company's Safety and Health Manual for the full Program.

§1926.651 – Specific Excavation Requirements

§1926.652 – Requirements for Protective Systems

Company Policy for Excavation, Trenching, & Shoring

Lundy Construction Co., Inc. has adopted this program for the safety of employees when working in or around trenches and excavations.

The Job Superintendent is designated as the competent person for Lundy Construction Co., Inc. in authority over all excavation operations. The Job Superintendent will ensure that all safety measures and systems are in place and correctly installed, all safety procedures are adhered to, and make regular inspections of the work site.

Lundy Construction Co., Inc. will implement and enforce the following engineering controls, procedures, and work practices to ensure that no employee is exposed to hazards from excavations being performed or existing at the jobsite:

- The Job Superintendent will ensure that all employees are trained in and familiar with required work practices and excavation procedures to safeguard personnel involved in trenching operations or who work in the vicinity of excavation operations.

Locating Underground Utility Installations

- Lundy Construction Co., Inc. will not excavate in a street, highway, public place, a private easement of a public utility, or near the location of a public utility facility owned, maintained, or installed on a customer's premises, without having first ascertained the location of all underground facilities of a public utility in the proposed area of excavation.
- Upon receiving the information from the public utility, Lundy Construction Co., Inc. personnel will exercise reasonable care when working in close proximity to the underground utilities. If the utilities are or likely to be exposed, only hand digging will be employed in such circumstances and any support reasonably necessary for protection of the utilities will be provided on the construction site.
- When any contact with or damage to any pipe, cable, or any other underground utility occurs, Lundy Construction Co., Inc. will immediately notify the utility company. If an energized electrical cable is severed, an energized conductor is exposed, or dangerous fluids or gases are escaping from a broken line, The Safety Coordinator will evacuate personnel from the immediate area until the utility company representative arrives.
- While an excavation is open, underground utilities will be protected, supported, or removed as necessary to safeguard employees.

Surface Encumbrances

- All surface encumbrances such as trees, boulders, rock fragments, or other obstructions whose movement could cause injury to an employee will be removed or supported.
- Excavations that personnel are required to enter will have spoil piles and other material stored and retained not less than 2 feet from the excavation edge.
- When a shoring system is used, the system will be designed and used to resist the added pressure when heavy equipment, material handling equipment, or material is located near an excavation.
- When mobile equipment is utilized or permitted adjacent to an excavation where the operator's vision is restricted, stop logs, barricades, or a signal person will be used.

Inspections

- Daily inspections of excavations, the adjacent areas, and protective systems will be made by a competent person for evidence of a situation that could result in possible cave-ins, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. An inspection will be conducted by the competent person prior to the start of work and as needed throughout the shift. Inspections will also be made after every rainstorm or other hazard increasing occurrence. These inspections are required when employee exposure can be reasonably anticipated.
- Where the competent person finds evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, exposed employees will be removed from the hazardous area until the necessary precautions have been taken to ensure their safety.

Access and Egress

- Lateral travel along the wall of a trench to a ladder or other means of egress will not exceed 25 feet.
- An excavation four feet or more in depth and occupied by an employee will be provided with either a ladder extending not less than 3 feet above the top as a means of access or with a ramp meeting the following requirements:
  - Structural ramps that are used solely by employees as a means of access or egress from excavations will be designed by a competent person. Structural ramps used for access or egress of equipment will be designed by a competent person qualified in structural design, and will be constructed in accordance with the design.
  - Ramps and runways constructed of two or more structural members will have the members connected together to prevent displacement. Structural members used for ramps and runways will be of uniform thickness.
  - Cleats or other appropriate means used to connect runway structural members will be attached to the bottom of the runway or will be attached in a manner to prevent tripping.

- Structural ramps used in lieu of steps will be provided with cleats or other surface treatments on the top surface to prevent slipping.
- An earth ramp may be used in place of a ladder if:

- The ramp material will be stable.
- The sides of the excavation above the ramp will be maintained to the maximum allowable slope or sheeted or shored along the means of egress.
- The degree of angle of the ramp will not be more than 45 degrees.
- Vertical height between the floor of the trench and the toe of the ramp will not exceed 30 inches.

Exposure to Vehicle Traffic

- Employees exposed to public vehicular traffic will be provided with, and be required to, warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.
- A sidewalk will not be undermined unless it is shored to support a live load of at least 125 pounds per square foot.
- Employees who are routed from a sidewalk or walkway into a roadway to detour excavations will be protected on all sides by regulation guardrails or barricades.
- If an employee or equipment is required or permitted to cross a trench or ditch, a walkway, ramp, or bridge will be provided and will have a designed capacity of not less than 3 times the imposed load. Regulation guardrails will be installed.
- If equipment is routed across or onto a roadway, protection will be provided using regulation signals, signs, or barricades.
- An open cut into a roadway will be provided with a regulation barricade on all sides. Warning lights will be provided during hours of darkness.

Walkways

- Walkways will be provided where employees or equipment are required or permitted to cross over excavations. Regulation guardrails will be provided where walkways are 6 feet or more above lower levels.
- A walkway or sidewalk will be kept clear of excavated material and other obstructions.
- The walkways and sidewalks will be lighted if used during hours of darkness.
- A walkway or sidewalk that is adjacent to an excavation will be separated from the excavation and protected by an appropriate guardrail.

Exposure to Falling Loads

Personnel will not be permitted under loads handled by lifting or digging equipment. Employees will be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped with regulation protection for the operator during loading and unloading operations.

Mobile Equipment Warning Systems

When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system will be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.

Hazardous Atmospheres

To prevent exposure to hazardous atmospheres and to assure acceptable breathing conditions, all of the following requirements will apply:

- Where an oxygen deficiency (an atmosphere that contains less than 19.5% oxygen) or a hazardous atmosphere exists, such as in excavations in areas where hazardous substances are stored nearby, the atmosphere in the excavation will be tested before employees enter excavations that are more than 4 feet deep.
- Precautions will be taken to prevent employee exposure to atmospheres that contain less than 19.5% oxygen and any other hazardous atmosphere. These precautions include providing regulation respiratory protection or ventilation.
- Precautions will be taken, such as providing ventilation, to prevent employee exposure to an atmosphere that contains a concentration of a flammable gas in excess of 20% of the lower flammable limit of the gas.
- When using controls intending to reduce levels of atmospheric contaminants to acceptable PEL, testing will be conducted as often as necessary to ensure that breathing air remains safe.
- Emergency rescue equipment, such as breathing apparatus, safety harness and line, or a basket stretcher, will be readily available where hazardous atmospheric conditions exist or could develop during work in an excavation. This equipment will be attended when in use.
- Employees entering bell-bottom pier holes, or other similar deep and confined footing excavations, will wear a harness with a lifeline securely attached to it. The lifeline will be separate from any line used to handle materials, and will be individually attended at all times while employee wearing it is in the excavation.

Protection from Water Accumulation Hazards

- Employees will not work in excavations where water has or is accumulating, unless adequate precautions have been taken to protect employees against the hazards posed by such water accumulation. Precautions necessary to protect employees vary with each situation and will include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.
- If water is controlled or prevented from accumulating by the use of water pumps, the pumping equipment and operations will be monitored by a competent person to ensure proper operation.

- If excavation work interrupts the natural drainage of surface water (such as streams), diversion ditches, dikes, or other suitable means will be used to prevent surface water from entering the excavation and to provide adequate drainage of the area adjacent to the excavation. Excavations subject to runoff from heavy rains will require an inspection by a competent person.
- An ongoing inspection of an excavation or trench will be made by a qualified person. After every rainstorm or other hazard-producing occurrence, an inspection will be made by a competent person for evidence of possible slides or cave-ins. Where these conditions are found, all work will cease until additional precautions, such as additional shoring or reducing the slope, have been accomplished.

Stability of Adjacent Structures

- Excavation below the level of the base or footing of any foundation or retaining wall that could be reasonably expected to pose a hazard to employees will not be permitted except when:
  - A support system, such as shoring, bracing, or underpinning, is provided to ensure the safety of employees and the stability of the structure.
  - The excavation is in stable rock.
  - A registered professional engineer has approved the determination that the structure is sufficiently removed from the excavation so as to be unaffected by the excavation activity or that such excavation work will not pose a hazard to employees.
- Sidewalks, pavements, and appurtenant structure will not be undermined unless a support system or another method of protection is provided to protect employees from the possible collapse of such structures.
- The shoring, bracing, and underpinning will be inspected daily or more often, as conditions warrant, by a competent person.

Employee Protection from Loose Rock or Soils

- Adequate protection will be provided to protect employees from loose rock or soil that could pose a hazard by falling or rolling from an excavation face. Such protection will consist of scaling to remove loose material; installation of protective barricades at intervals as necessary on the face to stop and contain falling material or other means that provide equivalent protection.
- Employees will be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection will be provided by placing and keeping such materials or equipment at least 2 feet from the edge of excavations, or by the use of retaining devices that are sufficient to prevent materials or equipment from falling or rolling into excavations, or by a combination of both if necessary.
- If different textured soils are encountered in the side of an excavation, each soil type of the excavation will be cut to the proper maximum allowable slope, except that the slope will not steepen between the toe of the slope and the ground level where soft clay or running soil is encountered in the lower cut.

- If the excavation is a trench, a trench shoring system will be used or the sides will be properly benched or sloped to protect against a cave-in.
- An excavation that is cut into a rock formation will be scaled to remove loose material.
- When installed forms, walls, or similar structures create a trench between the form, wall, or structure and the side of the excavation, it will be treated as a trench.

General Classification of Soil and Rock Deposits

- Each soil and rock deposit will be classified by a competent person as Stable Rock, Type A, Type B, or Type C in accordance with OSHA definitions.
- The classification of the deposits will be made based on the results of at least one visual and at least one manual analysis. Such analyses will be conducted by a competent person using approved methods of soil classification and testing.
- The visual and manual analyses will be designed and conducted to provide sufficient quantitative and qualitative information as may be necessary to identify properly the properties, factors, and conditions affecting the classification of the deposits.
- Layered systems will be classified according to its weakest layer. However, each layer may be classified individually where a more stable layer lies under a less stable layer.
- If after classifying a deposit, the properties, factors, or conditions affecting its classification change in any way, the changes will be evaluated by a competent person. The deposit will be reclassified as necessary to reflect the changed circumstances.

Protection of Employees in Excavations

- Employees in an excavation will be protected from cave-ins by an adequate protective system designed in accordance with OSHA requirements, except when:
  - Excavations are made entirely in stable rock.
  - Excavations are less than 5 feet deep and examination of the ground by a competent person provides no indication of a potential cave-in.
- Protective systems will have the capacity to resist without failure all loads that are intended or could reasonably be expected to be applied or transmitted to the system.

The slopes and configurations of sloping and benching systems will be selected and constructed by Lundy Construction Co., Inc. and will be in accordance with OSHA requirements, or the following alternative options:

Option 1 - Allowable configurations and slopes.

- Excavations will be sloped at an angle not steeper than one and one-half horizontal to one vertical (34 degrees measured from the horizontal), unless the employer uses one of the other options listed below.
- Specified slopes will be excavated to form configurations that are in accordance with the slopes shown for Type C soil.

Option 2 - Maximum allowable slopes, and allowable configurations for sloping and benching systems, will be determined in accordance with the conditions and requirements set forth in §1926 Subpart P – Appendices A and B.

Option 3 - Designs using other tabulated data.

- Designs of sloping or benching systems will be selected from and in accordance with tabulated data, such as tables and charts.
- The tabulated data will be in written form and will include all of the following:
  - Identification of the parameters that affect the selection of a sloping or benching system drawn from such data.
  - Identification of the limits of use of the data, to include the magnitude and configuration of slopes determined to be safe.
  - Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.
  - At least one copy of the tabulated data which identifies the registered professional engineer who approved the data, will be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data will be made available to OSHA upon request.

Option 4 - Design by a registered professional engineer.

- Sloping and benching systems not utilizing previous Options 1, 2, or 3 will be approved by a registered professional engineer.
- Designs will be in written form and will include at least the following:
  - The magnitude of the slopes that were determined to be safe for the particular project.
  - The configurations that were determined to be safe for the particular project.
  - The identity of the registered professional engineer approving the design.
  - At least one copy of the design will be maintained at the jobsite while the slope is being constructed. After that time the design need not be at the jobsite, but a copy will be made available to OSHA upon request.

Design of Support Systems

- Designs of support systems, shield systems, and other protective systems will be selected and constructed by Lundy Construction Co., Inc. and will be in accordance with OSHA requirements, or the following alternative options:

Option 1 - Designs for timber shoring in trenches will be determined in accordance with the conditions and requirements set forth in §1926 Subpart P – Appendices A and C. Designs for aluminum hydraulic shoring will be in accordance with Option 2 below, but if manufacturer's tabulated data cannot be utilized, designs will be in accordance with Appendix D.

Option 2 - Designs Using Manufacturer's Tabulated Data.

- Design of support systems, shield systems, or other protective systems that are drawn from manufacturer's tabulated data will be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer.
- Deviation from the specifications, recommendations, and limitations issued or made by the manufacturer will only be allowed after the manufacturer issues specific written approval.
- Manufacturer's specifications, recommendations, and limitations, and manufacturer's approval to deviate from the specifications, recommendations, and limitations will be in written form at the jobsite during construction of the protective system. After that time this data may be stored off the jobsite, but a copy will be made available to the Secretary upon request.

Option 3 - Designs using other tabulated data.

- Designs of support systems, shield systems, or other protective systems will be selected from and be in accordance with tabulated data, such as tables and charts.
- The tabulated data will be in written form and include all of the following:
  - Identification of the parameters that affect the selection of a protective system drawn from such data.
  - Identification of the limits of use of the data.
  - Explanatory information as may be necessary to aid the user in making a correct selection of a protective system from the data.
  - At least one copy of the tabulated data, which identifies the registered professional engineer who approved the data, will be maintained at the jobsite during construction of the protective system. After that time the data may be stored off the jobsite, but a copy of the data will be made available to OSHA upon request.

Option 4 - Design by a registered professional engineer.

- Support systems, shield systems, and other protective systems not utilizing previous Options 1, 2, or 3 will be approved by a registered professional engineer.
- Designs will be in written form and will include the following:
  - A plan indicating the sizes, types, and configurations of the materials to be used in the protective system.
  - The identity of the registered professional engineer approving the design.

- At least one copy of the design will be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design will be made available to OSHA upon request.

Protective System Materials and Equipment

- Materials and equipment used for protective systems will be free from damage or defects that might impair their proper function.
- Manufactured materials and equipment used for protective systems will be used and maintained in a manner that is consistent with the recommendations of the manufacturer, and in a manner that will prevent employee exposure to hazards.
- When equipment used for protective systems is damaged, a competent person will examine the equipment and evaluate its suitability for continued use. If the competent person cannot assure the equipment is able to support the intended loads or is otherwise suitable for safe use, then equipment will be removed from service be evaluated and approved by a registered professional engineer before being returned to service.
- General installation and removal of support systems:
  - Members of support systems will be securely connected together to prevent sliding, falling, kickouts, or other predictable failure.
  - Support systems will be installed and removed in a manner that protects employees from cave-ins, structural collapses, or from being struck by members of the support system.
  - Individual members of support systems will not be subjected to loads exceeding those which those members were designed to withstand.
  - Excavation of material to a level no greater than 2 feet below the bottom of the members of a support system will be permitted, but only if the system is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the support system.
  - Installation of a support system will be closely coordinated with the excavation of trenches.
  - Before temporary removal of individual members begins, additional precautions will be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.
  - Removal will begin at, and progress from, the bottom of the excavation. Members will be released slowly so as to note any indication of possible failure of the remaining members of the structure or possible cave-in of the sides of the excavation.
  - Backfilling will progress together with the removal of support systems from excavations.
- Employees will not be permitted to work on the faces of sloped or benched excavations at levels above other employees except when employees at the lower levels are adequately protected from the hazard of falling, rolling, or sliding material or equipment.

General shield systems requirements:

- Shield systems will not be subjected to loads exceeding those which the system was designed to withstand.
- Shields will be installed in a manner to restrict lateral or other hazardous movement of the shield in the event of the application of sudden lateral loads.
- Employees will be protected from the hazard of cave-ins when entering or exiting the areas protected by shields.
- Employees will not be allowed in shields when shields are being installed, removed, or moved vertically.
- Excavations of earth material to a level not greater than 2 feet below the bottom of a shield will be permitted, but only if the shield is designed to resist the forces calculated for the full depth of the trench, and there are no indications while the trench is open of a possible loss of soil from behind or below the bottom of the shield.

- Regulation guardrails or barricades will be provided at all remotely located excavations. All wells, pits, and shafts, temporary or otherwise, will be barricaded or covered. Temporary wells, pits, and shafts will be backfilled when exploration and similar operations are completed.

General Safe Practices for Trenching and Excavation

Lundy Construction Co., Inc. employees working on, in, or near excavations, as applicable, will follow these general rules and safe practices at all times:

- ***Before removal*** of individual trench shoring members begins, additional precautions will be taken to ensure the safety of employees, such as installing other structural members to carry the loads imposed on the support system.
- ***Exposure to falling loads***. No employee will be permitted underneath loads handled by lifting or digging equipment. Employees will be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when the vehicles are equipped to provide adequate protection for the operator during loading and unloading operations.
- ***Warning system for mobile equipment***. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, a warning system will be utilized such as barricades, hand or mechanical signals, or stop logs. If possible, the grade should be away from the excavation.
- ***Exposure to vehicular traffic***. Employees exposed to public vehicular traffic will be provided with, and will wear; warning vests or other suitable garments marked with or made of reflectorized or high-visibility material.
- ***Employees will not work*** in excavations in which there is accumulated water, or in excavations in which water is accumulating, unless adequate precautions have been taken to

protect employees against the hazards posed by water accumulation. The precautions necessary to protect employees adequately vary with each situation, but could include special support or shield systems to protect from cave-ins, water removal to control the level of accumulating water, or use of a safety harness and lifeline.

- ***Employees are not permitted*** under loads that are handled by lifting or digging equipment. Employees are not allowed to work in the excavation above other employees unless the lower level employees are adequately protected.
- ***Where oxygen deficiency*** (atmospheres containing less than 19.5 percent oxygen) or a hazardous atmosphere exists, or could reasonably be expected to exist, such as in excavations in landfill areas or excavations in areas where hazardous substances are stored nearby, the atmospheres in the excavation will be tested before employees enter excavations greater than 4 feet in depth.
- ***Adequate precautions*** will be taken to prevent employee exposure to atmospheres containing less than 19.5 percent oxygen and other hazardous atmospheres. These precautions include providing regulation respiratory protection or ventilation.
- ***When controls are used*** that are intended to reduce the level of atmospheric contaminants to acceptable levels, testing will be conducted as often as necessary to ensure that the atmosphere remains safe.
- ***At least one copy*** of the design will be maintained at the jobsite during construction of the protective system. After that time, the design may be stored off the jobsite, but a copy of the design will be made available to the Secretary upon request.
- ***Guardrails are provided*** for walkways or bridges crossing over an excavation.

Application of the Policy

This excavation policy applies to all open excavations made in the earth's surface.

A trench is a narrow excavation made below the surface of the ground in which the depth is greater than the width – the width not exceeding 15 feet.

An excavation is any man-made cut, cavity, trench, or depression in the earth's surface formed by earth removal. This can include excavations for anything from cellars to highways.

Competent Person

The designated competent person will have and be able to demonstrate the following:

- Training, experience, and knowledge of:
  - Soil analysis
  - Use of protective systems
  - Requirements of §1926 Subpart P
- Ability to detect:
  - Conditions that could result in cave-ins

- Failures in protective systems
- Hazardous atmospheres
- Other hazards including those associated with confined spaces

- Authority to take prompt corrective measures to eliminate existing and predictable hazards and to stop work when required.

General Requirements

OSHA requires that workers in trenches and excavations be protected, and that safety and health programs address the variety of hazards they face. The following hazards cause the most trenching and excavation injuries:

- No Protective System.
- Failure to Inspect Trench and Protective Systems.
- Unsafe Spoil-Pile Placement.
- Unsafe Access/Egress.

No Protective System

All excavations are hazardous because they are inherently unstable. If they are restricted spaces they present the additional risks of oxygen depletion, toxic fumes, and water accumulation. If you are not using protective systems or equipment while working in trenches or excavations at your site, you are in danger of suffocating, inhaling toxic materials, fire, drowning, or being crushed by a cave-in.

Methods to Avoid Hazards

Pre-job planning is vital to accident-free trenching; safety cannot be improvised as work progresses. The following concerns must be addressed by a competent person:

- Evaluate soil conditions and select appropriate protective systems.
- Construct protective systems in accordance with the standard requirements.
- Preplan; contact utilities (gas, electric) to locate underground lines, plan for traffic control if necessary, and determine proximity to structures that could affect choice of protective system.
- Test for low oxygen, hazardous fumes and toxic gases, especially when gasoline engine-driven equipment is running, or the dirt has been contaminated by leaking lines or storage tanks. Insure adequate ventilation or respiratory protection if necessary.
- Provide safe access into and out of the excavation.
- Provide appropriate protections if water accumulation is a problem.
- Inspect the site daily at the start of each shift, following a rainstorm, or after any other hazard-increasing event.
- Keep excavations open the minimum amount of time needed to complete operations.

Failure to Inspect Trench and Protective System

If trenches and excavations at your site are not inspected daily for evidence of possible cave-ins, hazardous atmospheres, failure of protective systems, or other unsafe conditions, you are in danger.

Methods to Avoid Hazards

Inspect excavations:

- Before construction begins.
- Daily before each shift.
- As needed throughout the shift.
- Following rainstorms or other hazard-increasing events (such as a vehicle or other equipment approaching the edge of an excavation).
- Inspections must be conducted by a competent person who:
- Has training in soil analysis.
- Has training in the use of protective systems.
- Is knowledgeable about the OSHA requirements.
- Has authority to immediately eliminate hazards.

Unsafe Spoil-Pile Placement

Excavated materials (spoils) at your site are hazardous if they are set too close to the edge of a trench/excavation. The weight of the spoils can cause a cave-in, or spoils and equipment can roll back on top of workers, causing serious injuries or death.

Methods to Avoid Hazards

Provide protection by one or more of the following:

- Use retaining devices, such as a trench box, which will extend above the top of the trench to prevent equipment and spoils from falling back into the excavation.
- Set spoils and equipment at least 2 feet back from the excavation.
- Where the site does not permit a 2-foot setback, spoils may need to be temporarily hauled to another location.

Unsafe Access/Egress

To avoid fall injuries during normal entry and exit of a trench or excavation at your job site, ladders, stairways, or ramps are required. In some circumstances, when conditions in a trench or excavation become hazardous, survival may even depend on how quickly you can climb out.

Methods to Avoid Hazards

- Provide stairways, ladders, ramps, or other safe means of egress in all trenches that are 4 feet deep or more.
- Position means of egress within 25 lateral feet of workers.
- Structural ramps that are used solely for access or egress from excavations must be designed by a competent person.
- When two or more components form a ramp or runway, they must be connected to prevent displacement, and be of uniform thickness.
- Cleats or other means of connecting runway components must be attached in a way that would not cause tripping (e.g., to the bottom of the structure).
- Structural ramps used in place of steps must have a non-slip surface.
- Use earthen ramps as a means of egress only if a worker can walk them in an upright position, and only if they have been evaluated by a competent person.

General Requirements

- All vehicles must have a service brake system, an emergency brake system, and a parking brake system. These systems may use common components, and must be maintained in operable condition.
- Whenever visibility conditions warrant additional light, all vehicles in use must be equipped with at least two headlights and two taillights in operable condition.
- All vehicles, or combination of vehicles, must brake lights in operable condition regardless of light conditions.
- All vehicles must be equipped with an adequate audible warning device at the operator's station (horn) in an operable condition.
- No employer may use any motor vehicle equipment having an obstructed view to the rear unless:
  - The vehicle has a reverse signal audible above surrounding noise level.
  - The vehicle backs up only when an observer signals it is safe to do so.
  - All vehicles with cabs must be equipped with windshields and powered wipers. Cracked and broken glass must be replaced. Vehicles operating in areas or under conditions that cause fogging or frosting of the windshields must be equipped with operable defrosting devices.
- All haulage vehicles, whose pay load is loaded by means of cranes, power shovels, loaders, or similar equipment, must have a cab shield and/or canopy adequate to protect the operator from shifting or falling materials.
- Tools and material will be secured to prevent movement when transported in the same compartment with employees.
- Vehicles used to transport employees must have seats firmly secured and adequate for the number of employees to be carried.
- Seat belts and anchorages meeting the requirements of 49 CFR Part 571 (Department of Transportation, Federal Motor Vehicle Safety Standards) must be installed in all motor vehicles, and used by the operator.
- Trucks with dump bodies must be equipped with positive means of support, permanently attached, and capable of being locked in position to prevent accidental lowering of the body while maintenance or inspection work is being done.
- Operating levers controlling hoisting or dumping devices on haulage bodies must be equipped with a latch or other device which will prevent accidental starting or tripping of the mechanism.
- Trip handles for tailgates of dump trucks will be so arranged that, in dumping, the operator will be in the clear.

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- All rubber-tired motor vehicle equipment manufactured on or after May 1, 1972, must be equipped with fenders.
  - Mud flaps may be used in lieu of fenders whenever motor vehicle equipment is not designed for fenders (such as dump trucks where the dump bed forms an effective fender).
- All vehicles in use must be checked at the beginning of each shift to assure that the following parts, equipment, and accessories are in safe operating condition and free of apparent damage that could cause failure while in use:
  - Service Brakes (including any trailer brake connections)
  - Parking System (hand brake)
  - Emergency Stopping System (brakes)
  - Tires
  - Horn
  - Steering Mechanism
  - Coupling Devices
  - Seat Belts
  - Operating Controls
  - Safety Devices
- All defects will be corrected before the vehicle is placed in service. These requirements also apply to equipment such as lights, reflectors, windshield wipers, defrosters, fire extinguishers, etc., where such equipment is necessary.

Note: Please see our company's Safety and Health Manual for the full Program.

29 CFR-§1910.146 - Permit Required Confined Spaces

Policy Statement

This policy has been implemented to ensure that proper safe work practices and procedures are followed to protect employees from the hazards associated with confined spaces. The Safety Coordinator is designated as the competent person who administers the Permit-Required Confined Spaces Program. The following practices, procedures, and controls will be enforced as an integral part of Lundy Construction Co., Inc. safety policy.

- The Safety Coordinator will ensure that all employees with access to, or duties within, confined spaces are trained in the understanding, knowledge, and skills necessary for the safe performance of duties assigned in those areas. Training will be provided to each affected employee:
  - Before the employee is first assigned duties under this section;
  - Before there is a change in assigned duties.
  - Whenever there is a change in permit space operations that present a hazard about which an employee has not previously been trained;
  - Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required or that there are inadequacies in the employee's knowledge or use of these procedures.
- Employees must demonstrate proficiency in the following duties of entry into, or work within confined spaces to complete and receive documented certification of training:
  - Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of exposure.
  - Properly use equipment as required.
  - Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space if required.
  - Alert the attendant whenever the entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or detects a prohibited condition.
  - Exit from the permit space as quickly as possible when an order to evacuate is given by the attendant or the entry supervisor, the entrant recognizes any warning sign or symptom of exposure to a dangerous situation, the entrant detects a prohibited condition, or an evacuation alarm is activated.

- Permit-required confined spaces in the workplace will be identified by The Safety Coordinator, and employees will be required to obtain a permit to enter or work in those spaces. Prior to entry, The Safety Coordinator will assess the conditions and hazards, and decide if workers will enter a permit space. The Safety Coordinator will be responsible for testing and monitoring atmospheric conditions as required. Procedures will be initiated to eliminate or control the hazards in the space including, but not limited to, the following:
  - Specifying acceptable entry conditions.
  - Providing each authorized entrant or that employee's authorized representative with the opportunity to observe any monitoring or testing of permit spaces.
  - Isolating the permit space.
  - Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards.
  - Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards, and prohibit unauthorized entry.
  - Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
  - Canceling entry permits once the work is completed, or conditions change, so that occupation of the confined space is no longer safe
- Lundy Construction Co., Inc. will provide and maintain the following equipment at no cost to employees, and ensure that employees use the equipment properly:
  - Testing and monitoring equipment required for atmospheric conditions.
  - Ventilating equipment
  - Communications equipment
  - Personal protective equipment where engineering controls do not eliminate hazards, or threat of hazards.
  - Lighting equipment
  - Barriers and shields as required
  - Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;
  - Rescue and emergency equipment, except to the extent that the equipment is provided by rescue services.
  - Any other equipment necessary for safe entry into and rescue from permit spaces.
- An attendant will be designated for each area for the purpose of testing and monitoring conditions and personnel anytime employees are assigned to confined spaces. Personnel involved in confined space activities will be designated as attendant, entry supervisor, or authorized entrant, and assigned specific duties relating to confined entry procedures as follows:

Authorized entrants are those permitted by an employer to enter a permit space. Entrants have the following duties and responsibilities:

- Knowing the permit-space hazards, including the symptoms and consequences of exposure.
- Using equipment properly.
- Communicating regularly with the attendant.
- Notifying the attendant immediately of hazardous conditions.
- Leaving the space immediately during a hazardous condition or when the attendant orders an evacuation.

Authorized attendants are those who monitor entrants' activities from outside the space. Attendants have the following duties and responsibilities:

- Knowing the permit-space hazards, including the symptoms and consequences of exposure.
- Knowing how many entrants are in permit space.
- Staying out of the space during entry operations.
- Keeping in contact with entrants.
- Ordering an evacuation for a hazardous condition.
- Keeping unauthorized persons away from the space.
- Activating rescue procedures.

The entry supervisor makes sure attendants and entrants follow entry-permit procedures. The entry supervisor is responsible for the following:

- Knowing the permit-space hazards, including the symptoms and consequences of exposure.
- Verifying that the entry permit is accurate and current.
- Stopping entry operations and canceling the entry permit when permit-space work is done or during a hazardous condition.
- Ensuring that responders will be available in an emergency.
- Removing any unauthorized person who enters the space.
- Ensuring that entry operations are consistent if another authorized person must replace an attendant or an entrant.

Prior to beginning any work at a new workplace The Safety Coordinator will verify the closest emergency medical and rescue service ability to respond to a confined space emergency. The number for the verified emergency service will be prominently posted on the job-site. In the event of an emergency requiring emergency service response, the assigned attendant will notify the entry supervisor, who is responsible for contacting emergency services.

In the event that an IDLH (Immediately Dangerous to Life and Health) entry is deemed necessary, The Safety Coordinator will first contact the above emergency response service, and ensure that emergency service is available on site before allowing entry into the confined space.

The assigned entry supervisor will be responsible for providing first aid where necessary after contacting emergency services.

No employee will enter a permit-required confined space without first completing an entry permit and having the entry supervisor sign the permit. The steps of the entry-permit procedure include the following:

- Obtain an entry permit prior to entering the space.
- Accomplish all pre-permit activities required for entering the space, including atmospheric testing, controlling hazards, having required equipment on hand, and providing for emergency services.
- Complete all items on the entry permit.
- Have the entry supervisor authorize and sign the permit, If any item on the permit is checked "NO" (meaning not yet completed or available), the permit will not be signed.
- Attach a copy of the entry permit outside the confined space. Keep it there until the entry operations are completed and the supervisor cancels it.
- Proceed with entry operations.

All proposed entrants, attendants, and entry supervisors will participate in the review of the initial atmospheric monitoring, and the completion and review of the entry permit.

Atmospheric monitoring will be performed regularly during confined space operations to ensure that conditions do not exist, or change, to threaten employees safety. Ventilation of confined spaces is required before entry, during monitoring, and throughout the operation. Monitoring or re-evaluation of conditions may be requested at any time during the operation by any employee, or their representative, who suspects that changes have occurred which might present a hazard to personnel.

If more than one employer or crew is working simultaneously as authorized entrants in a permit space, procedures, duties, communications, and priorities will be coordinated between all personnel involved prior to issuing an entry permit to ensure that employees of one employer do not endanger the employees of any other employer.

The entry supervisor or program administrator will have the authority to cancel an entry permit upon completion of the assigned task, upon finding unsuitable conditions or preparation, or if unsuitable conditions develop. The entry supervisor will ensure that all personnel have exited the space, that equipment, tools, and materials have been removed, and that no condition which might create a hazard has been left unresolved. The entry supervisor will then mark the permit cancelled, sign the space provided for cancellation, and present the cancelled permit to The Safety Coordinator for filing in records.

The Permit-Required Confined Space Program will be reviewed in the event of an accident/injury, or near miss, if employee protection is deemed inadequate or at least annually using the cancelled entry permits as reference. Revisions will be made to the program as necessary to ensure the safety of our employees.

Note: Please see our company's Safety and Health Manual for the full Program.

Motor Vehicle Safety

The safety of employees at Lundy Construction Co., Inc. is of utmost importance. The selection of employees who will be required to drive full or part-time will be done with care. Drivers of Company vehicles can be considered qualified when they meet the following criteria:

- Possess a valid state driver's license of the proper class.
- A review of MVD record shows that they do not pose an unreasonable risk.

Driver Training

All employees driving Company owned vehicles for Lundy Construction Co., Inc. will be trained in safe operation of assigned vehicle.

- Defensive driving
- Split-second decision making
- Backing-up rules
- Safe distances
- Intersection driving
- Poor condition driving in dust storms, rain, etc.

Preventive Maintenance

Establishment of a preventive maintenance program for all COMPANY vehicles is essential. Record jackets will be maintained on all vehicles so that a log can be maintained on all planned maintenance, as well as repairs made from noted defects.

Vehicle Inspection

Each vehicle or piece of equipment will be inspected on a daily basis by the operator before and after operation. Each operator is responsible for the safe condition of the equipment. Any vehicle having steering, brake, or other safety problems is not to be operated until repairs have been made by a mechanic. Any other unsafe conditions are to be reported to the operator's supervisor as soon as possible.

Vehicle Operation

All COMPANY vehicles and equipment are to be operated in a safe manner and operators will adhere to all applicable laws. The operator is fully and totally responsible for the safe operation of the equipment. The operator will report any accidents, or damage, to the Vehicle Operations Supervisor.

Driver Safety Program

Introduction

The operation of vehicles is indispensable in conducting Company business. The way in which each vehicle is handled will directly affect the loss picture of the entire Company. Fleet losses are potentially one of the most costly losses that an operation can incur.

The types of exposure that involve the fleet program include: property damage, bodily injury, fatalities, liability suits and Workers' Compensation claims.

The insurance and other claims costs that result from vehicle accidents can be substantial and would adversely affect successful accomplishment of COMPANY objectives. To help prevent vehicle accidents and the type of loss exposures associated with them, the following guidelines have been established:

Policy Statement

The success and the safety of Company employees depends on the mutual cooperation of each employee who has been entrusted with the responsibility of driving a Company vehicle, or their own vehicle, while conducting Company business.

In order to reduce vehicle accidents and limit liability because of driver negligence, our Company has adopted a Driver Safety Program.

Procedure

The procedures set forth in the Driver Safety Program will be the guidelines for management adherence to this policy.

Responsibility

The supervisors at Lundy Construction Co., Inc. have the primary responsibility for management of the Driver Safety Program.

The Safety Coordinator will appoint a responsible representative to report all driver information requested by our insurance broker.

Monitoring

The Safety Coordinator is also responsible for the records of the Driver Safety Program. Duties will include, but are not limited to:

- Be responsible for monitoring the driving record of those persons who operate the Company vehicles or their own "personal" vehicle while on Company business.
- Monitor the Driver's Safety Program and report to management any suggestions for improvement or needed changes.
- Monitor the maintenance policy of fleet vehicles so that they are kept in safe condition
- Review each vehicle accident report or infraction with management.
- Monitor renewals of insurance records.

Drivers

Drivers of vehicles that are owned, rented or leased by The Company will be required to follow defensive driving techniques and practices. The basic defensive driving practice is to plan ahead and do everything that one can reasonably do to prevent an accident. This is to include the use of seat belts.

The following guidelines will be followed:

Drivers for our Company must possess a valid driver's license in order to operate any Company vehicle or their own personal vehicle on Company business. The duties of drivers will be reviewed. The requirement will be noted by the employee's supervisor or personnel staff at the time of hire.

The driver should be physically and mentally capable of driving the vehicle he/she is assigned to drive, whether the vehicle is a car, van, or truck.

Pre-operation of Vehicles

Prior to the assignment of any vehicle to any employee or prior to allowing an employee to drive "Their Own Personal Vehicle" on Company business, the following minimum standards will be implemented and records maintained to ensure that the driver is qualified to drive the vehicle and minimize the risk of liability to our Company.

Initial Assignment

Verification and recording of date any type of driver's license held and renewal date noted. A review of the driver's state Motor Vehicle Record for the most recent three-year period to include the following:

- Review of the accident report history showing the dates and types of accident regardless who was at fault.
- Review of the traffic violations for the last three years, with evaluation of acceptable driving records according to Company guidelines.
- Confirmation of personal insurance for those driving their personal vehicle while on Company business.
- Physical examinations when required by the state for the driving of specified vehicles or by funding and licensing contract.
- The driver with a major conviction will be immediately suspended from driving any Company vehicle or their personal vehicle on Company business.
- Driving a Company vehicle while under the influence of drugs or alcohol will subject the employee to disciplinary action up to and including dismissal.

Annual Review

Once each year, a request for current license information will be sent to each Company employee. Employees who drive a Company vehicle, or if they request mileage reimbursement for driving their personal vehicle on Company business, will have their personal driving record reviewed. It will be the responsibility of the employee to respond in a timely manner. Failure to respond to the request for information by personal vehicle drivers may result in the delay of mileage reimbursements.

A review of each driver's file and record will be made annually and will include all of the criteria above as appropriate for each employee. This will not preclude request of driver's records for review by The Safety Coordinator as deemed necessary.

Preventing Collision with a Vehicle Ahead

An extremely frequent and costly accident is the collision with the vehicle ahead. There are five steps that can be taken that will help you avoid being involved in a collision with the vehicle ahead:

Be Alert — Watch for signs from the driver or drivers ahead as to what they intend to do. Are their turn signals on? Are their brake lights lit?

Drive Ahead of the Situation — Look beyond the vehicle ahead to see situations that may force him to act quickly and thereby become a threat to you.

Stay Back — Allow plenty of following distance. Allow one car length (using your own vehicle as a measure) for every 10 miles of speed and allow even more distance in adverse weather or road conditions.

Stopping Ability — This is the distance necessary to bring your vehicle to a stop that depends on a number of factors. The first is "driver reaction time". This is the time it takes for the driver to see the need to stop, take his foot from the accelerator to the brake pedal and begin to apply the brake. "Driver reaction distance" is based on an average driver reaction time of ¾ of a second for a typical driver under normal driving conditions. The distance traveled during the reaction time of ¾ of a second will depend upon the speed of the vehicle.

The second ingredient involves "braking distance". This is the distance traveled from the time the brake is applied until the vehicle is brought to a stop. This distance will also vary based on the speed of the vehicle. The type and condition of the pavement surface will also affect the braking distance, the type and condition of tires, and the condition of the brakes.

Begin to Stop Sooner — Slow down and touch your brakes the instant you see a hazard developing. The situation may require you to stop. Failure to do this is known as "delayed braking" - a serious flaw in good defensive driving techniques. A defensive driver should not have to make a true "panic" stop more than once a year. Stopping ability can be expressed as a formula:

Remember, moving at 55 mph produces a travel distance of 81 feet for each second of delay.

How to Avoid Backing Accidents

Backing can be a "dangerous maneuver". Because of the hazards of backing, the defensive driver avoids backing whenever possible by planning an alternative maneuver or choosing another route.

The defensive driver does not back out of parking lots, driveways, or alleys when he can avoid it. Instead, he drives in and turns around so he comes out front first. When this is not possible, he backs in so that he can drive forwards to come out. He knows it is safer to back out of traffic into a quiet area than to back into a heavy traffic stream.

When backing is unavoidable, follow these rules:

- *"Size up the situation"* thoroughly and completely, even if you have to get out of your vehicle to do so. Then start backing promptly before the backing situation changes.
- Back slowly.
- ***Check both sides as you back***. Check your mirrors often during the backing movement.
- ***Do not depend entirely*** on your mirrors to judge distance to the rear. Mirrors help you to spot pedestrians who may unexpectedly move into the path of your backing vehicle, but mirrors can be deceiving in estimating or measuring distances and clearances.

Avoid a Collision with a Following Vehicle

There are measures you can take to avoid being hit from behind:

- ***Signal Your Intentions*** — Use your directional signals and your brake lights.
- ***Stop smoothly*** — if you follow the rule for avoiding a collision with a vehicle ahead, you will also reduce the chances for a collision of the vehicle following.
- ***Keep Clear of Tailgaters*** — Do not let a tailgater rile you. Just slow down. Increase the following distance between your vehicle and the vehicle ahead, so you do not have to brake suddenly if a tailgater hits you.

Avoid a Rear-End Collision When Stopped

- ***Keep a foot*** on the brake pedal to activate lights.
- ***Stay at least*** 6 feet away from any stopped car ahead to avoid the "domino", multi-collision chain reaction effect.
- ***Keep your lights*** on at dusk or in the rain or other poor visibility conditions.

The Technique of Passing

Any passing maneuver often entails risk. The following twelve points will help to reduce that risk:

1. Decide if the Pass maneuver is necessary.
2. Make certain there is a safe following distance between you and the vehicle ahead.
3. Check the traffic ahead if you are moving in the oncoming traffic lane. If your vehicle and the oncoming vehicle are both traveling at 55 miles per hour, you are closing the gap between you at the rate of 161 feet per second. Since it takes 10 seconds to complete the task, the oncoming car should be at least 1/3 mile away.
4. Check the traffic behind you before changing lanes. First check your mirrors and then your blind spot.
5. Signal with your left turn signal before you change lanes.
6. Move into the left lane.
7. Accelerate as you move alongside the vehicle you are passing.

8. Signal the vehicle you are passing by tapping your horn or flashing your lights if you deem this necessary - especially at night.

9. Signal your intention to return to the right lane by the use of directional signal.

10. Return to the right lane when you can see all of the passed vehicle(s) in the right rear-view mirror.

11. Do not forget to cancel your directional signal.

12. Resume your proper cruising speed as soon as you have completed your passing maneuver.

Driving Emergencies

Your Brakes Fail — If there is any resistance, pump the pedal. You may be able to work up enough pressure to help somewhat.

Most vehicles are equipped with a dual brake system. If one system fails, the back-up system should work. If pumping the brake pedal does not help, coast in "drive" gear and use the parking or hand brake.

If you want to slow faster, shift to lower gears which will permit engine compression to help you slow your vehicle. Use your horn or lights to warn other drivers and pedestrians that you are in trouble and out of control.

You Go Into a Skid — If the rear of the vehicle starts to slide, take your foot off the gas at once. Your first instinct may be to turn hard away from the direction of skid. Do not! That will really spin you.

Turn your wheels in the same direction of the skid - but be careful, do not over-steer. You will be able to feel when the vehicle regains rolling action, and then straighten the wheel.

"Never hit the brakes as a side skid correction". For fast stopping with the least chance of causing a side skid, pump your brakes hard with a rapid jabbing and releasing pressure on the brake pedal. Disc brakes require slower pumping.

You Have a Blow-Out — Keep a firm and steady grip on the steering wheel and do not over-steer to correct swerve or pull.

If a front tire fails, there will be a strong pull to the side of the blow-out. A rear blow-out tends to cause weaving of the rear end. Do not slam on the brakes. Brake smoothly - but easily.

Day or night, set out flares or other warning devices such as reflectors and turn on your light flashers.

You Must Stop on the Freeway — On a freeway with paved shoulders, signal and pull off the road at near traffic speed, then slow down. Do not obscure your taillights by standing or working behind your vehicle. Day or night, place a flare or reflector warning device about 15 feet behind the vehicle and another at about 300 feet further back.

Seat Belts

Seat belts have been provided for your safety. They should be worn and properly adjusted at all times when your vehicle is in motion.

Accident Reporting

When reporting a vehicle accident involving other vehicles and persons, be certain that you have all pertinent information regarding other vehicles or equipment, any persons involved, and specific circumstances of the mishap.

Become familiar with the COMPANY reporting form and procedures. Know where to obtain copies of the form and keep them in your assigned vehicle at all times.

Accident Scene:

- Secure the scene to prevent other accidents from occurring.
- Place warning cones, flashers, reflectors or flares to protect the scene.
- Report injuries to emergency response services.

Note: Please see our company's Safety and Health Manual for the full Program.

Chapter 22

Hot Work Safety Policy

§1910.252 – General Requirements

§1910.253 – Oxygen Fuel-Gas Welding and Cutting

§1910.254 – Arc Welding and Cutting

Policy Statement

Lundy Construction Co., Inc. has instituted this program to make certain that employees are properly trained, aware of hazards associated with hot work, and correctly informed of procedures, policies, and practices to prevent or, if possible, eliminate these hazards. The Safety Coordinator is the supervisor responsible for assuring the following engineering controls, work practices, and safety procedures are enforced:

- The Safety Coordinator will ensure that any employee involved in the performance of hot work operations is properly trained in the use of any equipment required, proper PPE, and safety procedures which must be followed.
- Where possible, all hot work operations will be performed outside of buildings or structures clear of any foreseeable fire hazards.
- Where hot work must be performed indoors or in the vicinity of fire hazards the area will be cleared, if possible, of any and all material and equipment which may present a hazard of fire or explosion from flame, sparks, arcs, or slag.
- Where fire hazards exist in the area of hot work operations which cannot be removed, they will be guarded to prevent fire, and the hot work operation will be shielded to confine the heat and prevent hot materials from falling to a lower level. A fire watch will be established to monitor operations until at least one hour after hot work is complete, and prevent or extinguish fire resulting from these operations.
- The employee(s) assigned to fire watch will: be trained in the proper use of fire extinguishers and fire prevention measures, ensure that firefighting equipment is readily available, and be responsible for the sounding of fire alarms in the event of a fire which is not readily extinguishable.
- The Safety Coordinator will be responsible for inspecting work areas prior to any hot work being performed, designate precautions to be followed prior to work commencing, and assign a fire watch where advisable or required when any of the following conditions exist:
  - Appreciable combustible material, in building construction or contents, closer than 35 feet to the point of operation.

- Appreciable combustibles are more than 35 feet away but are easily ignited by sparks. Wall or floor openings within a 35-foot radius expose combustible material in adjacent areas including concealed spaces in walls or floors.
- Combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

- If the above conditions cannot be fully met, no hot work will be performed by Lundy Construction Co., Inc. personnel.
- Any hot work to be performed in confined spaces will conform to the following requirements:
  - Adequate ventilation is a prerequisite to work in confined spaces.
  - When welding or cutting is being performed in any confined spaces the gas cylinders and welding machines will be left on the outside. Before operations are started, heavy portable equipment mounted on wheels will be securely blocked to prevent accidental movement.
  - Where a welder must enter a confined space through a manhole or other small opening, means will be provided for quickly removing him in case of emergency. When safety belts and lifelines are used for this purpose they will be so attached to the welder's body that his body cannot be jammed in a small exit opening. An attendant with a preplanned rescue procedure will be stationed outside to observe the welder at all times and be capable of putting rescue operations into effect.
  - When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes will be removed from the holders and the holders stored so that accidental contact cannot occur and the machine disconnected from the power source.
  - In order to eliminate the possibility of gas escaping through leaks of improperly closed valves when gas welding or cutting, the torch valves will be closed and the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area, whenever the torch is not to be used for a substantial period of time, such as during lunch hour or overnight. Where practicable, the torch and hose will also be removed from the confined space.
- After welding or cutting operations are completed, the welder will mark the hot metal or provide some other means of warning other workers.
- Any welding or brazing materials used in hot work which might possibly generate hazardous fumes will be suitably labeled to indicated the hazard, and suitable measures of ventilation or respiratory protection provided to ensure that no employee is exposed to higher than permissible levels of hazardous fumes.

- All arc welding operations in occupied areas will be screened to prevent other personnel from being exposed to flash hazards.
- First aid kits and equipment are readily available at all times for employee use. First aid kits are kept in all company vehicles and are regularly inspected by The Safety Coordinator to ensure that contents are kept fully stocked and that the appropriate items are available.
- Personnel in charge of fuel gas and oxygen supplies will be fully trained in handling, use, and storage of compressed gas cylinders and related equipment. The manufacturer's recommendations covering the operation and maintenance of oxygen or fuel-gas supply equipment including generators, and oxygen or fuel-gas distribution piping systems will be followed and readily available to employees.
- Fuel gas and oxygen cylinders must be stored and used in an upright position, secured to prevent tipping, and located to prevent accidental collision with the cylinders. Cylinders must be kept away from any heat or combustion sources, and at least 20 feet from any flammable gases or petroleum products. When not in use cylinders must have their valves closed, any regulators or attachments removed, and their valve covers in place.
- Personnel who operate or maintain arc welding equipment will be properly trained in safety procedures and OSHA requirements for arc welding and equipment handling to include the following areas:

- Machine hook up.
- Grounding.
- Electric shock.
- Switches.
- Manufacturers' instructions.
- Electrode holders.

- The operator should report any equipment defect or safety hazard to his supervisor and the use of the equipment will be discontinued until its safety has been assured. Repairs will be made only by qualified personnel.
- Machines which have become wet will be thoroughly dried and tested before being used.
- Cables with damaged insulation or exposed bare conductors will be replaced. Joining lengths of work and electrode cables will be done by the use of connecting means specifically intended for the purpose. The connecting means will have insulation adequate for the service conditions.

Lundy Construction Co., Inc. will enforce the above policies and procedures and in addition, all OSHA requirements and regulations will be adhered to.

Hot Work Procedures

Elimination of injuries and illnesses improves employee morale, improves customer service, improves product quality, and reduces Workers' Compensation costs. This policy serves as a tool to increase employee protection, and to reduce jobsite hazards.

Any Company employee who disobeys and/or disregards the guidelines set forth in this program or the Company's safety program will be subject to disciplinary action.

Welding and hot work include any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions.

"Special Hazard Occupancies" include any area containing flammable liquids, dust accumulation, gases, plastics, rubber, and paper products.

Employees are required to comply with the guidelines set forth, and to comply with the instruction of The Safety Coordinator. In the event an unsafe condition arises, employees should alert the lead person on the jobsite immediately. Employees should also alert co-workers of any unsafe conditions that arise.

- Where practicable all combustibles will be relocated at least 35 feet from the work site.
- Where relocation is impractical, combustibles must be protected with flameproof covers, shielded with metal, guards, curtains, or wet down to help prevent ignition of material.
- Ducts, conveyor systems, and augers that might carry sparks to distant combustibles must be protected or shut down.
- Where cutting or welding is done near walls, partitions, ceilings, or a roof of combustible construction, fire-resistant shields, or guards will be provided to prevent ignition.
- If welding is to be done on a metal wall, partition, ceiling, or roof, precautions must be taken to prevent ignition of combustibles on the other side, due to conduction or radiation of heat.
- Where combustibles cannot be relocated on the opposite side of the work, a fire watch person will be provided on the opposite side of the work.
- Welding will not be attempted on a metal partition, wall, ceiling or roof having a covering nor on walls having combustible sandwich panel construction.
- Cutting or welding on pipes or other metal in contact with combustible walls, partitions, ceilings, or roofs will not be undertaken if the work is close enough to cause ignition by combustion.
- In areas where there is dust accumulation of greater than $^{1}/_{16}$ inch within 35 feet of the area where welding/hot works will be conducted, all dust accumulation will be cleaned up following the housekeeping program of the facility before welding/hot work is permitted.
- Suitable fire extinguishers must be provided and maintained ready for immediate use.
- A fire watch person will be provided during and for two hours past the completion of the welding project.
- A welding/cutting permit will be issued on all welding or cutting outside of designated welding areas.

Cutting or welding will not be permitted in the following situations:

- In areas not authorized by management.
- In sprinklered buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres.

- In areas near the storage of large quantities of exposed, readily ignitable materials.

Welding & Hot Work Fire Prevention Measures

A designated welding area should be established to meet the following requirements:

- Floors swept and clean of combustibles within 35 feet of work area.
- Flammable & combustible liquids & material will be kept 35 feet from work area.
- Adequate ventilation providing 20 air changes per hour, such as a suction hood system should be provided to the work area.
- At least one 10-lb. dry chemical fire extinguisher should be within access of the 35 feet of work area.
- Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free area.

Requirements for Welding Outside Designated Areas

- Portable welding curtains or shields must be used to protect other workers in the welding area.
- A "Hot Work Permit" must be completed and complied with prior to welding operation.
- Respiratory protection is mandatory unless an adequate monitored airflow away from the welder and others present can be established and maintained.
- Plastic materials must be covered with welding tarps during welding procedures.
- Fire Watch must be provided for all hot work operations.

Safe Welding and Cutting Procedures

Electric Welding

- Perform Safety Check on all equipment.
- Ensure fire extinguisher is charged and available.
- Ensure electrical cord, electrode holder and cables are free from defects (no cable splices are allowed within 10 feet of the electrode holder).
- Ensure PPE (welding hood, gloves, rubber boots/soled shoes, and aprons) are available and have no defects.
- Ensure the welding unit is properly grounded.
- All defective equipment must be repaired or replaced before use.
- Remove flammables and combustibles.
- No welding is permitted on or near containers of flammable material, combustible material or unprotected flammable structures.
- Place welding screen or suitable barricade around work area to provide a fire safety zone and prevent injuries to passersby (do not block emergency exits or restrict ventilation).
- Ensure adequate ventilation and lighting.
- Execute Hot Work Permit procedures.

- Set Voltage Regulator no higher than the following for:
  - Manual Alternating Current Welders - 80 volts
  - Automatic Alternating Current Welders - 100 volts
  - Manual or automatic Direct Current Welders -100 volts
- Uncoil and spread out welding cable
- To avoid overheating, ensure proper contact of work leads and connections, remove any metal fragments from magnetic work clamps. (To avoid electric shock do not wrap welding cables around a body part and avoid welding in wet conditions.)
- Fire watch for one hour after welding & until all welds have cooled.
- Perform final fire watch and terminate permit.

Manual Electrode Holders

- Only manual electrode holders which are specifically designed for arc welding and cutting, and are of a capacity capable of safely handling the maximum rated current required by the electrodes, will be used.
- Any current-carrying parts passing through the portion of the holder which the arc welder or cutter grips in his hand, and the outer surfaces of the jaws of the holder, will be fully insulated against the maximum voltage encountered to ground.

Welding Cables and Connectors

- All arc welding and cutting cables will be of the completely insulated, flexible type, capable of handling the maximum current requirements of the work in progress, taking into account the duty cycle under which the arc welder or cutter is working.
- Only cable free from repair or splices for a minimum distance of 10 feet from the cable end to which the electrode holder is connected will be used, except that cables with standard insulated connectors or with splices whose insulating quality is equal to that of the cable are permitted.
- When it becomes necessary to connect or splice lengths of cable one to another, substantial insulated connectors of a capacity at least equivalent to that of the cable will be used. If connections are effected by means of cable lugs, they will be securely fastened together to give good electrical contact and the exposed metal parts of the lugs will be completely insulated.
- Cables in need of repair will not be used. When a cable becomes worn to the extent of exposing bare conductors, the portion thus exposed will be protected by means of rubber and friction tape or other equivalent insulation.

Ground Returns and Machine Grounding

- A ground return cable will have a safe current carrying capacity equal to or exceeding the specified maximum output capacity of the arc welding or cutting unit which it services. When a single ground return cable services more than one unit, its safe current-carrying capacity will equal or exceed the total specified maximum output capacities of all the units which it services.

- Pipelines containing gases or flammable liquids, or conduits containing electrical circuits, will not be used as a ground return. For welding on natural gas pipelines, the technical portions of regulations issued by the Department of Transportation, Office of Pipeline Safety, 49 CFR Part 192, Minimum Federal Safety Standards for Gas Pipelines, will apply.
- When a structure or pipeline is employed as a ground return circuit, it will be determined that the required electrical contact exists at all joints. The generation of an arc, sparks, or heat at any point will cause rejection of the structures as a ground circuit.
- When a structure or pipeline is continuously employed as a ground return circuit, all joints will be bonded, and periodic inspections will be conducted to ensure that no condition of electrolysis or fire hazard exists by virtue of such use.
- The frames of all arc welding and cutting machines will be grounded either through a third wire in the cable containing the circuit conductor or through a separate wire which is grounded at the source of the current. Grounding circuits, other than by means of the structure, will be checked to ensure that the circuit between the ground and the grounded power conductor has resistance low enough to permit sufficient current to flow to cause the fuse or circuit breaker to interrupt the current.
- All ground connections will be inspected to ensure that they are mechanically strong and electrically adequate for the required current.

Operating Instructions

Employees will be instructed in the safe means of arc welding and cutting as follows:

- When electrode holders are to be left unattended, the electrodes will be removed and the holders will be so placed or protected that they cannot make electrical contact with employees or conducting objects.
- Hot electrode holders will not be dipped in water; to do so may expose the arc welder or cutter to electric shock.
- When the arc welder or cutter has occasion to leave his work or to stop work for any appreciable length of time, or when the arc welding or cutting machine is to be moved, the power supply switch to the equipment will be opened.
- Any faulty or defective equipment will be reported to the supervisor.

Note: Please see our company's Safety and Health Manual for the full Program.

Employee Signoff

Lundy Construction Co., Inc.

This is to certify that I have received a handbook of the Company Safety and Health Manual.

I have read these instructions, understand them, and will comply with them while working for the Company.

I understand that failure to abide by these rules may result in disciplinary action and possible termination of my employment with *Lundy Construction Co., Inc.*

I also understand that I am to report any injury to my foreman or superintendent immediately and report all safety hazards.

I further understand that I have the following "Safety Rights":

- I am not required to work in any area I feel is not safe.
- I am entitled to information on any hazardous material or chemical I am exposed to while working.
- I will not be discriminated against for reporting safety concerns.

Employee Name Signature Date

Employee Name Signature Date

cc: Employee File