ELEVATORS OF BEAUMONT

Industrial ● Commercial

Safety Manual

Health Safety and Environmental
HSE

2022

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ELEVATORS OF BEAUMONT
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I. Scope and Purpose

ELEVATORS OF BEAUMONT

HSE-POLICY STATEMENT

The management and employees of Elevators Of Beaumont, have made safety our number one priority. Everyone's goal is to work accident free.

As a leader within our industry, we feel our supervision and employees are our most important assets. With this in mind, we will empower our supervision and employees to be a catalyst of our safety beliefs and values. They are our first line of defense and no job is so important that recognized hazards should remain uncorrected.

Management will be provided with necessary funds, surveillance, and actively support a comprehensive employee safety and health program. Elevators Of Beaumont. has reached the highest level of safety performance, and we are proud of our achievements in providing state of the industry solutions and techniques in incident prevention.

Our goal is not only to maintain this status, but also continuously improve in every way we do business. This continuous performance will enable us to provide the best possible service on every job site we work on, whereby enabling Elevators Of Beaumont to continue to be "The Safest Place To Work".

ACCIDENTS DON'T JUST HAPPEN
THEY ARE CAUSED AND THEY CAN BE PREVENTED!

Brett Stark
President

02/08/2022
Date

ELEVATORS OF BEAUMONT

SAFETY PHILOSOPHY

- Ø All injuries and occupational illnesses can be prevented.
- Ø Safety is a line-management responsibility.
- Ø All construction and operating exposures can be reasonably safeguarded.
- Ø Line management has a responsibility to train all employees to work safely.
- Ø Preventing injuries and accidents is good business.
- Ø Each employee has the responsibility to work safely.
- Ø Working safely is a condition of employment.

ELEVATORS OF BEAUMONT

MISSION STATEMENT

To continuously improve our methods and results in the areas of environmental health, safety, and quality management not only for our employees and clients but for the wellbeing of our local community as well.

II. Duties and Responsibilities

1501A - MANAGER AND SUPERVISOR RESPONSIBILITIES

Manager and Supervisor Responsibilities

Managers and supervisors are responsible for actively supporting safety and loss prevention performance in their areas.

Purpose

Employee on-the-job safety is the primary responsibility of every manager and supervisor. Employee safety cannot succeed without the sincere ongoing effort of every manager and supervisor.

1. Holding employees accountable through performance reviews, qualifications, counseling or disciplinary action.
2. Communicating safety rules and standards to visitors, employees and contractor employees.
3. Setting safe examples.
4. **Strictly** enforcing safety rules and standards.
5. Reporting and investigating incidents, injuries, and serious potential incidents.
6. Conducting routine safety inspections.
7. Promptly correcting unsafe conditions.
8. Awarding contracts using past safety performance as a criterion.
9. Evaluating and documenting contractor safety, health and environmental performance.
10. Holding and documenting regular safety meetings.

Management is responsible for providing the tools to Elevators Of Beaumont. personnel necessary for a safe working environment. These tools include required safety and operation training, proper equipment, safety and engineering support, and safe facility designs.

Managers and supervisors will create an atmosphere in which safety issues can be proactively discussed and resolved.

1501B – EMPLOYEE RESPONSIBILITIES

Employee Responsibilities

Employees must recognize their role in safety. That role should involve a responsible attitude for personal safety and the welfare of coworkers and contractors. It is critical to the success of our safety program that employees have as their goal the concept that injuries can be prevented.

Employees should:

1. Immediately report every injury, regardless of severity, to a supervisor.

2. Report unsafe conditions and practices to a supervisor and, where possible, correct them.

3. Participate in safety meetings and training.

4. Assist in reporting and investigating incidents, injuries, and serious potential incidents.

5. Review and comply with the contents of this and other pertinent safety manuals, handbooks, and publications.

6. Comply with all regulatory requirements in relation to the job being performed.

1501C - CONTRACTOR RESPONSIBILITIES

Subcontractors shall take necessary precautions for the safety of personnel on the worksite. Subcontractors shall comply with all Elevators Of Beaumont, safety rules and standards and applicable federal, state and local safety laws, rules and regulations necessary to prevent injury to persons or damage to property. Subcontractors must submit safety performance qualifications including TRIR, EMR, DART and Fatality Rate for evaluation and review before being considered for work with Elevators Of Beaumont.

Subcontractors should:

1. Ensure their employees are trained in, and comply with, Elevators Of Beaumont, safety rules and practices, job-specific procedures and applicable regulatory laws.
2. Provide and maintain necessary safety equipment for their employees.
3. Report injuries, incidents and unsafe acts or conditions, no matter how slight (including property damage), *immediately* to the Elevators Of Beaumont, representative.
4. Provide a representative onsite who can communicate with all contract personnel and the Elevators Of Beaumont, representative.
5. Hold pre-job safety meetings as needed during the execution of the job.
6. Perform all work in a safe workmanlike manner.
7. Not operate Elevators Of Beaumont, valves or equipment without the Elevators Of Beaumont, representative's approval, except in a life-threatening emergency situation.
8. Show proof of qualifications and certification as required for the job, such as crane operation certification, welding qualification or *Production Safety Systems* (PSST) certification.

Subcontractors will be included in all of the following safety events:

1. Safety – Health – Environmental Orientations.
2. Job safety analysis and hazard assessments.
3. Job kickoff or pre-job meetings
4. Safety – Health – Environmental meetings.
5. Inspections
6. Audits
7. Incident reporting and investigations.
8. Safety performance meetings.
9. Participate in post-job safety performance reviews.

1501D – HEALTH SAFETY & ENVIRONMENTAL (HSE) RESPONSIBILITIES

The Health, Safety and Environmental (HSE) Department is responsible for:

1. Assisting the line managers in identifying potential safety and health hazards in both project design and operations, as well as develop appropriate control strategies to address these potential safety and health hazards.

2. Train and assist inspection and audit teams.

3. Participate in safety and health inspections and audits.

4. Provide technical assistance to supervisors and managers in incident investigations.

5. Maintain the company's accident statistics and incidence rates and regularly communicate safety performance to all levels of the organization.

6. Develop and maintain safety and health training programs.

7. Develop and monitor programs that ensure compliance of applicable safety and health regulations.

III. Administration

1502 – MEDICAL RECORD KEEPING

Purpose
The purpose of this section is to implement policies for maintaining accurate medical records as required by governmental regulations.

Medical Record Keeping
As required by governmental regulations, Elevators Of Beaumont will obtain a completed physician's written opinion that will include the following:

1. Any medical conditions detected that place employee at risk for the job hired to perform.
2. Physician's recommended limitations, if any.
3. Examination and test results.

A statement showing a physician has informed the employee of the medical examination results and of any existing conditions that require further examination or treatment.

As your employer, Elevators Of Beaumont, will maintain accurate medical records including:

1. Employee name.
2. Employee social security number.
3. Physician's written opinions, recommendations and results of tests and examinations.
4. All employee medical complaints.
5. Copies of all information furnished to physician.
6. Records of work related fatalities, injuries, and illnesses including Environmental and Biological monitoring results and relevant data but not including results which assess the biological effect of a substance or agent or which assess an employee's use of alcohol or drugs.

Medical records will be kept in each respective employee's medical file.

Medical records will be maintained as required for a period of 30 years beyond duration of employment for all employees. Employee exposure records will be retained for 30 years.

Access to Medical Records
Medical records (copies) are made available to employees or their authorized representative upon written request. Access to records will be provided in a reasonable time, place and manner. If access to records cannot reasonably be provided within fifteen (15) working days, Elevators Of Beaumont, will notify the requesting party within the fifteen (15) working days of the reason for the delay and the date when the record can be made available. Copies of Medical records will be released to employees or their authorized representative at no cost.

Medical records, all or in part, may be released to our company's insurance carrier, legal counsel, employee relations representative or other authorized representatives in connection with disability, workers compensation claims or similar claims, active or pending, against the company.

Confidentiality is waived in such instances. However, the company president or designee shall take care to see that only information relevant to the claim is disclosed.

In the event of a medical emergency involving the employee where information in the employee medical record is deemed important to the immediate care of the individual, information contained in the record may be released upon request of the attending physician or responsible family member.

To preserve the confidentiality of employee medical records, such records will be released only upon written request or authorization of the employee, or as required by law through an order of a court of competent jurisdiction. However, before any medical record is released to a government agency without prior written employee consent, the approval of the corporate president and company legal counsel must be obtained in order to determine whether such agency request falls within the regulatory authority of the agency.

The company may release company-initiated, composite statistical data regarding occupational health matters. In all such instances, the information will not be in individually identifiable form. Employee consent is not required in such instances.

Employees are informed when first entering into employment, and at least annually thereafter, information will be given to current employees of the existence, location, availability and the person responsible for maintaining and providing access to records and each employee's rights of access to these records.

In the event Elevators Of Beaumont, should cease to do business, all records subject to this section shall be transferred to the successor employer. If Elevators Of Beaumont, should cease to do business and there is no successor employer to receive and maintain the records, Elevators Of Beaumont, shall notify affected current employees of their rights of access to records at least three (3) months prior to the cessation of business.

OSHA Records

Each recordable injury or illness must be entered on an OSHA 300 Log and 301 Incident Report, or other equivalent form, within seven (7) calendar days of receiving information that a recordable injury or illness has occurred.

A company executive must certify that he or she has examined the OSHA 300 Log and that he or she reasonably believes, based on his or her knowledge of the process by which the information was recorded, that the annual summary is correct and complete.

The annual summary must be posted no later than February 1st of the year following the year covered by the records and the posting kept in place until April 30th.

The OSHA 300 Log, the privacy case list (if one exists), the annual summary, and the OSHA 301 Incident Report forms must be retained for five (5) years following the end of the calendar year that these records cover.

1503 – INJURY AND ILLNESS PREVENTION PROGRAM

Purpose

The purpose of the *Injury and Illness Prevention Program* is to establish a proactive approach to the elimination of workplace hazards through the policies and procedures contained in this manual, worker participation and training, and through the promotion of constant vigilance by all employees.

Responsibility

It shall be the responsibility of management of each region, division, or subsidiary to implement and monitor this program. Corporate management shall have oversight and auditing authority for the program.

Procedure

The *Injury and Illness Prevention Program* shall be based on the following:

A. Employee training is the most important and most fundamental requirement of this program. As related to the tasks involved and potential for exposure, employees shall be trained in accordance with the Elevators Of Beaumont, core training curriculum. The training may be conducted by competent Elevators Of Beaumont, personnel or others. Employees shall not be assigned job responsibilities until the training associated with job hazards has been completed, and documentation shall be maintained in each region, subsidiary, or division verifying employee participation and comprehension. Frequency of training shall be in accordance with OSHA requirements.

B. *Hazard Identification and Management*: The group manager shall be responsible for administration of this program. The program shall include the identification, analysis, and management of the following elements:

    1. Physical hazards are those that can be attributed to the workplace itself and include the worksite or building, machinery, materials, processes, electrical hazards, housekeeping, noise, heat, etc.

       Safety inspections shall be conducted by designated personnel. Any discrepancies found by the inspection shall be corrected, and the discrepancy and subsequent corrective actions shall be reviewed by local management.

Because of the wide variety of work accomplished by Elevators Of Beaumont, our field employees are subjected to ever changing physical hazards. It shall be the responsibility of the crew supervisor to survey the worksite prior to the start of operations and weekly thereafter. Should the field foreman encounter a situation or hazard that is not familiar or seems irregular, he shall contact area management and his safety supervisor for advice before proceeding. The foreman shall coordinate efforts with the customer's safety representative and others to reduce hazards. The findings from the survey and any site-specific precautions shall be forwarded to the regional office at the end of the job and reviewed by the safety supervisor. Safety inspections shall be permanently maintained in the job file.

2. Chemical hazards are those hazards posed by chemicals inherent or resident in the work place and those chemicals introduced into the work place by Elevators Of Beaumont, or others. It shall be the responsibility of management of each region, division, or subsidiary to implement and monitor the effectiveness of the program as set forth in 1522 -*The Hazard Communication Program*.

3. Work practices are those tasks, movements, and operations required to accomplish a job. Each segment of the operation may offer real or potential hazards and as such should be scrutinized by personnel trained in hazard recognition. Areas to be addressed include but are not limited to:

    a. The materials involved.
    b. The flow of materials and how they are moved and handled.
    c. Equipment and machinery involved.
    d. Dies, jigs and fixtures used.
    e. Machine guarding.
    f. Process produced hazards (dust, vapors, light, heat, etc.).
    g. Personal protective equipment.
    h. Worker ergonomics.
    i. Lighting, ventilation, and noise considerations.
    j. Employee training and experience.

    Findings generated by hazard assessments shall be reviewed by local and corporate management and methods shall be developed to minimize or eliminate the hazard.

4. Regardless of severity, all job-related accidents, injuries, and all occupational illnesses shall be reported and investigated. It shall be the responsibility of the management of each region, division, or subsidiary to provide the resources necessary to satisfy this requirement.

    All supervisors and foremen shall receive training in accordance with this procedure and in accordance with 1555 - *Accident, Injury and Illness Reporting* and 1502 - *Record Keeping*, and any procedures subsequent to that policy.

All accident, injury, and illness reports and all investigations of those incidents shall be reviewed, and prevention measures outlined, by management's respective to the area where the incident occurred. *Accident, Injury, and Illness Reports* and subsequent *Investigation Reports* shall be forwarded to Corporate Safety Manager and the Corporate President.

C. Hazard notification will include all employee communication of real and potential workplace hazards. Specifically, training shall be administered to all employees in accordance with procedures. Additionally, chemical-specific training shall be administered whenever a task requires an employee to come into direct contact with a hazardous chemical or has the potential to be exposed to a hazardous chemical.

   Hazard notification shall also include all training sessions, notifications, employee suggestions, safety meetings, tailgate meetings, etc., where real or potential workplace hazards are discussed. It shall be the responsibility of the safety supervisor, individual field foremen and supervisors to ensure that hazard assessments are conducted and that the results of those assessment and subsequent corrective actions are communicated to all affected employees.

D. It shall be the responsibility of the safety manager to ensure that all records required by this procedure are developed and maintained for a period of not less than three years. These records include but are not limited to:

   1. Hazard assessments.
   2. Safety inspections.
   3. Training documentation (curriculum, materials, tests, rosters, etc.).
   4. Safety meeting records (roster of attendees, subjects discussed, etc.).
   5. Accident / illness / injury reports and investigations.

   Moreover, local management shall implement an employee's safety suggestion program. The program shall allow the free expression of ideas and concerns, and shall include a method for anonymous input. All suggestions shall be reviewed by the management team at its regularly scheduled meetings.

   All records of management team meetings and records detailing actions taken by the management team are subject to the requirements of this procedure.

1504 – ACCIDENT AND INCIDENT INVESTIGATION

Purpose

It is the goal of Elevators Of Beaumont, to provide an accident-free workplace for all employees. *A cornerstone of that goal is the belief that all accidents are preventable*. Though great time and effort is spent identifying hazards and reducing the possibility of an accident happening, there is still a possibility that an accident may occur. Whenever there is an accident, it is our obligation to investigate that accident and to install measures to prevent a reoccurrence. This procedure establishes methods to be used in the investigation, reporting and record keeping of accidents to include fatalities, OSHA recordable, first aid cases, vehicle accident, property damage, spills, fires, and significant near misses.

Responsibility

It shall be the responsibility of the management of each region, division or subsidiary to ensure this procedure is implemented and revised locally as necessary to ensure effectiveness in the determination of the root cause of accidents. Management shall provide the necessary tools, equipment and training for supervisors and foremen to allow the successful implementation of this procedure. Equipment may include some or all of the following items; writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, marking devices such as flags, equipment manuals, etc.

The principal responsibility for conducting accident or exposure investigations has been assigned to the jobsite superintendent. The superintendent foreman will conduct an investigation into the events and circumstances leading up to and surrounding each and every accident, exposure, and near-miss accident that occurs in the company workplace.

Procedure

The Goal of the Investigation

The accident investigation must answer these questions.

1. *Who* was involved?
2. *What* events led to the accident?
3. *When* did the accident occur?
4. *Where* did the accident occur?
5. *Why* did the accident occur?
6. *How* did the accident happen?
7. *What can we do to prevent reoccurrence*?

The reason for answering these seven questions is to determine the root cause of the incident. Without accurate causal determination, proper corrective actions cannot be taken.

Typical root causes can be, but are not limited to, the following:

1. *Communication Problems*: procedures, policy, training, work practices, maintenance, proper equipment operation, scheduling, etc.
2. *Preparation Problems*: inadequate employee training, non-routine tasks, lack of or improper tools and equipment, lack of hazard identification and assessment, etc.

3. *Environmental Problems*: weather considerations, slippery work surfaces and other slip, trip, and fall hazards, elevated work surfaces, personal protective equipment, etc.
4. *Improper Work Practices*: body positioning, improper or misuse of personal protective equipment, work load, using shortcuts, improper use of tools or equipment, tool condition, etc.

INVESTIGATION METHOD

A. Before the Accident

In order to minimize the effects of any accident and to preserve crucial evidence, it is necessary that all employees are aware of the following:

1. How accidents are reported and by whom.
2. To whom are accidents reported.
3. Methods used to alert other employees that an accident has occurred and areas to be avoided.
4. Who contacts emergency personnel?
5. Emergency methods to shut down the operation.
6. The capability of emergency services and how to contact them.

B. When an Accident Occurs

1. *Take Charge of the Situation*.
   a. Assess the situation.
   b. Provide direction.
   c. Preserve evidence.

2. *Take Care of the Injured*.
   a. Notify emergency services as required.
   b. Assist the injured.
   c. Provide first aid when necessary.
   d. Reduce or eliminate the possibility of further injury.

3. *Neutralize the Area*.
   Clear non-essential personnel.
   a. Prevent related accidents.
   b. Turn off or neutralize power equipment.
   c. In case of chemical spills, evacuate as necessary.
   d. Preserve evidence.
   e. Ensure nobody alters the scene.
   f. If possible, record names of witnesses and any remarkable information.
   g. Look for obvious clues.
   h. **WRITE IT DOWN; DO NOT DEPEND ON YOUR MEMORY**.

4. *Make Proper Notifications*.
   a. Incidents must be verbally reported to applicable regulatory agency(s) within 8 hours of their discovery.
   b. Incidents must also be reported to the host facility/client as soon as possible or in a timely manner (within 24 hours of incident).

c. Written incident reports will be prepared and submitted to host facility/client detailing the incident, investigation procedures, investigation findings (root cause), recommended corrective action and name and contact information of company representative performing investigation.

C. Collect Evidence

1. *People Evidence*: Interview witnesses (REMEMBER, the victim is a witness) and determine:

   a. What they knew concerning the situation leading up to the accident.
   b. What they saw when the accident occurred.
   c. What they saw and what they did after the accident.

2. *Position Evidence*: Determine the locations of:

   a. The victim and other personnel.
   b. Structures, equipment and tools.

3. *Parts Evidence*: Determine any contributing factors:

   a. Condition of equipment (i.e., failed parts).
   b. Parts of product or structure involved.

4. *Paper Evidence*: Collect data pertaining to:

   a. Employee training (both safety and operational).
   b. Equipment maintenance and inspection records.
   c. Work instructions and procedures.
   d. Hazard assessments.
   e. Disciplinary actions for earlier unsafe acts.

D. Root Cause Determination

With evidence in hand, determine:

1. The immediate cause (not necessarily the root cause) of the accident.
2. Elements contributing to the accident.
3. Root cause of the accident. *Remember*, if the root cause had been properly addressed before the accident, the accident would not have occurred.
4. A corrective actions shall be identified and a corrective plan is to be implemented resulting from incident investigation. All accident investigation records will be documented and results including corrective actions plan shall be communicated to all employees to prevent a reoccurrence.

TAKE CORRECTIVE ACTIONS NECESSARY TO PREVENT A REOCCURANCE

Reporting and Record Keeping Refer to *1556 - Accident Investigation and Reporting Guidelines and Procedures.*

1505 – DISCIPLINARY PROGRESSION PROCEDURES FOR SAFETY VIOLATIONS

Purpose

ELEVATORS OF BEAUMONT CONSIDER VIOLATIONS OF SAFETY POLICY AND PROCEDURES AS SERIOUS. A GREAT DEAL OF TIME AND MONEY IS SPENT TRAINING EMPLOYEES ON THE SAFE AND PROPER WAY OF PERFORMING THEIR JOBS. WHEN THESE PROCEDURES ARE VIOLATED, PROGRESSIVE DOCUMENTATION OF DISCIPLINARY ACTIONS RESULTING FROM THESE VIOLATIONS SHALL BE COMPLETED.

Responsibility

The supervisor of the employee being warned shall complete the *Disciplinary Action Notice* form and submit it for review, comment and approval by the manager, then sent to the safety manager for tracking purpose. When this has been accomplished, a copy shall be placed in the employee's personnel file. The following shall be used as guidelines when completing this form. Under certain situations, however, serious violations may require different or more severe actions, even for first violations (i.e., drinking and/or drugs on the job).

ADDITIONALLY, COMPANY OFFICIALS, PROJECT MANAGERS, CONSTRUCTION MANAGERS, AND SAFETY SUPERVISORS ARE RESPONSIBLE FOR PERIODIC FIELD INSPECTIONS WHERE APPLICABLE. ALL VIOLATIONS INDICATING LACK OF COMMITMENT TO COMPANY SAFETY GOALS WILL BE SUBJECT TO DISCIPLINARY ACTION.

Safety Violations

Violation of safety rules and regulations include, but is not limited to, the following:

a. Failure to follow written safety rules and procedures
b. Failure to follow orders given by supervisory personnel
c. Fighting, horseplay, etc.
d. Failure to wear required PPE
e. Failure to properly care for PPE

Disciplinary Procedures

First Warning

WILL BE GROUNDS FOR EITHER AN ORAL OR WRITTEN REPRIMAND. MAY BE GROUNDS FOR SUSPENSION OR TERMINATION. The reprimand includes discussion of infraction with the employee and an explanation of expectation of performance. If the manager does not feel that actions taken by the supervisor are in the best interest of the company, documentation must include what actions were taken and justification for non-agreement with the supervisor's actions.

Second Warning

WILL BE GROUNDS FOR A WRITTEN REPRIMAND OR SUSPENSION WITHOUT PAY. MAY BE GROUNDS FOR TERMINATION. This warning includes a review with the employee and explanation of expected future performance. It also includes a written warning of suspension or termination at next occurrence. If the manager does not feel that actions taken by the supervisor are in the best interest of the company, documentation must include what actions were taken and justification for non-agreement with the supervisor's actions.

Third Warning

WILL BE GROUNDS FOR SUSPENSION WITHOUT PAY OR TERMINATION. If the manager does not feel that actions taken by the supervisor are in the best interest of the company, documentation must include what actions were taken and justification for non-agreement with the supervisor's actions.

1506 – SAFETY INCENTIVE PROGRAMS

Purpose

The purpose of our incentive programs is to keep everyone safe. Incentive programs are reminders to employees to perform their daily activities in a safe and efficient manner. Associated rewards serve as feedback and reflect management's appreciation for this safe performance. The incentive program is not intended to be a *payoff* for people's efforts; it is meant to 1) provide rewarding feedback; 2) be a token of appreciation; and 3) a reminder to employees to keep up the good work.

Responsibility

Operating groups are responsible for developing a safety incentive program that supports their safety performance goals and objectives. The Safety Manager will assist in such program development to ensure corporate-wide continuity in program objectives and awards.

Guidelines

1. Behaviors required to achieve a safety award must be specified and perceived as achievable by employees.
2. Everyone who meets the criteria should be rewarded.
3. It is better for many employees to receive small rewards than one person receiving a large reward.
4. The local employee group should determine the target safety awards with input from corporate safety.
5. Rewards should be displayable and represent safety achievement (i.e. coffee mugs, T-shirts, hats or jackets with a safety message)
1. Programs should not reward one group or department at the expense of another.
2. Groups should not be penalized (lose awards) for failure of one individual.
3. Progress towards achieving a safety award must be monitored.
4. Team performance within departments or work groups can be recognized for achievements.
5. Award presentations should be delivered to commensurate with the achievement and should maximize the benefit of the investment.

Elements of an Effective Incentive Program

1. Attendance at established safety meetings.
2. Special participation on projects or non-routine jobs.
3. Leading a safety meeting.
4. Writing, reviewing and revising a job safety analysis.
5. Conducting periodic workplace inspections of equipment and safe work practices.

Our focus is to encourage safe performance but not at the expense of under reporting injuries. Our goals cannot be limited to outcomes such as avoiding injuries or by achieving a certain number of days without a lost time accident (i.e., if the primary qualifying activity is to *not have an accident*

or injury). More than likely we will inadvertently encourage employees to not report accidents or injuries if the consequence is to lose an award.

Certainly suffering an accident or personal injury deserves attention and corrective action. However, the severity must be considered and proportional to the overall objective of encouraging safe behavior. The accident should be considered a temporary setback capable of being overcome by increased safe performance as opposed to a total disqualifier of eligibility to receive a safety award.

Additionally, late reporting of an accident or injury is a critical element in any safety program. Without prompt reporting, management cannot gain vital information in a timely manner that could be instrumental in developing corrective or preventative action. Again, failure to report promptly should be penalized but capable of being overcome by additional safety activity as deemed by management.

1507 – SAFETY INSPECTION SYSTEM

Purpose and Scope

The purpose of a safety inspection system is to aid us in maintaining hazard-free working conditions. In order to make inspections work, inspections may be conducted in two ways: a documented inspection and an informal inspection. The safety inspection forms have been developed as an aid for making inspections, as well as to look for, correct and report unsafe items.

Responsibility

Safety inspections are required by a variety of entities including Elevators Of Beaumont, customers and regulatory agencies. It is the responsibility of the superintendent to conduct inspections as outlined by this procedure. Additionally, project managers, construction managers, and safety supervisors are responsible for periodic field inspections where applicable.

Procedures

A. Types of Inspection

1. *Documented Inspections:* On a formal basis, the safety inspection will be documented by management and field supervisors. The inspection should be discussed with the crew, explaining why things are safe or unsafe. The inspection form must be forwarded for review and filing by the safety supervisor.
2. *Informal Inspections:* On an informal basis, the safety inspection is used by the job foreman and crew. Inspections are used by the foreman as requirements to entering and setting up a jobsite.

B. Frequency of Inspections

Documented safety inspections should be made at least once a month on all jobsites or more frequently if required as management visits the jobsites. The foreman and his crew will make and document a weekly *informal* inspection.

C. Corrective Actions and Records Disposition

Unsafe or problem situations and tools shall be corrected, regardless of whether the inspection is a documented or informal inspection.

After any *Documented* inspection has been made and discussed, the inspection form should be forwarded to the safety supervisor. *Informal* inspection documentation will remain on the job site until the end of the job.

1508 – NEW EMPLOYEE ORIENTATION

Purpose

When a new employee comes to work, he immediately begins to learn things and form attitudes about the company, his job, his supervisor and his coworkers. First impressions are very important and should be presented under the best circumstances. Therefore, it is important that new employees be properly directed toward performing their work in a safe and proper manner.

A. Initial Orientation

Safety training shall start at the time of employment, before the employee begins work. The first step of training shall consist of a safety indoctrination given by the facility safety supervisor or immediate supervisor. At that time, the employee shall receive his personal protective equipment and be instructed in its use and purpose. Facility safety rules and policies shall be thoroughly discussed with the employee, as well as the nature and hazards of his job and the materials he will be working with. Additionally, the employee shall be given a tour of the facility, and all available life safety equipment shall be reviewed and their uses demonstrated to the employee.

B. On the Job Training

Supervisory personnel will instruct new employees specifically along the following lines:

1. General work rules and regulations of the worksite.
2. When explaining the details of the job, the supervisor will discuss the hazards of the job, such as mechanical hazards, noise hazards, hazards of chemicals and their potential threat to health, falling objects, electrical hazards, etc. The supervisor should also inform the employee of the potential for injury or damage to equipment when the work is not performed in accordance with instructions.
3. The supervisor shall demonstrate to the employee how the work can be performed without injury.
4. The supervisor should frequently recheck the employee's performance and immediately correct any unsafe habits observed.
5. The supervisor should take every opportunity to discuss safety on the job with the new employee, and the supervisor should, from time-to-time, question the employee to ensure the employee understands the proper work procedures and the safety requirements.
6. The supervisor should stress the importance of good housekeeping and the individual employee's responsibility in maintaining his work area in a safe and orderly condition.
7. The supervisor should encourage the employee to ask questions when in doubt. The supervisor should solicit from all employees, on a periodic basis, suggestions for improvement. It is particularly important in the case of new employees to solicit their suggestions for improvement, as their past experience and fresh viewpoint may enhance the safety of the entire operation.
8. In the training and instruction of ne w employees, it is important that the supervisor set a good example and demonstrate clearly that he treats safety as an integral part of operating efficiency, and that he uniformly enforces safety rules.

1510 – PERMITS AND WORK AUTHORIZATION

Purpose

The purpose of this procedure is to provide training and aid the field foreman concerning the various permits that may be necessary to perform work at customer facilities. All Elevators Of Beaumont, employees should remember that we conduct our work at the pleasure and discretion of our customers, and that we are in fact a guest at their facility. The foreman should also keep in mind that each facility may have its own permitting requirements and that we must always meet those requirements.

Safe Work Permit

1. Safe Work Permit is issued form all high risk, non-routine task and low risk routine work task.
2. Safe Work Permit shall be issued and executed before work on the task begins.
3. Safe Work Permit will be reviewed with all workers.
4. If the work scope changes, then the Safe Work Permit must be closed and a new permit must be issued, in situations where new, previously unidentified hazards arise.
5. Before a Safe Work Permit is issued the foreman and the permit writer will do a risk assessment to identify and assess task hazards. Proper controls must be implemented to mitigate identified hazards.

Safe Work; (Confined Space) Entry and Hot Work

Scope

This standard covers procedures required for the following.

1. Personnel entry of enclosures that, by design, has limited openings for entry and exit; unfavorable natural ventilation that could contain or produce dangerous air contaminants and is not intended for continuous employee occupancy.
2. Hot work or work involving flame or spark-producing equipment in areas or on equipment that contains or has contained flammable materials.
3. This checklist is to be completed by all Elevators Of Beaumont, foremen after a client's inspector certifies that the area is *clean and gas free* and issues a hot work permit. The foremen will combine visual inspection with the results from appropriate monitoring and/or detection devices to validate the client's certification.

Responsibility

1. The responsibility for completing *Safe Work, Entry* and *Hot Work Checklists* rests with the job superintendent.
2. Responsibility for establishing procedures providing methods or communications that ensure the work will be done in a safe manner, and ensuring that equipment is ready and safe to work on rests jointly with the Superintendent and Project Manager and those who are to perform the work.
3. The Superintendent and the Safety Supervisor are jointly responsible for identifying the following:
    a. An *approved* list of personnel competent to use welding or burning equipment.

b. A competent and certified person to calibrate, maintain and use combustible gas indicators in each location (this person should be thoroughly familiar with the instrument, including its limitations).

Types of Permits

The permits listed below are typical permits commonly encountered by Elevators Of Beaumont, crews. A general explanation is given for each permit.

A. Work Permit

Issued before any work can begin. In some facilities the work permit can be used to enter. At other facilities a separate entry permit is required. The foreman should carefully read the work permit to ensure the scope of work to be accomplished and the areas to be entered are adequately described on the permit. Any restrictions should be noted and discussed with the crew before work begins. Any time restraints or re-issue requirements described on the permit shall be strictly adhered to.

B. Entry Permit

Issued whenever an entry into some designated area is required. The foreman should carefully review the entry permit to ensure the specific areas to be entered are described and that all entry conditions are met prior to entry. Any time restraints or re-issue requirements described on the permit shall be strictly adhered to.

C. Confined Space Permit

Issued whenever entry into a designated confined space is required A confined space permit may be required in addition to any work or entry permits. The foreman should carefully review the entry permit to ensure the specific areas to be entered are described and that all acceptable entry conditions are met prior to entry. Any time restraints or re-issue requirements described on the permit shall be strictly adhered to.

D. Hot-Work Permit

Issued whenever cutting, welding, or other spark or flame producing work is required. The use of electrically powered tools (such as drills and saws) will also require a hot-work permit. The foreman should carefully review the permit when it is issued to ensure that the work to be accomplished and the areas where the work will be conducted are adequately described. Any limitations listed on the permit should be noted and discussed with the crew before hot-work begins. The hot-work permit must include the entire work area and all appurtenances.

E. Scaffold Permits

A scaffold permit or scaffold inspection by the customer's safety department may be required before the scaffold can be used. The foreman should make himself aware of a customer's specific requirements. See Scaffolding Guidelines section #44 of this SOP for more detailed on Elevators Of Beaumont, tagging requirements.

Acceptable Conditions

Many permits list conditions that must be met before the permit can be used. These conditions may address: types of personal protective equipment; acceptable entry conditions; area and personal monitoring; work hours; hole and fire watch requirements; fire prevention and protection

requirements; etc. It is the responsibility of the foreman to review these conditions, to notify the crew of the requirements, and to ensure the conditions are met at all times.

Resolving Permit Problems
There are usually only two causes of permit problems:

1. The permit was not read and/or understood or the requirements of the permit were not discussed with the crew.
2. The permit is too restrictive to allow efficiency to effectively complete the job.

The first cause is easily resolved. It is the responsibility of the superintendent to review the permit *when it is issued*. If there is anything that is not understood, or if any element of the permit is unclear, those issues should be resolved on-the-spot with the person issuing the permit. It is also the responsibility of the superintendent to review all permit requirements with the crew before work begins.

The second cause may not be as easy to resolve. If the permit is too restrictive, the superintendent should attempt to explain Elevators Of Beaumont, practices and have the permit modified. Be careful to never argue with the permit writer. Notify Elevators Of Beaumont, management and explain the restriction and how it will impact job performance.

1511 – SAFETY MEETINGS

Purpose

Elevators Of Beaumont, operates in a widespread area. Thus, it is necessary to hold safety meetings in small groups in the regional office and on or near jobsites. These safety meetings can be very effective in promoting safety and health practices.

The format are to be weekly formal safety meetings held in conjunction with other meetings such as tailgate meetings specifically held daily for a given job or just to discuss new procedures, new equipment, new regulations, or other such matters.

Scope

In order to reach as many employees as possible, the meetings should be held by foremen for their crews or by the regional office staff or by an outsource firm.

Documentation

Every safety meeting shall be documented. The form shall be completed by the person conducting such meetings. Participant comments or concerns shall be documented and attached to this form along with actions taken**,** if required, to address the specific concerns of the participant.

1. Safety meetings will be held weekly. The supervisor is responsible for planning the meeting and all aspects of

    a. All participants should make recommendations to improve safety.
    b. Discuss causes and safe alternative methods with respect to any recent accidents.
    c. Point out and discuss the actions and possible consequences of any crew member who disregards company safety policy.
    d. Discuss special topics the supervisors feel are most appropriate for the work in progress.

2. Tailgate meetings will be utilized by each supervisor and his crew on a daily basis to coordinate all personnel for a specific job in progress or about to begin. These meetings can also be used to identify individual work habits that need correcting or provide retraining that may be necessary. This meeting is the prime opportunity to complete your Job Safety Analysis (JSA).

3. If operations become to rushed or confused, the supervisor is expected to stop the activity and have an on-the-spot safety meeting to assure that the operation will continue in a safe and orderly manner.

1512A – DRUG AND ALCOHOL FREE WORKPLACE

PURPOSE

Elevators Of Beaumont, recognizes that alcohol and drug abuse in the work place has become a major concern. We believe that by reducing drug and alcohol abuse, we will improve the safety, health and productivity of employees. The objective of our drug abuse policy is to provide a safe and healthy work place for all employees and clients, prevent accidents and comply with section 7.10 of the Texas Worker's Compensation Act.

The use, possession, sale, transfer or purchase of any illegal drug or alcohol, or being under the influence of drugs or alcohol by employees at any time on company premises, construction sites, or while on company business is prohibited. Employees must not report for duty or be on company property while under the influence of, or have in their possession while on company property, any drugs or alcohol.

DEFINITIONS

Company Premises-All places where the company conducts business, including vehicles (owned, leased, or used on company business), closets, lockers, deck, parking lots, etc.

Company Property-All Company owned or leased property used by employees, such as vehicles, closets, offices, decks, lockers, buildings, parking lots, etc.

Illegal Drug-Any substance listed in Section I-V of section 202 of the Controlled Substance Act (21 U.S.C. S12), as amended, or prescription or any other drug used for any reason other than a legitimate medical reason or in a way other than that intended by the manufacturer or prescribing physician.

Drug Paraphernalia-Equipment-A product or material that is used or intended for use in concealing an illegal drug or for use in injecting, ingesting, inhaling, or otherwise introducing into the human body an illegal drug or controlled substance.

Fitness For Duty- Physical condition of an employee enabling that employee to work in a manner suitable for the job. To determine "fitness", a medical evaluation may include drug and/or alcohol testing.

Reasonable Cause/Reasonable Suspicion-Supported by evidence strong enough to establish that a policy violation may have occurred.

Negative Test Results-"Negative Test Results" indicates no alcohol or drugs in the employees system, above the levels specified in this policy.

Testing-Is generally defined as urine, blood, or breathe test to determine chemical or drug content. Testing will occur in the instances described in those related sections of the policy. Testing results will remain confidential subject to the provisions of this policy.

Under The Influence or Positive Test Results-A state resulting from the introduction into the body of an alcohol or controlled substance, wherein the following levels are found to exist or are exceeded. However if client contractual agreement levels are more stringent, they shall prevail.

	Emit Level	GC/MS Level
Amphetamines	1000 ng/ml	500 ng/ml
Barbiturates	300 ng/ml	200 ng/ml
Benzodiazepines	300 ng/ml	200 ng/ml
Cannabinoids (marijuana)	50 ng/ml	15 ng/ml
Cocaine & metabolites	300 ng/ml	150 ng/ml
Methadone	300 ng/ml	200 ng/ml
Methaqualone	300 ng/ml	200 ng/ml
Opiates	2000 ng/ml	2000 ng/ml
Phencyclidine (PCP)	25 ng/ml	25 ng/ml
Propoxyphene	300 ng/ml	300 ng/ml
Alcohol, Urine	0.04%	0.04%

The confirmatory analysis shall be performed by the use of gas chromatography, mass spectrometry GC/MS.

General Policy Provision

Any of the following actions constitute a violation of the policy and will result in termination:

A drug test revealing positive test results as described in this policy.

Use, sale, purchase, transfer, possession, manufacture or storage of an illegal drug-Attempt at above activities or assisting another to do so while in the course of employment or engaged in a company sponsored activity, on company business, or in company owned, leased or rented vehicle.

Switching, altering or attempting to tamper with any sample submitted for medical testing, or otherwise interfering or attempting to interfere with the testing process.

Physician Prescribed Drugs

> No employee will be regarded as being in violation of this policy if, at or before the time of testing, the employee advises the Company that he/she is taking a specific drug and, further, provides evidence from a duly-licensed physician that (a) a duly-licensed physician has prescribed the drug to the employee for an existing and specifically identified medical condition (b) the employee has taken the drug at the time and in the manner prescribed by the duly-licensed physician and (c) the employee is physically and mentally capable of performing the duties of the job to which he/she is assigned.

ALL PRESCRIPTION DRUGS MUST BE KEPT IN THEIR ORIGINAL CONTAINER.

SEARCHES

The company reserves the right to conduct searches or inspections to monitor compliance with rules concerning security of company and individual property, drugs and alcohol, and possession of other contraband items. Searches may also be conducted for reasonable cause. All employees are subject to this policy. A search may include the employee's, their work areas, and any other personal items including but not limited to briefcases, purses, lunch boxes or motor vehicles located on company property. The company further reserves the right to conduct searches or inspections of company property used by an employee as access, including but not limited to, lockers, desks, and offices, whether secured, unsecured or secured by a lock or locking device provided by the employee (employee's must give the company a copy of keys or combinations to personal locking devices). Any item found during the search believed to be an illegal drug or drug paraphernalia or other contraband items such as firearms, ammunition, explosives and weapons will result in the notification of the appropriate law enforcement agency. Refusal to submit to a search may lead to immediate termination. In the event of termination, a clear and documentable or witnessed final warning will be recorded and filed in employee records.

Employee Testing

The company's objective is to provide a safe, drug-free work environment for employees and customers. Employees will be required to take a drug test for the following reasons:

- Testing will be required for reasonable cause or reasonable suspicion as described in this policy as determined by company designated competent person.
- Testing may be required during routine physical exams.
- Testing may be required during return-to-work physical.
- Testing will be required if an employee requires other than first aid medical treatment for any on-the-job injury.
- Testing may be required of employee suspected of having caused or contributed to an on-the-job incident resulting in injury, near miss accident or property damage.
- Testing will be required for any vehicle accidents involving company owned vehicles.
- Testing will be required for any vehicle accident occurring while on company business.
- Pre-Access testing may be required for all employees assigned to an on-site client project.

  If required by contract, the employee on farm-out or in-plant must pass aforementioned pre-Access drug screen with a negative result on a comprehensive alcohol and drug test within the 12 months preceding access to Client Property. In addition, each employee requiring pre-access testing will be required a minimum of one negative drug screen annually conducted on

a random basis. Upon the request of client Elevators Of Beaumont, shall so certify in writing with a single letter certifying negative test results.

- If the client has a drug screen policy in effect, the more stringent policy shall apply.
- Job applicants will be required to take a pre-employment drug test prior to reporting to work.
- Refusal by an employee to submit to testing will be considered equivalent to a positive test result and shall be treated as such.

Random

All employees are subject to unannounced and continuous random selection and testing for Prohibited Substances while performing working for Elevators Of Beaumont. The number of tests randomly conducted during each calendar year will be at least the current United States Department of Transportation (USDOT) required percentage or, where testing is not required by USDOT, at least at the rate of 50% of the total number of employees in the selection pool each year. All employees are required to have a negative test result.

Consequences

A positive test shall indicate the presence of a drug and/or alcohol. Sample testing procedure shall conform to scientifically accept analysis methods and procedures. Any positive test result shall be confirmed by gas chromatography, mass spectrometry (GC/MS). A positive drug screen will result in termination of employment. Employees terminated as a result of a violation of this policy will not be eligible for rehire unless approved by a management committee that has been established specifically for this purpose.

I, _____, acknowledge that I have received a copy of this drug policy and do fully understand and agree comply with this policy.

_____ _____
Name Date

_____ _____
Company Representative Date

IV. Guidelines and Procedures

1516 – BACK INJURY PREVENTION / SAFE LIFTING TECHNIQUES

Elevators of Beaumont requires a hazard assessment to be completed before manual lifting is performed. This assessment must consider size, bulk, and weight of the object(s), if mechanical lifting equipment is required, if two-man lift is required, whether vision is obscured while carrying and the walking surface and path where the object is to be carried.

Since the bulk of back injuries results from poor lifting techniques, these techniques and suggestions may help prevent such injuries:

1. Face the load you are trying to lift.
2. Determine the center of gravity in order to keep the load balanced.
3. Bend at the knees with your feet about 20 inches apart (approximately shoulder's width), one foot slightly ahead of the other.
4. Grasp the load and gain control before you attempt the lift.
5. Watch out for nails or other protrusions that could cause cuts or other types of injuries.
6. Keep the load close to your body.
7. Lift gradually with your legs, not your back.
8. Do not jerk the load.
9. Make sure the path you're taking is free of obstructions or slipping hazards.
10. Know your lifting ability and get help with heavy or awkward loads.
11. When you set the load down, watch for pinch points.
12. To put the load down, reverse the steps, lowering with your legs, placing your feet in the proper position and keeping the load close to your body.

These reminders may help you on the job:

1. Gear your activity to your age and physical condition. Physical exertion is an excellent body builder, but it should not be performed in excess. Stop and rest when you feel tired.
2. When maneuvering vehicle cabs, use hand grips and make sure step-ups are dry and clear.
3. If your job allows little movement, it is important to watch your posture and change your working position often. Don't become tense…rest the muscles that are constantly in use.
4. Team lifting should be used when a load is too heavy, too bulky, or too long to be moved by one person. Team lifting requires two or more individuals moving a load together.

    a. One person gives the order to lift, turn, and set down. Everyone must lift and move together. Each worker should understand what he is to do before beginning.
    b. Lift and lower in the same manner. Squat down close to the load, get a firm grip, and keep back straight, lift slowly with leg power. For setting down, reverse the procedure. Take care to keep fingers and hands from being caught.
    c. Carry the load without sudden starts or stops. Move slowly and watch where you step.
    d. Avoid stairs where possible. Use elevators or hoists to move loads to different floors.
    e. Keep the load level and the weight evenly distributed. Be especially careful when you are going up and down inclines.
    f. Carry long, rigid loads with the same shoulder, and walk in step (two-man team). However, walking out of step will keep flexible objects from bouncing.

g. Avoid walking backwards. If it is necessary, be sure the path is clear and someone is there to guide you.

h. Musculoskeletal injuries caused by improper lifting will be investigated and documented. Investigation findings will be incorporated into work procedures to prevent future injuries.

i. Periodic evaluation of work areas and employees' work techniques are done to assess the potential for and prevention of injuries. New operations are evaluated to engineer out hazards before work processes are implemented.

j. Things to **avoid** when carrying a load:
   - Twisting your body when lifting or carrying.
   - Lifting from one knee.
   - Changing your grip while holding a load.
   - Stepping over objects when you are moving.

Lifting Equipment

1. One of the best ways to avoid overexertion is to use a dolly or handcart to carry the load. Lift-assist devices are provided for employees. However, this method has its own hazards. Be sure to use safe lifting techniques when loading the dolly or hand truck. Follow these steps to prevent injury:

   a. Choose a dolly/handcart that is the right size and shape for the object(s) being carried.
   b. Place the heaviest objects on the bottom.
   c. Position the load over the axles so that the truck (not the handles) carries the weight.
   d. Secure bulky, irregular, or fragile items to the cart.

2. As you begin to move, it is important to avoid all possible hazards that may be in the way.

   a. Look where you're going.
   b. Make sure that you can see over the load.
   c. Move slowly and cautiously.
   d. Avoid walking backwards.
   e. Be especially alert to edges of platforms and docks.
   f. Watch out for objects on the floor or obstructions in the way.
   g. Avoid pedestrians and vehicles.
   h. Keep the load ahead of you when going downhill.

3. Rope and strapping are most commonly used to secure the load to the cart or dolly. Some simple precautions will make your work easier and safer.

   a. Make certain the rope is in good condition before using it. Inspect it and test it by pulling on it.
   b. Keep the rope away from corrosives like acid.
   c. To avoid the sharp edges of strapping, use safety gloves.
   d. Cut off loose strap ends with cutters, not claw hammers or pry bars.
   e. Make sure the strapping is taut, but not too tight, around the objects.
   f. Don't lift by the strap unless it's designed for that purpose.

1517 – CONFINED SPACE PROCEDURES FOR FIELD CONSTRUCTION

Purpose

This standard establishes procedures necessary for preparation, entry and restoration of a vessel or storage tank to be entered by trained and qualified personnel. These procedures are designed to maintain a safe environment when personnel are required to enter a vessel or storage tank. An annual review will be performed by Management to assure that elements of this program have been appropriately addressed and that revisions required, if any, be performed to protect Elevators of Beaumont and its employees.

Scope

This standard addresses both permit and non-permit required confined space entries as defined below. Normally, Elevators of Beaumont employees work under the owner's confined space permit system. In circumstances where the owner does not issue a permit, the Elevators of Beaumont, superintendent is responsible for determining if the confined space requires a permit. If so, the foreman must follow this procedure. If a permit is required for the entry, the *Safe Work Checklist* must be completed. If work is done under a customer's permit, the foreman completes the checklist as confirmation that it is safe to work in the confined space.

Definitions

Confined Space is a space that meets all of the following criteria:

1. Is large enough and so configured that a person can bodily enter and perform assigned work.
2. Has limited or restricted means for entry or exit.
3. Is not designed for continuous occupancy.

These include, but are not limited to, storage tanks, frac-tanks, tank trucks, process vessels, and excavations greater than four feet deep. Whether these are permit-required or non-permit required, confined spaces depend primarily, although not exclusively, on their potential to contain a hazardous atmosphere.

Permit-Required Confined Space is a confined space as defined above that **also meets any one** of the following criteria:

1. Contains, or has a potential to contain, a hazardous atmosphere.
2. Contains a material that has the potential for engulfing (see definition below) an entrant.
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor that slopes downward to a smaller cross-section.
4. Contains any other recognized serious safety and health hazard.

Non-Permit Required Confined Space is a confined space which does not meet the permit required confined space criteria.

Attendant: An authorized employee who is stationed outside of the permit required confined space that is authorized to stop work if conditions require it and is responsible to call for assistance in case of emergency.

Entrant: Any person who breaks the plane of entry for a permit required confined space.

Entry Supervisor: The individual who is responsible for determining acceptable entry conditions and authorizes entry into permit required confined spaces.

Entry: Entry into a confined space occurs when any part of the entrant's body breaks the plane of an opening into a confined space. Entry can occur both during work and preparation for work.

Engulfment: The surrounding and effective capture of a person by a liquid or finely divided (flowable) substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Responsibilities

The following are requirements for entering any permit-required confined space.

A. Authorized Entrants

1. Become knowledgeable of the hazards that may be present during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
2. Become knowledgeable in the proper selection and use of personal protective equipment required for entry.
3. Learn to communicate with the attendant whenever:
   a. The entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
   b. The entrant detects a prohibited condition.
4. Become knowledgeable in procedures for exiting a confined space including:
   a. Understanding an order to evacuate when given by the attendant or the entry supervisor.
   b. Understanding when an evacuation alarm is sounded.
   c. Recognizing any warning sign or symptom of exposure to a dangerous situation.
   d. Detecting a prohibited condition.

B. Attendants

1. Become knowledgeable of the hazards that may be present during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
2. Become aware of the possible behavioral effects of hazard exposure an authorized entrant may exhibit.
3. Learn to maintain a continual accurate count of authorized entrants in the permit space and be able to accurately identify who is in the permit space at all times.
4. Understand the importance of maintaining a constant vigil outside the permit space during entry operations until relieved by another attendant.
5. Learn techniques for communicating with entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space.
6. Learn to monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space.

7. Learn under what circumstances the entrant is to be ordered to evacuate the space. Such circumstances may include:

    a. If the attendant detects a prohibited condition.
    b. If the attendant detects the behavioral effects of hazard exposure in the authorized entrant.
    c. If the attendant detects a situation outside the space that could endanger the authorized entrants.
    d. If the attendant cannot effectively and safely perform his duties.

8. Learn when and how to summon rescue and other emergency services.
9. Learn what actions to take in the event unauthorized persons approach or enter the permit space while entry is under way. These actions may include the following:

    a. Warn unauthorized persons to stay away from the permit space.
    b. Advise unauthorized persons they must immediately exit the permit space if they have gained entry into the space.
    c. Inform authorized entrants and the entry supervisor of any unauthorized entrants.

10. Learn to perform non-entry rescue procedures.
11. Understand that the primary duty is to monitor and protect the authorized entrants and, as such, never to perform duties that will interfere with this objective.

C. Entry Supervisor

1. Become knowledgeable in the proper selection and use of personal protective equipment and rescue equipment required for making rescues from permit required spaces.
2. Participate in practice rescue drills, if any, as required by contractual obligations.
3. Become knowledgeable of the hazards that may be present during entry, including information on the mode, signs or symptoms, and consequences of the exposure.
4. Gain thorough knowledge of the information required on the entry permit, and understand his role in verifying that tests, if applicable, have been conducted and that equipment is in place prior to endorsing the permit and allowing entry to begin.
5. Understand procedures for terminating entry and canceling the permit.
6. Understand procedures for verifying that rescue services are available and means for summoning them are operable.
7. Understand procedures for removing unauthorized individuals from the area.
8. Become knowledgeable and take responsibility for determining that entry operations remain, at all times, consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

D. Rescue Personnel

There are four options when arranging for rescue personnel to perform permit space rescue, each of which has specific requirements.

OPTION 1 is to perform non-entry rescue using on-site personnel operating to the level of their ability and training

OPTION 2 is to use contractually supplied customer personnel meeting regulatory requirements.

OPTION 3 is to make arrangements for using a third party rescue service to perform permitted confined space rescue.

OPTION 4 is to use a combination of the options listed above.

Elevators of Beaumont, Management will determine and document the evaluation process for selection of the rescue service.

1. Elevators of Beaumont, Management will document and inform the job-site foreman of the entity which will be performing rescue services, appropriate clinics, hospitals, etc. and the methods by which they may be contacted. This can be accomplished by providing a completed *Emergency Response Form.*
2. The Elevators of Beaumont, representative shall inform the rescue service of the hazards they may confront when called on to perform a rescue.
3. The Elevators of Beaumont, representative shall provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop an appropriate rescue plan and practice rescue operations.

E. Fire Watch

1. Must be trained in proper use of extinguisher, fire hose and be familiar with customer emergency instructions.
2. Read Hot Work Permit and assure proper permit is on the job site and is valid.
3. Know the personal protective equipment requirements as specified on the permit.
4. Have clear access to a dry chemical fire extinguisher at a distance no greater than three feet.
5. Wear red identification vest or jacket.
6. Hot-work permits are not valid if work does not start within one hour of time of issuance.
7. Hot-work permits are valid for one work shift.
8. No combustible debris or liquids are to be in the area.
9. Must not leave area until relieved or until hot-work has stopped for at least 30 minutes.
10. Before leaving area, check for hot metal, smoldering debris and roll up or return water hoses, if applicable.

Procedures

Preparation

The owner or his designated representative is responsible for proper preparation of the vessel or storage tank to be entered. The Elevators of Beaumont, foreman confirms safe entry conditions exist. In preparation for entry, the *Safe Work Checklist* shall be initiated and completed according

to the following procedure.

1. The vessel and storage tank must be properly isolated with blinding or disconnection and every line connected to the vessel must be blinded or disconnected with documented Elevators of Beaumont, participation. (As per Lockout/Tagout (LOTO)) section # 27 of this SOP)
2. The vessel must be purged, steamed, washed, etc., as necessary, to properly free the vessel of contaminants.
3. Air driven or explosion-proof electric fans are required to establish and maintain forced ventilation and ensure movement of fresh air in the vessel.
4. The atmosphere shall be checked with a calibrated direct-reading instrument for the following conditions in the order listed and recorded on the checklist.

    a. Oxygen (shall be between 19.5% and 23%).
    b. Flammable gases and vapors (shall be less than 10% LEL).
    c. Toxic gases (that may include, but are not limited to, hydrogen sulfide, carbon monoxide, carbon dioxide, mercaptans, and benzene). *Consult your local safety representative for assistance on appropriate permissible exposure limits if respirators are needed.*

5. Any entrant or their representative should be afforded the opportunity to observe and/or participate in the collection of monitoring data before entry.
6. One or more properly equipped and trained standby person(s) shall be posted outside the space to remain in direct communication with workers inside. No attendant will monitor more than one space at a time.
7. A self-contained breathing apparatus (SCBA) or an approved hose line unit with an escape feature shall be immediately available outside.(or as required by permit)
8. Lifelines, harnesses and other appropriate equipment shall be available for the entrants while in the confined space. A mechanical retrieving device for rescue shall be available for vertical lifts of five feet or greater.
9. Equipment such as air movers and vacuum truck hoses shall be properly grounded or bonded to prevent static sparks.
10. Lighting conditions, temperature, the need for climbing, scaffolding or the presence of water should be considered. *Electrical equipment shall have a ground fault interruption device located outside the confined space, and all electrical cords and devices must be inspected prior to use.*
11. Provide proper personal protective equipment, such as coveralls, goggles, gloves, hard hats, safety glasses with side shields, and respirators, as required.
12. Respiratory protection should be worn until the confined space has been cleaned of materials that may produce a toxic and/or hazardous atmosphere.
13. Personnel trained in CPR and First Aid must be available onsite, along with a first aid kit.
14. Fire extinguishers and other fire fighting equipment shall be available where needed.
15. A communication system (visual, hand signals, audible, etc.) shall be established between workers and standby personnel.

16. Signs and barricades shall be posted outside to notify personnel of entry and prohibit unauthorized entry to protect entrants from external hazards including, but not limited to pedestrians and vehicles.
17. Entrants and standby personnel may become a rescue person if qualified and they have the appropriate P.P.E. to do so. However, the person must not enter the confined space during an emergency without first ensuring that another standby person is present. Prior to entering a confined space for personnel rescue, additional backup personnel must be present.
18. Rescue and other services that may be summoned in case of an emergency and the means of communication with those services shall be listed on or attached to the permit. Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed.
19. A pre-entry safety meeting shall be held and documented for all personnel involved. Additional precautions and concerns, such as vessel coating, composition of previous contents, and iron sulfide should be discussed.

When the preparations on the checklist are complete and any additional precautions are taken, the permit to enter a vessel or storage tank may then be signed. It will be maintained and available for review by the attendant during the course of the entry.

Multiple Employers/Contractors

Elevators Of Beaumont shall inform all other affected outside employers and contractors of the permit space locations and permit space hazards when working in confined spaces. All affected outside employers and contractors will be educated on the confined space program and confined space requirements of Elevators of Beaumont, Multiple permit space entries conducted by outside employers and contractors shall be reviewed and coordinated prior to authorized entry by any party. Elevators of Beaumont, shall not enter into any binding business agreement with contractors or employers that do not meet the confined space program and training requirements of 29 CFR 1910.

Entry

1. Entry may be made by personnel after preparation requirements have been met and a *Safe Work Checklist* has been signed, issued and reviewed with the workers.
2. The standby person must not leave the confined space with someone inside without first ensuring another standby person is present. Unauthorized personnel shall not be allowed entry, and if the vessel or confined space is left unattended, the entrance must be barricaded.
3. When required by permit, the atmosphere shall be continuously monitored during entry and instrument readings periodically recorded on the checklist.
4. If entrants have reason to believe that conditions within the space change have changed, re-evaluation of conditions (additional monitoring), will be performed.
5. When all work is complete and the vessel or confined space is ready to be returned to service, a *Site Specific Checklist* should be used for proper restoration. In addition to items listed on the permit, questions to consider may include:

a. Are all personnel out of the confined space?
b. Are all blinds removed using the blind list?
c. Are all equipment and tools removed?
d. Are all man-way and flanges closed and sealed?
e. Has the atmosphere been purged?
f. Have start-up procedures been reviewed?

After completion of all job entries, an entry completion meeting with everyone involved should be held and documented. The canceled permit shall be reviewed to ensure that any hazards found or created are documented to ensure that personnel participating in future entry operations are protected from previously unidentified hazards.

Contact your local safety supervisor for assistance in vessel and storage tank entry if necessary.

Entry procedures will be reviewed by Elevators of Beaumont, whenever management has reason to believe that the measures taken under the program may not protect employees. Elevators Of Beaumont, will revise the program to correct deficiencies found to exist before subsequent entries are authorized. Examples of circumstances requiring the review of this confined space procedure include:

a. Any unauthorized entry of a permit space
b. the detection of a permit space hazard not covered by the permit
c. the detection of a condition prohibited by the permit
d. the occurrence of an injury or near-miss during entry
e. a change in the use or configuration of the permit space
f. employee complaints about the effectiveness of the program

Training

Employees are expected to become and remain, familiar with the terms of the confined space program. If any questions exist, please consult your foreman and/or supervisor.

Annual training will be given to all field employees regarding confined space entry and documentation will be maintained and available for review in the individual personnel file.

Training will be certified/documented with the following:
Employee's name
Employee's signature
Date of training
Instructor's name and signature

Each effected employee must be trained prior to initial assignment. Additionally training must be performed if duties change, a new hazard has been created or if special considerations affecting entrant's safety have occurred.

1518 – FIRST AID AND MEDICAL PROCEDURES

Purpose

The purpose of this program is to ensure Elevators of Beaumont, employees are provided the necessary care required to protect their health and safety in the event of an injury.

Scope

This program is designed to fit the requirements of Elevators of Beaumont, and is applicable in all offices in all regions within the company. It is the policy of Elevators of Beaumont, that all employees work safely and carefully and follow all programs and procedures that have been designed to provide optimum safety and effectiveness for all. This includes this procedure.

Responsibilities

1. The Elevators of Beaumont, Safety Manager shall ensure, on at least an annual basis, that elements of this procedure are effectively being utilized. He shall report his analysis to corporate and regional management and recommend corrective actions required to the degree that maximum effectiveness of this procedure is ensured.
2. The Regional Manager, or his designate, is responsible for the administration of the program. He will, on an annual basis, review the operation of the program to ensure its effectiveness.
3. Area Managers shall periodically (i.e., quarterly) evaluate the application of the procedure within their district and report any discrepancies to the Regional Manager. The Area Managers shall see that remedial actions are implemented to correct any deficiencies.
4. The Regional Safety Supervisor shall coordinate training activities, equipment selection and procedural matters in order to meet the requirements of the program.
5. The Foreman shall maintain a first aid and Bloodborne pathogens kit in a constant state of readiness. Should the contents of the first aid kit become depleted, the foreman shall see to the procurement of replacement supplies. The required supplies and minimum contents of the first aid kits are outlined in Attachment I of this procedure. Inspection of the first aid kit shall be made weekly on each job to ensure that expended items are replaced. In addition, all foremen shall receive, understand and utilize training required under this procedure.
6. Employees are expected to know the location of the job site first aid kit and be prepared to obtain it for use, if necessary, in an emergency. Each employee is required to know of the location of eyewash fountains and/or safety showers within or near their work area.

General Requirements

1. Emergency information including local police department, fire department, hospital, and ambulance phone numbers shall be posted conspicuously at each job site. (See also *Emergency Action Plan section #49*.) Local area managers should be contacted to provide the names and location of hospitals, clinics and/or doctors, approved for use by Elevators of Beaumont, in their areas.

2. Should an injured employee require additional medical attention, the onsite Elevators of Beaumont, foreman shall arrange for prompt transportation of the injured party by either ambulance or company vehicle. *In no case will an injured* Elevators of Beaumont, *employee be permitted to drive himself to the medical facility or doctor's office.*

3. Where the eyes or body of any person may be exposed to injurious corrosive material, suitable facilities shall be available within, or in close proximity to, the work area to drench or flush the eyes or body. These may be stationary, facility-owned equipment or portable types approved by Elevators of Beaumont, management.

4. There shall be a minimum of one employee at each jobsite who maintains a current certification in First Aid and/or CPR. First-aid training courses shall be selected from those courses that meet the requirements of OSHA and other regulatory agencies. The State Department of Health or the State Workers' Compensation Commission. U. S. Bureau of Mines, American Red Cross, American Heart Association or Medic First Aid courses usually meets these requirements.

5. Only those employees who have successfully completed an approved first aid and/or CPR course will be required to perform first aid and/or CPR on employees of the company. Documentation of all training received will be kept in the respective employee's personnel file.

6. Qualified employees who perform first aid on employees of the company must record the name and occupation of the individual being treated including the date, time, injury and treatment, accompanied by the signature of the first-aid care giver.

7. All affected employees will be trained as to the requirements of this program. Training may be repeated (i.e., annually or when an employee demonstrates a lack of understanding of the requirements).

8. Disregard of the requirements of the programs or its elements may subject an employee to possible disciplinary action up to and including termination.

ATTACHMENT I

The following kits (among others) are approved for use by Elevators of Beaumont, personnel.

Supplier - NORTH

	Pieces Per unit	10 unit kit #01-15-60	16-unit kit #01-15-80	24-unit kit #01-16-10
Crew Size		**5**	**8**	**12**
Adhesive Bandages, 1'x3'	16	2	2	3
Antiseptic Towelettes	6	0	1	1
PVP Wipes	10	1	2	3
Latex Gloves	4	1	1	1
Triangular Bandage, with pins	1	1	1	2
Burn Ointment, 1/8th oz.	6	1	1	2
Sting Kill Swabs	10	1	1	2
Cold Pak, Instant	1	1	1	2
Eyewash, 1 oz.	1	0	1	2
Bandage Compress, 4' offset	1	0	1	3
Knuckle Bandages	8	0	1	2
Bandage Compress, 2' offset	4	1	1	3
Finger-Tip Bandages	10	0	0	2
First Aid Instructions	1	1	1	1
National Poison Control Listing	1	1	1	1

Elevators of Beaumont, **GUIDELINES**

1. Class A fire materials (paper, wood, combustibles) should not be stored in or used as construction material in process areas.
2. Keep all buildings in which solvents or chemicals are being handled well ventilated at all times.
3. Report and repair all hydrocarbon liquid or gas leaks immediately. If immediate repairs are not possible, post an adequate warning sign, isolate the area and take extra precautions against fire.
4. In the event of a hydrocarbon liquid or gas leak, extinguish all fires and remove other sources of ignition immediately. Shut down engines and other potential sources of ignition, such as pilot lights. Report the leak promptly to the supervisor in charge. Shut off fuel supply or process if possible.
5. Use soapsuds when testing for gas leaks on connections. Never use an open flame.
6. Use gasoline as a motor fuel only. Using gasoline as a cleaning agent on company property is strictly forbidden. Use a high flash point (140^{o}+F) safety solvent to clean tools, machinery and other similar equipment. Wear gloves made of hydrocarbon-resistant rubber to protect hands.
7. Keep flammable or combustible liquids and gases in a building or operating area to a minimum. Store in metal safety cans or storage cabinets that meet Underwriter's Laboratories, Inc. or Factory Mutual approval.
8. Properly ground all tanks that contain hydrocarbons.
9. Use static straps (grounding straps) when transferring hydrocarbon liquids to trucks.

RESPONSE PROCEDURES

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

1. **Report Immediately**. Do not fight a fire before alerting someone else.
2. **Analyze the Situation** considering:

    a. Possible threat to life?
    b. Possible damage to property?
    c. Evacuate or ask yourself, "Is it possible to extinguish the fire safely?"
    d. Notification and assistance from outside authorities appropriate?
    e. Hazardous or toxic chemicals present?

3. Isolate all fuel sources and/or threatened facilities.
4. Fighting a fire in the initial stages is called incipient firefighting. *Do not fight fires beyond the incipient stage unless you are trained and equipped to do so as part of a fire brigade or emergency response team.* Such firefighting should be limited to trained personnel using fire extinguishers and water streams at long range.
5. Locate the firefighting equipment and approach the fire *from the upwind side*. In the case of a gas fire, extinguish the fire by shutting off the fuel source.

6. *Never pressurize an extinguisher in such a manner that any part of the body is located directly above or in front of the fill cap.*
7. Start at the base of the fire using a sweeping motion.
8. After the fire is extinguished, stand by to ensure that there are no flashbacks.
9. Assess the damage and fill out necessary reports. Do not discuss the fire with anyone other than your supervisor or the local safety representative. Someone will be specifically assigned to relate the facts of the incident to the news media.

FIRE EXTINGUISHER INSPECTION AND MAINTENANCE

Fire extinguishers are an important segment of any fire protection program. Fire extinguishers shall be:

1. Accessible.
2. Kept clear of any obstructions.
3. Properly maintained.
4. Inspected monthly by trained and authorized personnel and documented.
5. Inspected and serviced annually by qualified personnel and documented.
6. Hydrostatically tested as required.

Elevators of Beaumont, will maintain the annual inspection record and any maintenance required for a period of at least one year after the last entry or the life of the shell, whichever is less.

The supervisor is responsible for ensuring that all extinguishers are properly maintained and inspected. All personnel should know how to identify and report extinguishers needing recharging and/or maintenance.

TRAINING

All employees who may be required to perform incipient (beginning) stage fire fighting will attend an educational presentation explaining the general principles of fire extinguisher use and the hazards involved. Training shall be conducted upon initial assignment and at least annually thereafter.

Documentation of the training will be maintained in the individual employees personnel file.

1520 – FALL PROTECTION

PURPOSE:

To prevent work related injuries resulting from falls from elevations. The prevention of these incidents will be accomplished by the use of fall prevention and fall protection methods, training of effected employees and enforcement by all field management and staff.

SCOPE:

This program applies to all company employees who may be exposed to fall hazards in the course of their daily activities. In addition it also applies to non-company employees, visitors and individuals who are exposed to a fall hazard due to company activities. It applies to all work to be performed that will expose an employee to a fall from an elevation of 6' or greater to a working surface and employees must be 100% tied-off using approved fall protection methods and equipment.

RESPONSIBILITIES:

President:
The president has the ultimate responsibility to ensure all management, safety and field personnel are adhering to the written requirements of this program. He may delegate a program administrator to handle the day-to-day operation of the program who will provide him with at least annual updates on its operation. In the event that compliance is not achieved, the president will take immediate action to rectify the situation.

Management:
All management has the responsibility to administer the program on a daily basis. They are accountable for the effective administration, cost control and evaluation of related incidents for corrective action. Fall protection measures shall be subject to review and modification until the potential for injury has been mitigated.

Safety Personnel:
Safety personnel will be responsible for assuring appropriate training is provided and ensuring that site-specific fall protection systems are provided and implemented. Accident investigations shall be conducted to evaluate the fall protection plan for potential updates to practices, procedures or training in order to prevent reoccurrence.

Supervision:
Supervisory personnel will ensure compliance with this program through enforcement of the requirements, hazard identification, hazard abatement and provision of training for all effected personnel. Effective performance of these responsibilities will minimize fall injuries.

Competent Persons for Fall Protection:
Competent Persons for fall protection are designated for each work site. They have the responsibility to ensure that fall prevention and protection systems are performed to meet the requirement of this program and design criteria. They have the authority to stop work if necessary, take corrective actions to prevent incidents. They must be able to recognize hazardous, exposures or conditions that are unsanitary or unhealthful. They shall provide for

prompt rescue of employees in the event of a fall or shall assure the employees are able to rescue themselves.

Employees:
All employees are responsible to employ approved fall prevention and fall protection systems and devices as required by the task at hand. They are also responsible to attend and successfully complete training classes designed to provide them with sufficient information to protect themselves and their fellow employees from fall hazards and to put that information into practice according to the needs of the task at hand.

HAZARD IDENTIFICATION AND ELIMINATION:
Hazard identification and elimination can be accomplished by the use of three methods.

Pre-Planning for Fall Prevention:

Management and supervisor will participate in a pre-planning process for all Elevators of Beaumont, jobs. The following tasks and responsibilities shall be completed before work begins:

- Engineering drawings will specify appropriate anchor points for fall arrest systems.
- All open sided working levels or those with floor holes will be protected to the extent feasible with guardrail systems prior to work being performed on that level.
- All scaffold systems utilized will be complete with appropriate guard barrier, mid-barrier and shell side fall prevention as outlined in Elevators of Beaumont, 1544-Tank Builders Scaffolding Guidelines.

Analyzing the Work Area:

All work areas will be analyzed by management and/or safety personnel to ensure that existing and potential fall hazards are identified. Review of engineering drawings, actual site conditions and tasks to be accomplished form the basis of the review. This analysis should be ongoing as the job status and/or personnel changes. The focus will be on those areas where workers could experience falls in relation to task that are to be performed.

Job Site Inspections:

Job site inspections are critical to implementation of this program. The foreman and all employees should participate in this inspection. They will be conducted at least weekly and will focus on the following fall hazards:

- Any area which exposes the worker to a fall hazard.
- Fall hazards such as:
  structures
  scaffolds
  ladders
  roof/wind girder work
  floor or roof holes or openings
  open sided working/walking surfaces
  scissors lift or aerial lifts

Documentation of the job-site inspections will be maintained by the competent person.

FALL PREVENTION

Pre-Planning for Fall Prevention:

Elevators of Beaumont, will pre-plan for fall prevention for each job that is undertaken. Management, supervision, safety and effected employees should participate in the process. This may be accomplished as follows:

- Elevators of Beaumont, engineering drawings will specify appropriate anchor points for personal fall arrest systems.
- All scaffold systems, regardless of height will have guard lines or guardrails in place when in use.
- All open sided roofs and working levels will have temporary guard lines or guardrail systems in place or other methods of fall protection (such as personal fall arrest systems will be used.)

Engineering controls:

The following engineering controls will be incorporated in the process:

- A maximum amount of the structure will be assembled on the ground minimizing the fall exposures.
- Where lifelines or other conventional methods are not feasible, safety nets will be used.
- If possible, elevated work may be performed through the use of aerial lifts or scissors lifts to reduce the amount of scaffolding to be erected.

Alternate Work Methods:

Hole Covers:

Engineering controls will be implemented to minimize the use of hole covers. If they are required, they will meet the following requirements:

- Covers will be installed in such as fashion as to prevent slippage or movement.
- They must be designed to support at least twice the weight of any personnel or equipment that may be imposed on them.
- Covers shall be marked **"HOLE" or "COVER"** to provide warning of the hazard.

SPECIALIZED FALL PROTECTION

Fall Protection Plans

NOTE: All equipment/materials purchased shall meet the requirements of ANSI and ASTM.

Safety Monitoring Systems:

Elevators of Beaumont, will designate a competent person to monitor the safety of other employees and will ensure that the safety monitor complies with the following:

1) The safety monitor shall be competent to recognize fall hazards.
2) The safety monitor shall warn employees when it appears the employees are unaware of a fall hazard or are acting in an unsafe manner.

3) The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employees being monitored.
4) The safety monitor shall be close enough to communicate orally with the employees.
5) The safety monitor shall not have other responsibilities which could take the monitor's attention from the monitoring function.

Controlled Access Zones:

Where conventional fall protection cannot be used, these areas will be identified and classified as "Controlled Access Zones". Controlled access zones shall be defined by a control line or by any other means that restricts access.

Warning Line Systems:

Warning line systems are not allowed during roof operations. Acceptable systems for roof operations are:

- An approved guard line or guardrail system around the roof.
- Safety nets installed around the roof.
- Personal fall arrest systems used in an approved manner.

Safety Net Systems:

Safety net systems will be installed under the direction of a competent fall protection person and at the discretion of management. These systems are used for fall arresting and should not be used as a replacement for a fall prevention system.

Personal Fall Protection System:

Personal Fall Protection Systems must be specifically designed and approved for the job site. Anchorages will meet the guidelines of this program and regulatory requirements. This includes work from ladders, where applicable, elevating platforms and aerial lifts. Use of a full-body harness is required.

Guardrail (Guard line) Systems:

Guardrail (Guard line) systems will be used in all of the following area:

- Permanent and temporary stairs.
- Large roof holes and/or man-ways.
- During roof operations when no other fall protection system is in place.

Barricades:
Areas where floor holes exist that could cause an employee to be injured due to a fall will be barricaded. The barricade will be installed sufficient distance from the expose to alert the worker to the presence of the hazard and permit him time to avoid it.

INSPECTION STORAGE AND MAINTENANCE OF FALL PROTECTION SYSTEMS

Temporary Guardrail (Guard line) Systems will be visually inspected daily by the foreman and weekly a complete structural inspection will be completed by the competent person.

All personal fall arrest systems shall be inspected in accordance with the manufacturer's instructions. This includes daily inspections by the user and monthly inspections by a competent person in fall protection.

All other systems will follow the procedure for Temporary Guardrail (Guard line) Systems.

TRAINING

Employees:

All field employees who will be required to work at elevations greater than six feet above the walking or working surface will attend, understand and complete a training course in fall protection. In addition employees must meet to following criteria to work in areas where fall protection must be utilized:

- Employees with disorientation difficulties will not be permitted to work at heights.
- Employees with medical evidence of seizures or epileptic backgrounds will not be permitted to work at heights.
- Employees who demonstrate a difficulty in understanding how to adequately protect themselves will be retrained or not permitted to work at heights.

Competent Persons/Trainer:

The competent person for fall protection will be adequately trained in the fall protection systems in use. They will be responsible for training any field employees who do not have documented training in fall protection when they report to the job-site or who demonstrate a lack of understanding of the requirements, appropriate uses and responsibilities for fall protection. In the event a new system is employed, training on this system will commence immediately for effected employees.

Documentation of Training:

All training will be documented and will include:

- The date of the training.
- The employees printed name and signature
- The printed name and signature of the trainer
- The specific subjects covered at the training session.
- The means by which comprehension was determined.

Documentation will be maintained on the job-site until completion of the job and then placed in each employee's personnel file.

1522 – HAZARD COMMUNICATION PROGRAM – RIGHT TO KNOW

Purpose

It is the intention of Elevators of Beaumont, and all of its subsidiary companies to conduct its operations in such a manner that not only complies with health, safety and environmental measures required by law, but also to act positively to prevent injury, ill health, damage and loss arising from its operation.

Scope

It is with that intention in mind that the company has chosen to apply measures taken to satisfy the United States Department of Labor Occupational Safety and Health Administration (OSHA) requirements for Hazard Communication to all locations, domestic and foreign, *UNLESS A HOST COUNTRY PROGRAM OR STANDARD APPLIES, SUCH AS THE U.K. CONTROL OF SUBSTANCES HAZARDOUS TO HEALTH ACT.*

Reference

The exact requirements for the U.S. Federal OSHA *Hazard Communication Standard* can be found in the code of Federal Register 29 CFR Parts 1910.1200. The intent of the *Hazard Communication Standard* is to ensure that both the health and physical hazards of all chemicals used at the work place are identified and information is given on ways to protect employees while working with these chemicals.

All employees, or their designated representative, can obtain further information or copies of this program, the hazard communication standard, applicable SDS, and chemical information lists from the Safety Manager.

Requirements

A. Hazard Evaluation

1. Elevators of Beaumont, does not manufacture any chemicals and, therefore, does not make any hazard determinations. *Safety Data Sheets* (SDS) will be requested for chemicals and products purchased by the company. We will rely on the evaluation performed by the manufacturer on chemicals and products purchased by the company. The Safety Manager is responsible for developing and updating a listing of chemicals used or generated in the workplace and obtaining all SDS.

    - *Physical Hazards*: Substances that burn easily, explode, or react in some way.
    - *Health Hazards*: Substances that may be irritating, corrosive, sensitive or toxic.

2. This information will be maintained on each worksite and made available to all employees working on that worksite. The chemical inventory list and SDS will be maintained in a binder and kept on each superintendent's vehicle. (See Chemical Inventory Listing Form.)

B. Warning Labels

1. Once the physical and health hazards are identified, manufacturers are required to communicate these hazards. This is accomplished by labeling containers. The labels can assist the employees by identifying the physical and chemical hazards of the products in their work areas. Hazard warnings will be in the form of Words, Pictures, Symbols, or any

combination thereof. Safety precautions to be taken when working with the substance are also listed. The label must contain the following:
   a. Appropriate hazard warning.
   b. The contents of the container.
   c. The name, address, and emergency telephone number of the chemical manufacturer.
2. Each container in the workplace must have a label, tag or mark that indicates the appropriate hazard warning. The field foreman, shop superintendent, etc., or designated person, will be responsible for ensuring that all chemical containers received on location have the approved warning label.
3. Satellite containers of materials which have been transferred from their original containers must have approved warning labels attached. Approved labels include those outlined in the NFPA 704-M labeling system.

LABELS SHALL NOT BE REMOVED OR DEFACED ON CONTAINERS OF HAZARDOUS CHEMICALS.

B. Safety Data Sheets (SDS)

1. The SDS for all chemicals will be maintained at the worksite. The SDS form provides more detailed information about a product than the warning label. SDS copies will be maintained at each worksite.
2. The following information is provided on all SDS sheets:
   a. *Identification of the Chemical*: This section gives the chemical name, trade name, and any synonyms for the chemical. The CAS number and formula are also given.
   b. *Physical and Chemical Characteristics of the Hazardous Chemical*: This section will help identify the substance by observing its physical properties. It describes the chemicals, appearance, odor, boiling point, Ph and other technical data.
   c. *Hazardous Ingredients or Components*: Listed in this section are any hazardous ingredients that make up at least one percent (1%) of the total mixture. The Threshold Limit Value (TLV) will be listed, as well as the Health Hazard, Flammability and Reactivity values.
   d. *Fire and Explosion Hazard*: This section gives information on fire control, flash point and flammability limits of the material.
   e. *Reactivity Data*: This section gives information on conditions and materials that could increase the hazard of the chemical. Some materials react dangerously or become unstable when in the presence of other chemicals or under certain conditions.
   f. *Health Hazard Data*: The TLV, health effects and emergency or first aid procedures are listed in this section.
   g. *Spill or Leak Procedures*: This section lists the procedures for cleanup of material.
   h. *Special Protection*: This section lists the manufacturer's recommendations for personal protective equipment that should be used when working with the chemical.
   i. *Special Precautions*: This section details the required handling and storage procedures for the chemical.

C. Information and Training

All employees are required to attend a detailed Hazard Communication and Right-to-Know training session that covers the following topics:

1. Requirements and details of this program.
2. Any operations in their work area where hazardous chemicals are present.
3. Location of written hazard communication program, listing of hazardous chemicals present, and changes from SDS to Safety Data Sheets (SDS)
4. Identification of hazardous material by use of monitoring devices, visual appearance, or odor.
5. Toxicology.
6. Types: flammable, corrosive, radiation, etc.
7. Protective measures to be utilized to prevent exposure, appropriate work practices, emergency procedures, and proper PPE to be used including respirators: APR, SAR, SCBA.
8. Explanation of the labeling system and the Safety Data Sheets (SDS).
9. Acknowledgement of Training Session signed by employee.

D. Non-Routine Tasks

From time-to-time, employees may be required to perform tasks that are non-routine and may pose different hazards than those found in their normal workplace. Prior to beginning any such hazardous non-routine task, the Regional Manager or his designated representative is responsible for informing the employees of the appropriate safe handling methods for each chemical to be used. The specific chemical hazards, and the company's policy on protective measures to be adhered to, including personal protective equipment, emergency procedures, ventilating respirator use and employee assistance will be communicated to the employees performing the task. Documentation of employee training of non-routine tasks shall be maintained. Adequate documentation consists of recording each trainee's name, social security number, training date, trainer's name, nature and extent of training, and date completed.

E. Multi-Employer Workplaces

Many worksites may be classified as multi-employer workplaces. Where non- Elevators of Beaumont, personnel may be exposed to the potential hazards of chemical substances that are brought to the workplace by Elevators of Beaumont, SDS sheets shall be made available for review by employees of other employers with whom we share the site. The Elevators of Beaumont, onsite foreman will maintain a **current** inventory and copies of SDS sheets of chemicals brought onsite. Employees shall be informed of marking and sign systems in use as well as precautionary measures to be taken in the event of a chemical release or exposure.

All Elevators of Beaumont, employees are expected to speak and understand English. Elevators of Beaumont, will ensure that labels or other forms of warning are legible, in English, and prominently displayed on the container. In multi-employer workplaces, markings and signs may be provided in the primary other language, in addition to English, as required.

TRAINING SESSION ON HAZARD COMMUNICATION

I, _____, acknowledge the following:
(printed name of employee)

1. I know where the Safety Data Sheets are kept for my workplace.

2. I understand the safe work procedures and precautions to be taken when working with these products, including the use of personal protective equipment.

3. I know where the emergency supplies are kept.

4. I know where the emergency phone numbers are posted.

5. I am aware that I may review and/or request copies of the hazardous chemicals list, Elevators of Beaumont, written program, and the SDS at this facility.

EMPLOYEE SIGNATURE: _____

DATE: _____ LOCATION: _____

1523 – HAZARD RECOGNITION (ASSESSMENTS)

Purpose and Scope

A study of industrial accident statistics reveals that almost six times as many industrial accidents occur as a result of unsafe acts of employees as compared to the unsafe physical conditions in the workplace, and yet, very little is done to understand or control the human element. A hazard detection and control program that does not take into account the human element is almost certain to fail. Elevators of Beaumont, has in place hazard recognition (assessments) guidelines that are required of all employee's and sub-contractors. This processes are to be used for routine, non-routine activities, new processes, and changes in operation, products or services.

Definitions

Hazard: An un-assessed risk or a potential threat for a loss. An unsafe condition or an unsafe practice (act) that, if not corrected or controlled, has the potential to cause, contribute to or intensify an undesired or unintended event (accident).

Accident: An unintended event that has the potential to cause damage to property, injury, illness or death.

Loss: The bodily injury, death, financial or property damage arising out of an accident.

Unsafe Condition: A physical condition within the environment with the potential to cause or contribute to an accident.

Unsafe Practice (A*ct*): A knowing or unknowing violation of the standard accepted procedures or practices with the potential to cause or contribute to an accident.

If hazards such as unsafe conditions and/or unsafe practices can be detected, action can be taken to eliminate or modify them. This action can help prevent an accident from occurring and, hence, prevent a loss. To do this successfully, it is important to understand the nature of unsafe conditions and unsafe acts and the reasons for their occurrence. If a hazard cannot be prevented, the strategy should be to control its frequency and severity. Employee's and sub-contractors are trained in hazard identification and are to actively participate in Hazard assessment activities on a regular basis.

A. <u>Types of Hazards</u>

Hazards from unsafe conditions can be temporary or permanent. They generally remain in the environment until found (i.e., by inspection or by accident) and tend to worsen with elapsed time. An important characteristic of these types of hazards is that once the fundamental cause of their existence is found and acted upon, they do not normally reoccur for any extended period of time. Unsafe condition type hazards can be caused by:

1. Unsafe practices.
2. Previous accidents.
3. Damaged equipment.
4. Normal wear and tear.

5. Poor maintenance.
6. Fabrication and/or design defects.
7. Improper arrangement or layout.
8. Environmental contamination.
9. By products of an operation.

B. Unsafe Practice Type Hazards

Hazards from unsafe work practices are not always easily identified compared to those from unsafe conditions. However, they will often result in a larger percentage of accidents. These hazards are often brought about by:

1. Lack of knowledge or skill.
2. Incentive to commit an unsafe act (deliberate act).
3. Existing poor work habits.
4. Habit interference reaction.
5. Mental or physical impairment.

Because unsafe practices are harder to detect than the unsafe condition type hazards, they are much more difficult to control. They occur intermittently and are usually of short duration. The reasons for their occurrence can vary from individual to individual as well as varying reasons for the same individual. Analysis of unsafe work practices requires an understanding of human nature in order to target a specific solution to each case.

Hazard Detection and Identification

A good safety program always starts with hazard detection that consists of a deliberate search and identification of various unsafe conditions and unsafe practices in the workplace. It requires a good knowledge of acceptable standards, codes, regulations and safe work practices. The tools that are most commonly used in hazard detection include:

A. Physical Inspection

A physical (or facility) inspection is a program of systematic and planned plant observations for the effective prevention of accidents, and efficient management of the people, equipment, machines and environment. Inspections can be formal or informal and are very suitable for detecting unsafe condition type hazards. A program of regular physical inspections can help spot developing unsafe conditions before they become dangerous and produce an accident. The main weakness is the physical inspections are not as suitable for detecting hazards from unsafe work practices. They also may not reflect the actual accident experience and may have a tendency to overlook less obvious unsafe condition type hazards.

B. Accident Investigation

An accident investigation is basically an objective account, analysis and evaluation of an accident based on all facts, opinions, statements and related information. A true accident investigation also includes a recommended corrective action to prevent a reoccurrence of the accident.

C. Accident Analysis

An accident analysis is a collective analysis of data obtained from a variety of accident information. If accident reports and investigations, including First Aid records, are included in this analysis, it significantly enhances its effectiveness in detecting unsafe conditions and unsafe practice type hazards. *Accident and Incident Analysis* looks at the total loss experience to highlight the *vital few* accidents that result in significant loss. This provides valuable insight into the loss data that may not be apparent in a single accident. It is most useful in providing a focus for corrective actions when the resources for any remedial action are scarce. A successful accident analysis requires a good knowledge of various factors involved, but is only as good as the accident data available. Therefore, good accident record keeping is essential.

Hazard Control

1. Unsafe conditions associated with normal wear and tear are some of the easiest to correct by instituting a good maintenance program. Hazards caused by defects in tools, equipment and workplace require more in-depth analysis like *Process and Equipment Hazard Review* and *Ergonomic Analysis*. Unsafe conditions arising out of environmental contamination may require engineering controls. It is important to note that unsafe practices like poor work habits also create unsafe conditions. Once correctly identified, control of unsafe condition hazards is usually a matter of allocating adequate resources for the corrective action.

2. Unsafe acts committed out of lack of knowledge are usually the most dangerous, but probably the easiest to control by providing proper instructions and training (i.e., employee orientation).

3. Unsafe acts committed because of poor or unsafe work habits can be corrected by training and periodically retraining until the unsafe work habits are replaced by safe ones.

4. Unsafe acts that are committed knowingly or deliberately can be addressed by providing a stronger incentive to choose a safe practice over an unsafe one.

   These incentives can be positive (i.e., rewards) or negative (i.e., punishments). The incentive value of various objects and activities varies with different individuals and situations. They pose a creative challenge to management. A person committing an unsafe act knowingly is generally aware of the danger and might take a compensating action to protect himself (i.e., a driver running a red light will often make certain that no police officer is around to issue a ticket).

5. Employee physicals and other careful job placement measures may help minimize adverse effects of an individual's physical or mental disability.

Hazard Assessment Tools

1. Safe Work Checklist (Confined Space Entry).
2. Hazard Assessments (PPE).
3. Classification and Severity Rankings
4. Job Safety Analysis.

1525 – HEARING CONSERVATION PROGRAM

Purpose and Scope

Elevators of Beaumont, is keenly aware of the importance of hearing protection requirements as they apply to our employees. However, requirements cannot, and do not, make an effective program. Incentives must be created in the employee's mind sufficient to prove the necessity for any personal protective device. The following information is to be provided to all employees. It is the desire of the company to assist its employees to better understand the importance of proper use and care of hearing protection. Noise does not have to be painful to cause damage to ears. Hearing loss is a slow process. Once it occurs, there is no way to reverse the damage.

Responsibilities

Company management is responsible for administration of the program. Where it is necessary to use personal protective equipment to control exposure of employees to high noise levels, the site supervisor will implement this program. Management will evaluate hearing protection for the specific noise environments in which it will be used. Hearing protectors will be provided at no cost to employees when needed and/or requested, and replaced as necessary.

Employees are responsible for wearing protective hearing equipment as required and to notify their supervisor immediately when conditions or practices change and result in increased noise levels.

Reference

The company's *Hearing Conservation Program* will adhere to OSHA requirements for protection. This includes the audiometric testing program for employees exposed to an eight-hour TWA of 85 decibels or more. This program will be in accordance with 29 CFR 1910.95 as it applies to the construction industry. Testing will be done by a licensed or certified audiologist, physician, or technician certified by the CA-OHC.

Permissible Noise Exposures

Duration Per Day	Sound Level Slow Response
8 hours	90
6 hours	92
4 hours	95
3 hours	97
2 hours	100
1-1/2 hours	102
1 hour	105
½ hour	110

When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each. D=100 (C1/T1+C2/T2+…+Cn/Tn). Cn indicates the total time of exposure at a specified noise level. Tn indicates the total time of exposure permitted at that level. Exposure to impulsive or impact noise should not exceed 140 decibels peak sound pressure level.

Procedure

Hearing Conservation Program

In order to determine what elements of the *Hearing Conservation Program* to implement, the following requirements shall be considered:

1. Should an eight-hour time-weighted average (TWA) of 85 decibels (db) be exceeded, elements of a hearing conservation program shall be implemented.

2. Should the maximum exposure level of an eight-hour TWA of 90 decibels (db) be exceeded, engineering or administrative controls shall be implemented and supplemental hearing protection shall be provided if appropriate.

Noise Exposure Determination

1. Any area where noise levels are at or above 85 decibels for a substantial portion of the workday should be considered a prime candidate for employee exposure monitoring. To determine where these areas are located, an OSHA approved sound level meter shall be used to conduct area sampling. Examples of typical high noise areas include compressors, arc gouging in tanks, welding machine packs, and grinding. Once the suspect areas have been located, arrangements shall be made to develop and implement a monitoring program. **Note: If you are standing within two or three feet of the person you are talking to and you can't understand a normal conversation, then you probably need to be wearing hearing protection**

2. If any employee is exposed to more than one high-noise area, then all high-noise areas to which the employee is exposed shall be sampled.

3. Sound level instruments to be used for the monitoring program shall be capable of integrating continuous, intermittent, and impulsive sound levels from 80 to 130 decibels. These instruments shall be calibrated before and after each use to ensure measurement accuracy.

4. Employee exposure measurements shall be retained for at least two years by Elevators of Beaumont, These records include the following information:
   a. Employee identification.
   b. Description of equipment utilized.
   c. Equipment calibration record.
   d. Average decibel level over eight-hour workday.

5. Audiometric test records shall be retained for the duration of the affected employee's employment. All records shall be provided upon request to employee or employee's designee.

Employee Notification

Elevators of Beaumont, shall notify its employees who are exposed to an eight-hour TWA of 85 decibels or greater. Employees or their representatives may observe any noise measurements that are conducted.

Engineering and Administrative Controls

Feasible engineering or administrative controls shall be used when it has been determined that exposure exceeds an eight-hour TWA of 90 decibels. Should engineering or administrative controls fail to reduce exposure levels below OSHA limits, hearing protection shall be employed as an alternate method.

Hearing Protection

1. If engineering and administrative controls fail to reduce noise exposure levels below OSHA limits, or are unfeasible, personal protective equipment shall be provided by Elevators of Beaumont, to each affected employee and shall be used to reduce the noise exposure levels below an eight-hour TWA of 90 decibels; or 85 decibels for those persons who have experienced a standard threshold shift.

2. Suitable hearing protectors shall be made available by Elevators of Beaumont, to all employees exposed to an eight-hour TWA of 85 decibels at no cost to such persons, and the use of these hearing protectors shall be mandatory. Responsibility for wearing the hearing protection shall be the employee's. Hearing protectors shall be replaced as necessary.

3. For employees exposed to an eight-hour TWA of 85 decibels or greater, Elevators of Beaumont, shall ensure protectors are worn for the following reasons:
   a. Employee has not had a baseline audiogram established.
   b. Employee has experienced a standard threshold shift.

4. Elevators of Beaumont, shall provide training for employees and supervisors exposed to an eight-hour TWA of 85 decibels or greater, in the use and care of hearing protectors, ensure proper initial fitting, and supervise correct use of all hearing protectors to be used by their employees. Training must be conducted annually and include the following information:
   a. Effects of noise on hearing.
   b. The purpose of hearing protectors.
   c. Advantages, disadvantages, and attenuation of various types of hearing protectors.
   d. Instruction on selection, fitting, use and care.
   e. Purpose of audiometric testing and explanation of test procedures.

Audiometric Testing Program

1. Elevators of Beaumont,. shall establish and maintain an audiometric testing program for its employees that are exposed to an eight-hour TWA of 85 decibels or greater. Testing will be conducted by an audiologist, otolaryngologist, physician, or certified technician using audiometric measuring instruments and test booths that meet OSHA requirements.

2. A baseline audiogram shall be established within six months of an employee's first exposure at or above an eight-hour TWA of 85 decibels. Testing by Elevators of Beaumont, to establish a baseline audiogram shall be proceeded by a minimum of fourteen hours without exposure to workplace noise.

3. Subsequent annual audiograms shall be conducted for all Elevators of Beaumont, employees exposed to an eight-hour TWA of 85 decibels or greater. A review of the annual audiogram as it compares to the baseline audiogram shall be conducted.

4. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the Elevators of Beaumont, employee shall be informed in writing within 21 days of the determination. Additional hearing protector requirements exist for those employees who experience a standard threshold shift. Use of hearing protection shall be re-evaluated and/or re-fitted and employees re-trained in its use and care.

5. Audiometric test records will be retained for the duration of the individual's employment and will contain the following information:

    a. Name.
    b. Job classification.
    c. Date of audiogram.
    d. Examiner's name.
    e. Last date of calibration.
    f. Employee's most recent noise exposure assessment.
    g. Background and sound pressure levels in audiometric booth.

6. Elevators of Beaumont, requires its subcontractors to adhere to the standards set forth above with respect to employees of the subcontractor who are exposed to an eight-hour TWA of 85 decibels or greater at such contractor worksites, if such worksites include any Elevator of Beaumont facilities.

Training Requirements

All employees who are exposed to noise levels equal to or exceeding 85 decibels per eight-hour TWA are required to participate in the company *Hearing Protection Training Program.* Training shall be updated consistent to changes in PPE and work processes. Elevators of Beaumont, shall make available to affected employees copies of the noise exposure procedures and shall also post a copy in the workplace.

Training will be repeated on an, at least, **annual** basis for employees required to take part in the *Hearing Conservation Program.*

1526 – HOUSEKEEPING

Purpose

To implement sound general housekeeping practices and ensure the safety and well being of every employee and visitor of Elevators of Beaumont,

Requirements

Following are general housekeeping requirements for a variety of operations. It is the responsibility of every employee of the company to ensure his work area is kept free from accumulation of debris and subsequent obstructions. In addition to specific work areas, general housekeeping procedures for common areas shared by all employees are included and must be adhered to by every employee of the company.

General Housekeeping

1. Keep all passageways clean and free of obstruction. If you see something in the way, move it to its proper location.
2. Keep all storage areas neat and orderly. Do not stack boxes or other stored items in a fashion that could pose a threat to employee safety.
3. Keep floors as clean and dry as possible during your workday. If something is spilled, clean it up immediately.
4. Never block emergency equipment or passageways (i.e., exits, fire extinguishers, first aid supplies, emergency eyewash stations, stairways, fixed ladders, etc.). If you notice emergency equipment and/or passageways blocked, report to the manager immediately or unblock the emergency equipment and/or passageway.
5. Always sweep up broken glass immediately and discard in an appropriate trash bin.
6. Whenever tools or other materials are not in use, place them in their designated storage area.
7. At the end of each workday, discard all scrap material in appropriate scrap bins.
8. Keep *ALL* exits clear and free from obstruction at all times.
9. Whenever necessary, empty trash receptacles.
10. Keep cables, welding leads, hoses, etc., out of working or vehicular traffic areas.

Flammable and Combustible Materials

1. Always maintain adequate spacing between flammable and combustible materials.
2. Always store flammable and combustible materials in their proper location in an upright position and in approved containers.

Sanitary Facilities

1. Always do your part to maintain washroom facilities in sanitary condition.
2. *NEVER* pour any material other than water or other consumable liquids down any toilet or washroom drain.
3. Whenever there is a need for additional toilet paper, towels or hand soap, please report this need to the manager.
4. Keep fresh drinking water and single service cups readily available to employees along with sufficient trash containers.

1527 – LOCKOUT / TAGOUT (LOTO)

THE CONTROL OF HAZARDOUS ENERGY LOCKOUT/TAGOUT PROGRAM

PURPOSE

1. This standard establishes lockout/tagout (**LOTO**) procedures for the safety of personnel working on equipment that must be locked out to prevent an unexpected release of electrical, hydraulic, pneumatic or mechanical energy.
2. Electrical **LOTO** procedures shall be used before commencing any work requiring personnel to work on/near de-energized circuit parts or equipment in any situation where there is danger of injury due to unexpected energizing or startup of equipment.
3. Other **LOTO** procedures shall be used for safely isolating other energy sources such as process fluids, hydraulic, pneumatic, thermal, chemical and mechanical systems.
4. The procedure shall also be immediately implemented when equipment becomes unsafe to operate.

SCOPE

All employees are required to comply with the restrictions and limitations imposed upon them during the use of **LOTO**. Authorized employees are required to perform the **LOTO** in accordance with this procedure. All employees, upon observing a machine or piece of equipment that is locked out to perform servicing or maintenance shall not attempt to start, energize or use that machine or equipment. All locks and lockout equipment must be removed before leaving the jobsite at the end of the job. Noncompliance with this policy and subsequent procedures shall be grounds for disciplinary action up to and including termination.

RESPONSIBILITIES

President of Elevators of Beaumont,

The President is to ensure that the requirements set forth by this policy and subsequent procedures are followed and to ensure that periodic reviews as to the effectiveness of procedures are conducted by Elevators of Beaumont, management**.**

Regional Managers

It is the responsibility of Elevators of Beaumont, management to ensure that procedures are developed to satisfy site specific **LOTO** requirements and to provide and record incidents of training in **LOTO** procedures. They will report the status and acceptability of these procedures to the President on at least an annual basis.

Project Managers

All project managers are accountable to ensure that appropriate control measures are utilized in areas of their responsibility and shall have read and understood the regulatory requirements

(federal, state, local and those of our customers) for hazardous energy control and Elevators of Beaumont, policies and programs.

Safety Supervisor

Regional Safety Supervisors shall maintain a supply of **LOTO** related equipment in sufficient quantities to support field operations. This shall include, but is not limited to tags, locks, lock boxes and other lockout devices.

Foremen

It shall be the responsibility of all affected foremen to ensure that authorized procedures shall be taken to prevent injury due to the release of hazardous energy. The foremen shall be familiar with the requirements of OSHA standards, Elevators of Beaumont, policies and procedures, customer requirements and applicable state and local rules and regulations requiring the control of hazardous energy. Should questions arise about required procedures to be followed, they shall consult Elevators of Beaumont, management for guidance.

Employees

Each employee is responsible for taking necessary precautions and use only authorized procedures in applying **LOTO** in their daily activities. They will consult their foreman should there be any question about the necessary procedures.

DEFINITIONS

Affected Employee: An employee whose job requires him to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him to work in an area in which such servicing or maintenance is being performed. Any field employee may be an affected employee while performing repair of maintenance activities on out-of-service or in-service equipment.

Authorized Employee: A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing servicing or maintenance covered under this section.

Capable of Being Locked Out: An energy isolating device is capable of being locked out if it has a hasp or other means of attachment to which, or through which, a lock can be affixed, or it has a locking mechanism built into it. Other energy isolating devices are capable of being locked out, if lockout can be achieved without the need to dismantle, rebuild, or replace the energy-isolating device or permanently alter its energy control capability.
Energized: Connected to an energy source or containing residual or stored energy.

Energy Isolating Device: A mechanical device that physically prevents the transmission or release of energy, including but not limited to the following: A manually operated electrical circuit breaker; a disconnect switch; a manually operated switch by which the conductors of a circuit can

be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy. Push buttons, selector switches and other control circuit type devices are not energy isolating devices.

Energy Source: Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal or other energy.

Lockout: The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device is just that - a locking device that provides a positive means for rendering a switch, valve, or any energy source inoperable. The device may be a padlock, restraining bar, chain, or any device that positively prevents a machine or piece of equipment from becoming *energized* or from releasing stored energy. The device must be substantial enough to prevent removal without the use of excessive force or unusual techniques.

Servicing and/or Maintenance: Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. These activities include lubrication, cleaning or un-jamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Tagout: The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device: Serves as a lockout and is a means of identifying who locked out the machinery, the date and time of day the lockout took place and the department for which the person works. There is additional information that may be placed on the tag such as beeper number, extension number, etc. Tags must be of a durable nature, weather and chemical resistant, and able to be securely fastened to the locking mechanism so as not to fall off. Tags must be standardized in color and size with wording warning of hazardous energy (Do Not Start) (Do Not Open) (Do Not Close) (Do Not Energize) (Do Not Operate) or similar warnings.

General Guidelines

1. **LOTO will be performed in all cases where the control of hazardous energy is necessary for employee protection.**

2. Foremen will perform an initial evaluation to identify potential exposure(s) that must be isolated before safely working on equipment.

3. Notify affected personnel and shutdown the equipment according to established shutdown procedures with approval of the responsible supervisor or designated alternate.

4. Outside personnel (contractors, etc.):

a. Whenever outside servicing personnel are to be engaged in activities covered by the scope and application of this standard, Elevators of Beaumont, management and the outside employer shall inform each other of their respective lockout or tagout procedures.
b. Elevators of Beaumont, shall ensure that our employees understand and comply with restrictions and prohibitions of the outside employer's energy control program.

5. Group lockout or tagout:

   a. When servicing and/or maintenance is performed by a crew, craft, department or other group, they shall utilize a procedure which affords the employees a level of protection equivalent to that provided by the implementation of a personal lockout or tagout device.

      All job site employees are required to actively participate in the LOTO process.

   b. Group lockout or tagout devices shall be used in accordance with the procedures required by this section including, but not necessarily limited to, the following specific requirements:

      - Primary responsibility is vested in the foreman for a set number of employees working under the protection of a group lockout or tagout device (such as an operation's lock).
      - Provision for the authorized employee to ascertain the exposure status of individual group members with regard to the lockout or tagout of the machine or equipment.
      - When more than one crew, craft, department, etc. is involved, assignment of overall job-associated lockout or tagout control responsibility to an authorized employee designated to coordinate affected work forces and ensure continuity of protection.
      - **Each authorized employee shall affix a personal lockout or tagout device to the group lockout device, group lockbox, or comparable mechanism when he begins work, and shall remove those devices when he stops working on the machine or equipment being serviced or maintained.**

6. *Shift or personnel changes*: Management will establish and implement specific procedures to be utilized during shift or personnel changes to ensure the continuity of lockout or tagout protection, including provisions for the orderly transfer of lockout or tagout device protection between off-going and oncoming employees, to minimize exposure to hazards from the unexpected energization or startup of the machine or equipment, or the release of stored energy.

Procedure

A. Electrical **LOTO**

1. Notify all affected employees that servicing or maintenance is required on a machine or equipment and that the machine or equipment must be shut down and locked out to perform

the servicing or maintenance. Name(s)/Job Title(s) of affected employees and how to notify.

2. The authorized employee shall refer to the company procedure to identify the type and magnitude of the energy that the machine or equipment utilizes, shall understand the hazards of the energy, and shall know the methods to control the energy.

3. If the machine or equipment is operating, shut it down by the normal stopping procedure (depress stop button, open switch, close valve, etc.).

4. Deactivate the energy isolating device(s) so that the machine or equipment is isolated from the energy source(s).

5. The person doing the work shall *LOCK* open the circuit breaker(s) or approved disconnect device using an approved lock.

6. Stored or residual energy (such as that in capacitors, springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down, etc. If reaccumulation of stored energy is possible, verification of isolation shall be continued until servicing or maintenance is complete, or until the threat no longer exists.

7. *TAG* the lockout with a dated and signed **DANGER, DO NOT OPERATE** tag. The reason for the lockout shall be written on the tag.

8. Other personnel doing work on this equipment or desiring it to remain inoperative shall insert a lock and danger tag in the same lockout. Never install a lock without a tag.

9. There must be only *ONE* key for a lock, or a set of locks, and that one key will be held by the locking party until the completion of the job.

10. If a circuit cannot be locked out, it must be de-energized and tagged. If the circuit requires disconnection or removal of a component to ensure isolation, a qualified electrician must perform the work.
11.
12. The area must be *CLEAR* of personnel and tools prior to attempting to start the equipment.

13. Before starting work, *TRY* to energize the piece of equipment locally to ensure that the proper circuit is de-energized and that an override does not exist.

14. Only the person originally attaching the lock and tag is authorized to remove the lock and tag unless the person is not available or other circumstances make it impractical for the original party to remove the lock and tag. *UNDER THESE CONDITIONS THE SUPERVISOR OR DESIGNATED ALTERNATE, AFTER CHECKING THE EQUIPMENT FOR COMPLETE REPAIRS AND ASSUMING FULL RESPONSIBILITY, CAN REMOVE THE TAG AND LOCK AND PLACE THE EQUIPMENT IN SERVICE*. The supervisor or

designated alternate is responsible for notifying personnel that their lock(s) and tag(s) have been removed.

15. Due to shift or personnel changes, the custody of lock and key may be transferred between personnel. Tags need to reflect the change in responsibility.

16. When personnel performing the work prepare to unlock the equipment, it is their responsibility to contact the person responsible for the area to determine that no one is working on the equipment and that no hazard to personnel or equipment would be created by energizing an electrical circuit or by placing the equipment in service.

B. Pneumatic, Thermal, Chemical and Hydraulic **LOTO**

The same basic procedure used for electrical lockout must be used for isolating process, pneumatic and hydraulic energy sources. The primary difference will be the means of isolation. The recommended means of isolation for these energy sources are as follows:

1. *Blinding / Blanking*: Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.
2. Disconnection: Physically disconnecting and offsetting the ends or removing part of the system, and properly isolating and tagging **both** open ends is an acceptable alternative where blinding is not feasible.

C. Mechanical Energy Lockout/Tagout

The means of isolation can be chains, blocks or disconnection.

1. If springs are involved, they shall be released or physically restrained when necessary to immobilize mechanical equipment.
2. The use of breaks (i.e., on pumping units) is not an acceptable means of energy isolation. The use of blocks and/or chains, in addition to the break, is required.

D. The following procedures will be followed when LOTO devices must be temporarily removed for safety testing machines:

1. Clear away tools.
2. Remove employees.
3. Remove the LOTO device.
4. Energize and proceed with testing.
5. De-energize and reapply control measures.

This procedure will be documented, signed and dated by the authorized personnel performing the test.

FIELD REPAIR OF MOTORIZED OPERATING EQUIPMENT

Ensure the following minimum requirements are met:

1. The engine shall be turned off.
2. As required to prevent exposure, any hydraulic, pneumatic or kinetic energy shall be relieved or guarded.
3. The battery shall be disconnected.
4. The equipment shall be tagged out.
5. If key operated, the key shall be in the possession of the repairman during the time of the repairs.
6. An attempt shall me made to start the equipment. If it does not start, repairs can proceed.
7. Upon completion of repairs, all guards removed shall be replaced, guards installed to prevent the release of energy removed, tools and other material collected and removed from the equipment and the battery reconnected. All personnel not involved in startup should be removed from the area and the equipment restarted.
8. The tag may be removed and normal operations resumed.
9. The following types of equipment are covered by this policy:
   a. Portable welding machines. (Lincoln, Miller, etc.)
   b. Pick-up trucks. (Dodge, Ford, Chevrolet, etc.)
   c. Portable air compressors. (Ingersoll Rand, Kohler, etc.)
   d. Mobile cranes. (Grove, Gallion, etc.)
   e. Skid steer loaders. (Bobcat, Case, etc.)

Periodic Inspection

1. At least annually, conduct and document an inspection of the lockout/tagout procedure to ensure that the requirements of the standard are being followed.
2. The inspection shall be performed by each regional manager or designated alternate.
3. The inspection shall be conducted to correct any deviations or inadequacies identified and shall include the following:
   a. A review between the supervisor or designated alternate and each authorized employee of the employee's responsibilities under the **LOTO** standard.
   b. Identification of the equipment on which the **LOTO** was being utilized.
   c. Date of inspection.
   d. A list of the employee or employees' inspection.
   e. Supervisor or designated alternate performing an inspection.

Training

1. Training in these procedures for authorized employees shall be completed within 60 days of the issuance of the procedure. Only trained and authorized employees shall attempt repairs on equipment where lockout or tagout is required.
2. Retraining is required when there is a change in the energy control procedure or a new hazard is introduced.
3. All training and/or retraining must be documented and placed in the employee's personnel file.

1528 – OFFICE SAFETY

Elevators of Beaumont, Safety Equipment and Procedures

1. Keep current emergency phone numbers for police, fire, and medical aid near the telephone.
2. Become familiar with all exits and building evacuation procedures. An evacuation plan should include both primary and secondary escape routes.
3. Know where first aid kits are located. You should also know who has been trained in first aid and cardiopulmonary resuscitation (CPR) procedures and where these people are located.

Emergency Procedures in Case of Fire

1. Know how to report a fire.
2. Know the location and operating methods of all fire-fighting equipment in the building.
3. Be familiar with survival techniques in case you are trapped by a fire.
   a. Do not use elevators. Use stairways to exit.
   b. If caught in a smoke-filled area, crawl on the floor and take short breaths through your nose. If possible, hold a cloth in front of your face.
   c. Before opening a door, touch it to check its temperature. If it is hot, do not open it.
   d. Know alternative means of exit.

Office Furniture and Equipment

A. Files and Cabinets

1. Whenever possible, arrange filing cabinets side-by-side and bolt them together.
2. For single cabinets, do not overload the upper drawers and have only one drawer open at a time.
3. Close desk and file cabinet drawers when not in use. Never leave an open drawer unattended.
4. Avoid placing cabinets and files so that open drawers block passageways.
5. Never stack separate two-drawer file cabinets unless they are designed to be stacked and can be fastened together.
6. Do not stack bookcases or file cabinets on top of tables or desks unless designed for such use. Even if bolted to a wall, they may fall if the table is moved because of excessive unsupported weight.
7. Large files, cabinets, and bookshelves should be bolted to the wall, particularly in libraries or file rooms.
8. Never attempt to move heavy file cabinets without proper assistance.

B. Other Furniture

1. Always use an approved ladder or stool to reach articles high above the floor. Never use a swivel chair or other makeshift device to reach high places.
2. Sharp burrs on metal furniture and splintered edges on wooden furniture should be repaired or replaced. Glass desktops are not recommended and should not be replaced when broken.
3. Keep furniture in proper repair. Repair sticky drawers, replace broken casters, and replace warped, cracked or broken seats on chairs. Warped, cracked, or broken chair mats that create a stumbling hazard should be replaced.
4. Use typewriter stands or platforms designed to carry the weight and size of the machine. Use caution when pulling out a spring-loaded typewriter platform from the desk. Never use such a platform for anything other than its intended purpose.
5. Avoid storing heavy objects above eye level in the office.
6. Secure pictures and wall hangings with the proper fasteners.
7. Desk chairs should be stable and level. You should not tilt back or put your feet on top of the desk.
8. Make aisles wide enough for easy passage and always keep them clear of obstructions.

C. Office Incidentals and Mechanical Devices

1. Keep items such as paper clips, thumbtacks, rubber bands, and pencils off the floor. Such items should be kept in containers in the desk, not loose in drawers.
2. Remove staples with a staple puller and dispose of used staples properly.
3. Use a moistener to seal envelopes in order to avoid both mouth cuts and germs. Avoid cuts by picking up an individual sheet of paper at the corner, not at the side. Exercise caution when turning book pages or going through files.
4. Pass scissors handle first, blades together, and keep them where they cannot fall.
5. Handle sharpened pencils carefully. Do not place pointed objects upright in a container or upright in a pocket. Pocket protectors, for carrying pencils and pens, are recommended.
6. Use staplers and paper cutters with care. Never overload or force them. Paper cutters should be left in a closed and latched position when not in use.
7. Do not operate office equipment without proper instruction.
8. Handrails should be used when ascending or descending stairways.
9. Report all unsafe conditions to your supervisor at once.
10. Place litter and trash in waste containers provided. Respect others and reduce hazards by keeping work areas orderly enough for safe movement of personnel.

D. Electrical Equipment

1. Arrange to have worn electrical cords replaced promptly by qualified personnel. Never attempt electrical repairs yourself unless you are qualified to do the work.
2. Keep walking areas clear of telephone and electrical cords. Tape down cords that temporarily cross aisles.
3. Electrical outlets must not be overloaded. Bear this in mind when using portable electric heaters. Use only properly ground three-pronged plugs or Underwriters Laboratories (UL) approved double-insulated appliances.

4. Dry your hands thoroughly before plugging, unplugging, or operating electrical equipment.
5. Turn off the power overnight for copiers, coffee machines, desk lamps and other electrical devices as required to meet building safety requirements. Always turn off and unplug portable electric heaters when leaving the office.
6. Where a microwave oven or other radiation device may be in use, signs announcing the possibility of this activity must be posted at all entrances to the area.
7. Keep coffee and other beverages away from electrical equipment such as copy machines.
8. Paper shredders should be operated with extreme caution. Keep ties, dangling jewelry, and loose clothing away from machines by standing to the side of the machine. Always stand in a position that is accessible to the *off* switch. Always turn off after each use and do not force paper. Do not attempt to unjam the shredder unless the power is turned off.
9. Unplug electric staplers and pencil sharpeners before opening them for cleaning or repair.
10. Replace burned out light bulbs or fluorescent bulbs promptly.

E. Flammable and Hazardous Materials

1. Keep all flammable materials away from possible ignition sources and in approved containers, with the contents labeled for identification. Containers must not be left uncapped.
2. Do not use aerosol sprays, cleaners, or insect repellents near ignition sources.
3. Keep portable electric heaters away from furniture and other flammable materials. Never block forced-air heater outlets.
4. Do not allow paper or other flammable material to accumulate behind copy machines

1529 – PERSONAL PROTECTIVE EQUIPMENT (PPE)

Purpose

The proper use of Personal Protective Equipment (PPE) is an integral part of a comprehensive *Safety and Health Management Program*. Personal protective equipment is available for a variety of uses including eye and face protection, foot protection, hearing protection, respiratory protection, head protection, hand protection and fall protection.

29 CFR 1910.132(d)(1) requires that the employer assess the workplace to determine if hazards are present, or likely to be present, that necessitate the use of personal protection equipment.

29 CFR 1910.132(d)(2) requires the employer to verify that the workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date(s) of the hazard assessment; and, which identifies the document as a certification of hazard assessment.

Responsibility

PPE required by reasons of hazards of processes or environment to protect body parts from inhalation, absorption, or physical contact will be provided, used, and maintained in a sanitary and reliable condition and all damaged PPE be replaced at no charge to employee.

Each superintendent shall ensure that prior to selecting eye, face, head, hand, foot or hearing protection, the following hazard assessment shall be conducted for each workplace area.

Assessment guidelines

In order to assess the need for PPE, the following steps should be taken:

A. Survey

Conduct a walk-through survey of the areas in question. The purpose of the survey is to identify sources of hazards to workers and coworkers. Consideration should be given to the basic hazard categories:

1. Impact.
2. Penetration.
3. Compression (roll-over).
4. Chemical.
5. Heat.
6. Harmful dust.
7. Light (optical) radiation
8. Elevation above ground

B. Sources

During the walk-through survey, the following should be observed:

1. Sources of motion (i.e., machinery or processes where any movement of tools, machine elements or particles could exist, or movement of personnel that could result in collision with stationary objects).
2. Sources of high temperatures that could result in burns, eye injury or ignition of protective equipment, etc.
3. Types of chemical exposures.
4. Sources of harmful dust.
5. Sources of light radiation (i.e., welding, brazing, cutting, furnaces, heat treating, high intensity lights, etc.).
6. Sources of falling objects or potential for dropping objects.
7. Sources of sharp objects that might pierce the feet or cut the hands.
8. Sources of rolling or pinching objects that could crush the feet.
9. Layout of workplace and location of coworkers.
10. Any electrical hazards.
11. Additionally, injury and accident data should be reviewed to help identify problem areas.

C. Organize Data

Following the walk-through survey, it is necessary to organize the data and information for use in the assessment of hazards. The objective is to prepare for an analysis of the hazards in the environment to enable proper selection of protective equipment.

D. Analyze Data

Having gathered and organized data on a workplace, an estimate of the potential for injuries should be made. Each of the basic hazards should be reviewed and a determination made as to the type, level of risk, and seriousness of potential injury from each of the hazards found in the area. The possibility of exposure to several hazards should be simultaneously considered.

E. PPE Selection Guidelines

After completion of the procedures described above, the general procedure for selection of protective equipment is to:

1. Become familiar with the potential hazards and the type of protective equipment that is available, and what it can do (i.e., splash protection, impact protection, etc.).
2. Compare the hazards associated with the environment (i.e., impact velocities, masses, projectile shape, radiation intensities), with the capabilities of the available protective equipment.
3. Select the protective equipment that ensures a level of protection greater than the minimum required to protect employees from the hazards.
4. Fit the user with the protective device and give instructions on care and use of the PPE. It is very important that end users be made aware of all warning labels for, and limitations of, their PPE.

5. Should employees elect to supply their own PPE, it must meet the requirements of this program. Supervisors must assure that it is adequate to protect the employee and is maintained in an appropriate and sanitary condition.

F. Fitting the Device

Careful consideration must be given to comfort and fit. PPE that fits poorly will not afford the necessary protection. Continued wearing of the device is more likely if it fits the wearer comfortably. Protective devices are generally available in a variety of sizes. Care should be taken to ensure that the right size is selected.

G. Devices with Adjustable Features

Adjustments should be made on an individual basis for a comfortable fit that will maintain the protective devices for eye protection against dust and chemical splash to ensure that the devices are sealed to the face. In addition, proper fitting of helmets is important to ensure that it will not fall off during work operations. In some cases, a chin strap may be necessary to keep the helmet on an employee's head (chin straps should break at a reasonably low force so as to prevent a strangulation hazard). Where manufacturer's instructions are available, they should be followed carefully.

H. Reassessment of Hazards

It is the responsibility of the supervisor or safety supervisor to reassess the workplace hazard situation as necessary, by identifying and evaluating new equipment and processes, reviewing accident records, and reevaluating the suitability of previously selected PPE.

Eye and Face Protection (29 CFR 1910.133 and 1926.102)

The purpose of establishing eye and face protection policies is to prevent eye injuries resulting from contact with chemical or physical agents.

General Safety Guidelines

1. Many hazards that may pose immediate and potentially irreversible eye damage exist within a work environment. Whenever the use of safety glasses is required, such use will be strictly enforced.
2. Elevators of Beaumont, does not permit field personnel to wear contact lenses in the performance of their job duties.
3. Employees are required to wear safety glasses at all times while working in the areas identified by the *Certification of Hazard Assessment* process.
4. All customers or visitors who enter the areas designated as *Eye Protection Required* will be required to wear safety glasses at all times while in the area.
5. Eye protection will be provided by the company and will be readily available for anyone needing protection for any reason.
6. Selection of eye protection must suit the job at hand. When in doubt, contact your immediate supervisor or manager.
7. Adequate protection against the highest level of each of the hazards will be provided.

8. Employees whose vision requires the use of prescription lenses must wear prescription safety glasses (lens and frame) or protective devices over regular prescription eyewear.
9. The wearing of safety glasses is not normally required in offices, vehicles, locker rooms, and break areas. However, activities such as maintenance work in these areas may require employees in these areas to wear suitable eye protection.
10. Eye and face protection shall be inspected regularly for integrity, and defective or damaged eye and face protection shall be immediately removed from service.
11. Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each of the hazards should be provided. Protective devices do not provide unlimited protection.
12. Operations involving heat may also involve light radiation. As required by the standard, protection from both hazards must be provided.
13. Face shields should only be worn over primary eye protection (safety glasses or goggles).
14. As required by the standard, filter lenses must meet the requirements for shade designations in 29 CFR 1910.133(a)(5). Tinted and shaded lenses are not filter lenses unless they are marked or identified as such.
15. As required by the standard, persons whose vision requires the use of prescription (Rx) lenses must wear either prescription (Rx) lenses in safety frames or protective devices designed to be worn over regular prescription (Rx) eyewear.
16. Wearers of contact lenses must also wear appropriate eye and face protection devices in a hazardous environment. It should be recognized that dusty and/or chemical environments may represent an additional hazard to contact lens wearers. Elevators of Beaumont,. prohibits the wearing of contact lenses by field personnel in the performance of their job duties.
17. Caution should be exercised in the use of metal frame protective devices in electrical hazard areas.
18. Atmospheric conditions and the restricted ventilation of the protector can cause lenses to fog. Frequent cleansing, or allowing the lens to clear, may be necessary.
19. Welding helmets or face shields should be used only over primary eye protection (safety glasses or goggles).
20. Non-side shielded glasses are available for frontal protection only, but are not acceptable eye protection for the sources and operations listed for *IMPACT*.
21. Ventilation should be adequate, but well protected from splash entry. Eye and face protection should be designed and used so that it provides both adequate ventilation and protects the wearer from splash entry.
22. Protection from light radiation is directly related to filter lens density. Select the darkest shade that allows task performance.

Head Protection (29 CFR 1910.135 and 1926.100)

1. The purpose of establishing head protection policies is to prevent injury to the head that may result from falling objects, electric shock and/or burn.
2. Employees are required to wear hard hats at all times while working in the areas identified by the *Certification of Hazard Assessment* process.
3. Hard hats will be non-conductive to prevent injury due to contact with electrical energy.
4. Hard hats should be inspected by the wearer on a regular basis so that defects, if any, can be noted and the hard hat replaced.
5. Do not paint the hard hat as defects may not be found.

Clothing

1. *Basic Workplace Clothing*: Elevators of Beaumont, workplace clothing standard reflects the minimum requirements of government regulations. However, some areas and job tasks require increased protection for workers and contractors. All special requirements will be outlined by the Elevators of Beaumont, representative before work starts.
2. All Elevators of Beaumont, and contract employees working at Elevators of Beaumont, facilities, must wear clothing that:

    a. Protects them from job hazards.
    b. Does not contribute to injury.
    c. Does not introduce hazards to a worksite.
    d. Increases their visibility on the job, especially around vehicles and mobile equipment.

3. All clothing must be close fitting and kept clean. Clothing saturated with oil or other chemicals is not protective. It creates a potential fire hazard and can cause skin irritation (dermatitis).
4. Clothing must adequately cover the body (short-sleeved shirts and cutoffs are not allowed).
5. Proper protective clothing is required for extreme cold and heat.
6. *Fire-Resistant Clothing*: When required by customers or contract, the Elevators of Beaumont, INC. standard is to use fire-resistant clothing made from an inherently fire-resistant fiber, such as NOMEX III, that will protect individuals from a three-second flash fire and will not support combustion, or a topically treated material, such as INDURA COTTON.
7. Specific situations require the use of special protective clothing. Such clothing will be provided by Elevators of Beaumont, The use of special protective clothing does not permit workers to take chances that will endanger themselves or others.
8. When selecting protective clothing, consider:

    a. Static accumulation.
    b. Fire-resistant properties.
    c. Electrical conductivity and insulation.
    d. Chemical resistance.
    e. Ambient temperature.

Foot Protection (29 CFR 1910.136 and 1926.96)

1. The purpose of establishing foot protection policies is to prevent foot injuries resulting from contact with chemical or physical agents.
2. To avoid foot injuries resulting from the impact of falling tools or equipment, employees are required to wear steel-toed boots while working in the areas identified by the *Certification of Hazard Assessment* process.
3. Where potential exposure to chemical hazards exist, employees will be provided with, and required to wear, suitable boots or overshoes.
4. Under no circumstances are gym or tennis shoes, sandals, lightweight or high-heeled shoes permitted in designated *Foot Protection Required* areas.

Hand Protection (29 CFR 1910.138)

1. To avoid hand injuries from chemicals, cold, heat, abrasive surfaces or sharp objects, employees are required to wear appropriate hand protection while performing duties in the areas identified by the *Certification of Hazard Assessment* process.
2. Where exposure to chemicals is present, suitably protective gloves are to be worn at all times. It is the responsibility of the supervisor, or the safety supervisor, to select gloves made of an appropriate protective material for the work being performed.
3. Watches, rings, bracelets or other jewelry must not be worn during operations where they may create a hazard.

Hearing Protection (29 CFR 1910.95 and 1926.101)

1. The purpose of establishing hearing protection policies is to reduce or eliminate the damage to hearing that is often a direct result of noise level and duration.
2. Employees required to take part in the company *Hearing Conservation Program* will be provided hearing protection as outlined in the *Hearing Conservation Program*. Please refer to that section for further information.

Fall Protection Systems (29 CFR 1910.66 and 1926, Subpart M)

1. Fall protection systems shall comply with 29 CFR 1910.66, Appendix C and 1926, Subpart M and Elevators of Beaumont,'S 1520 - Fall Protection. All fall protection systems shall be provided and installed prior to an Elevators of Beaumont,. employee beginning the work that necessitates the fall protection.
2. Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials and shall have a corrosion-resistant finish. All surfaces shall be smooth to prevent damage to interfacing parts of the system.
3. "D" rings and snap-hooks shall have a minimum tensile strength of 5,000 pounds and shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snap-hook. Only locking type snap-hooks shall be used. Unless the snap-hook is a locking type and designed for the following connections, snap-hooks shall not be engaged.
    a. Directly to webbing, rope or wire rope.
    b. To each other.
    c. To a "D" ring to which another snap-hook or other connector is attached.
    d. To a horizontal lifeline.
    e. To any object that is incompatibly shaped or dimensioned in relation to the snap-hook such that unintentional disengagement could occur.

4. *Lifelines and Lanyards*

    a. Horizontal lifelines shall be designed, installed and used under the supervision of a qualified person, as part of a complete personal fall arrest system, maintaining a safety factor of two.
    b. On suspended scaffolds or similar work platforms with horizontal lifelines (that may become vertical lifelines), the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.
    c. Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds. When vertical lifelines are used, each employee shall be attached to a separate lifeline. Lifelines shall be protected against being cut or abraded.
    d. Self-retracting lifelines and lanyards that automatically limit free fall distance to two feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds.
    e. Self-retracting lifelines and lanyards that do not limit free fall distance to two feet or less shall be capable of sustaining a minimum tensile load of 5,000 pounds.
    f. Ropes and straps (webbing) used in lanyards, lifelines and strength components of and body harnesses shall be made from synthetic fibers.

5. *Components*

    a. **Waist belts shall not be used! Full body harnesses shall be used in all cases!** The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head. Harnesses and components shall not be used to hoist materials or secure equipment.
    b. Personal fall protection systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
    c. Provisions shall be made for prompt rescue of employees in the event of a fall or employees must be able to rescue themselves promptly. Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.

Additional Information

For additional information about fall protection systems, refer to 29 CFR 1910, Appendix C and 1926, Subpart M and/or Elevators of Beaumont, *Health, Safety and Environment Guidelines and Procedures* 1520 - *Fall Protection.*

Training

1. Training shall be provided to employees whose work requires the use of personal protective equipment protection. Documentation will be maintained in their personnel files.
2. Upon completion of training, employees shall demonstrate their knowledge of the proper use and care of personal protective equipment and shall be certified accordingly utilizing the designated training form.
3. Employees shall be retrained whenever:
    a. Changes in workplace conditions occur.
    b. Changes in use of personal protective equipment occur.
    c. Employees demonstrate a lack of knowledge in the use and care of PPE.

Attachment 1

EYE AND FACE PROTECTION SELECTION CHART

SOURCE	ASSESSMENT OF HAZARD	PROTECTION
IMPACT: Chipping, grinding, machining, sawing, drilling, chiseling, power fastening, riveting, sanding and sand blasting	Flying fragments, objects, large chips, particles, sand, dirt, etc.	Spectacles with side protection, goggles, face shields. For severe exposure, use face shield.
HEAT: Welding, cutting and brazing	Hot Sparks Splash from molten metals High temperature exposure	Face shields, goggles, spectacles with side protection. For severe exposure, use face shield. Face shields worn over goggles. Screen face shields, reflective face shields.
CHEMICALS: Acid and chemical handling, degreasing	Splash Irritating mists	Goggles, eyecup and cover types. For severe exposure, use face shield. Special-purpose goggles.
DUST: Sweeping, buffing, general dusty conditions	Nuisance dust.	Goggles, eyecup and cover types.
LIGHT and/or RADIATION: Welding: Electric arc Welding: Gas Cutting, Torch brazing, Torch soldering Glare	Optical radiation Optical radiation Optical radiation Poor vision	<u>Welding helmets or welding shields.</u> Typical shades: 10-14. <u>Welding goggles or welding face shield.</u> Typical shades: gas welding 4-8, cutting 3-6, brazing 3-4. <u>Spectacles or welding face shield.</u> Typical shades, 1.5-3. Spectacles with shaded or special-purpose lenses, as suitable.

1530A – PROCESS SAFETY MANAGEMENT

Purpose

The purpose of this policy is to establish actions required of Elevators of Beaumont, when performing work that involves equipment or facilities included under or effected by the provisions of 29 CFR 1910.119 for *Process Safety Management*. These actions are necessary to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals. (See Section 1522, Hazard Communication Program, for more information.)

Responsibility

It is the responsibility of each manager of a Elevators of Beaumont, operation's area to ensure procedures are developed and implemented to support this policy, and to provide adequate resources and training to promote the effective implementation of this policy.

Policy

Procedures shall be developed, implemented, followed, and revised as necessary to ensure that the requirements of *Process Safety Management* are met.

For employees working at sites covered by the *Process Safety Management Standard*, a training program shall be established to ensure each employee is aware of hazards associated with that site and the effect the employee's task(s) has on those processes.

All training efforts shall be documented and proof of training shall be maintained in individual employee personnel files.

Contract Employer Responsibilities (taken from 29CFR 1910.119)

1. As a contract employer Elevators of Beaumont, will ensure that each employee is trained in the work practices necessary to safely perform his job.
2. Each employee is instructed in the known potential fire, explosion, or toxic release hazards related to his job and the process, and applicable provisions of the emergency action plan. *Generally, site specific training provided by individual refineries or area safety councils will satisfy this requirement. If this training is not available, provisions must be made locally to ensure appropriate training is provided.*
3. Elevators of Beaumont, will document that each employee has received and understood the training required by this section. A record that contains the identity of the contract employee, the date of training, and the means used to verify the employee understands the training must be maintained. *In instances where area safety councils or other training services are used, the operating area must ensure that the entity providing the training maintains requisite documentation and that the documentation is available for review as necessary.*

4. Elevators of Beaumont, will ensure that each employee follows the safety rules of the affected facility including the safe work practices listed below.

    d. Lockout/tagout (LOTO).
    e. Confined space entry.
    f. Manipulating process equipment.
    g. Facility access.
    h. Understanding and strictly following work permits, including hot work permits.
    i. Immediately reporting all accidents, injuries, and near misses. Elevators of Beaumont, will initiate an incident investigation within 48 hours. Resolutions and corrective actions will be documented and maintained for at least five years.

5. Elevators of Beaumont,. will notify the tank owner and/or operator, Elevators of Beaumont's customer, client and/or employer, of any unique hazards presented or found by Elevators of Beaumont. work practices.
6. Confidentiality will be maintained for any proprietary or trade secret information which may be obtained during the process of the work.

1531 – RESPIRATORY PROTECTION

PURPOSE

The purpose of this program is to outline the practices and procedures necessary in order to protect Elevators of Beaumont, employees from respiratory hazards in the workplace and to comply with regulatory requirements as outlined in 29 CFR 1910.134. This program shall be updated as necessary to reflect changes in the workplace that affect respirator use.

SCOPE

This applies to all tasks which may be performed by Elevators of Beaumont, employees in the course of our business where exposure to potentially hazardous levels of air contaminants is present or oxygen deficient atmospheres may exist.

NIOSH certified respirators shall be provided which are applicable and suitable for the purpose intended. Training shall be provided before the employee is required to use the respirator. Respirators and training are provided at no cost to the employee.

RESPONSIBILITIES

Safety Manager

Designated the program administrator. He may delegate the day-to-day administration of the program to suitably trained and authorized individuals within the Elevators of Beaumont, organization but is responsible for regular evaluation (such as quarterly) of the program to ensure its effectiveness. Evaluation should include respirator usage, review of safe practices and documentation requirements included in the program. Responsible to provide guidance and support in appropriate respiratory practices to all affected personnel. Shall ensure that each respirator user has been adequately trained and is following the procedures designated by this program and applicable customer and federal, state or local guidelines. They will ensure that only company supplied respiratory equipment is used when respirators are required.

Each employee

Has the responsibility to assure that he is protecting himself adequately from potential respiratory hazards through the proper application of approved respiratory practices as outlined in the program.

MEDICAL EVALUATION

Employees will be medically evaluated, at the company's expense, during normal working hours, prior to fit testing or on-the-job use of Air Purifying Respirators (APR) and/or Supplied Air Respirators (SAR) as required by regulations and Elevators of Beaumont, policy. These evaluations are required for all respirator users except for employees who voluntarily use dust masks or whose only use would be escape-only respirators. Regional Management will select

qualified Physicians or other Licensed Healthcare Providers in their areas of responsibility to perform this evaluation and maintain the medical records. Such evaluations are of a confidential nature between the employee and the PLHCP. The employee will be given the opportunity to discuss results and/or ask questions of the PLHCP.

No employee will be required or allowed to use respiratory protection if such use could have adverse effects on the employee.

FIT TESTING

Fit testing is required for all tight fitting face pieces. This includes negative pressure and air supplying respirators. It is necessary as face pieces and faces come in a variety of shapes and may not be compatible. As face pieces age, they may lose flexibility or dry out resulting in a loss of the required level of protection. Additionally, due to weight gain or loss, face shape may change thereby reducing the effectiveness of the face piece. Finally, there is no respirator equipment, regardless of price, that will perform satisfactorily if it does not fit properly. Therefore, the following fit testing policies and procedures are hereby established:

1. No person shall use a respiratory protection device until undergoing and passing a fit test. When the fit test is passed, a like face piece may be assigned to the employee and is the only face piece to be used by that employee.
2. Fit testing will be documented. The most current completed documentation will be kept in the employee's medical file. The employee is expected to keep a copy of the fit test card on his person. Fit testing must be done at least annually. Documentation will include the name of employee, date of test, type of fit test performed, specific make, model, style, and size of respirator tested, and test results.
3. Persons failing fit testing will be provided with a different mask and retested. In the event a person fails the fit test using all available masks, said person is not to be assigned to any duty that requires the use of a respiratory protection device.
4. Fit testing will be conducted only by those persons deemed qualified by the site supervisor, facility manager or by third parties qualified to do so.
5. The person conducting the fit test will complete the documentation and ensure it is placed in the employee's medical file.

TYPES OF FIT TESTING

Quantitative Fit Testing

The quantitative test is the most accurate and is the preferred method to be used for Elevators of Beaumont, personnel. It is capable of determining proper respirator fit numerically and does not rely on a subjective response from the wearer. This type of test is warranted when exposure to highly toxic materials is expected or when exposure to IDLH atmospheres is likely. Quantitative testing can only be performed by trained personnel. Due to the complexity and bulk of the unit, quantitative testing is generally unsuitable for onsite testing. Additionally, as the face mask must be adapted to allow for sampling inside the mask, the face mask used cannot be worn in the field. Elevators of Beaumont, will utilize third party testing services to perform this fit testing.

Qualitative Fit Testing

The qualitative test can be employed by Elevators of Beaumont, prior to the use of a respiratory protection device. Its major drawback is its reliance on the wearer's subjective response and, therefore, may not be totally reliable. In addition, only half-mask negative pressure respirators may be qualitatively tested. Extreme care will be taken to ensure that the test is performed in a manner that minimizes the chance for error. Following are the procedures that will be followed.

Test Materials

Isoamyl Acetate Vapor (Banana Oil): This material has a pleasant, easily detectable odor. This material is flammable and requires all sources of ignition be removed from the area prior to its use. A cartridge capable of filtering out organic vapor must be utilized when this material is used for testing.

Stannic Chloride: This material produces an irritant smoke that often causes persons exposed to cough involuntarily. This reduces the chance of giving a false indicator of proper fit. As this material consists of hydrochloric acid or small particles, the tester and other unprotected persons should avoid prolonged contact that may result in respiratory irritation.

Bitrix®: The Bitrix® solution aerosol protocol uses the published saccharin test protocol. Bitrix® is widely used as a taste aversion agent.

Any of the above may be used with the protocols described in 29 CFR 1910.134 Appendix A, Part 1(B).

Testing Procedures

Test Chamber

A hood constructed of polyethylene should be placed over the wearer's head and shoulders. This enables a concentration of test material to build up in the vicinity of the mask. Other test chambers include small rooms, closets or small booths framed and covered with polyethylene. A sufficient level of oxygen (19.5%) must be available at all times when using these test chambers and negative pressure respirators.

The individual being tested shall don the respirator with an appropriate cartridge. Straps should be pulled tight but not made to be uncomfortable. While pulling the straps extremely tight may reduce mask leakage, doing so creates conditions not found in the field and may result in an inaccurate fit test. The mask must be worn for a five minute period immediately prior to the test to determine if it fits comfortably.

HAZARD EVALUATION

Any use of respiratory protective equipment requires a hazard evaluation. The toxic nature and quantity of the contaminant must be known so that a reasonable estimate of employee exposure may be determined and a suitable level of respiratory protection provided.

Oxygen deficient atmospheres or those that cannot be estimated must be treated as IDLH. A full faced, pressure demand SCBA, certified by NIOSH for a minimum service life of 30 minutes or an SAR with auxiliary self-contained air supply will be provided for use in IDLH atmospheres.

Hazard Assessments may be performed in the following manners:

1. Use of objective data obtained from industry studies, trade associations or manufactures tests which demonstrates that air contaminants cannot be released into the workplace in airborne concentration that are IDLH.

    a. This data includes but is not limited to the nature and physical properties of the hazard, adverse health effects, exposure levels and sampling results (if any).
    b. The level of work and worker stress, time of exposure, warning properties of the hazard and limitations of the respirator must also be included.

2. Mathematical approaches using data on the chemical and physical properties of the air contaminants, air exchange rates, physical dimensions of the tank, rate of contaminant release and other pertinent data including exposure patterns and work practices to estimate the maximum anticipated exposure.

GENERAL PROCEDURES

1. Respirators shall be selected on the basis of the hazard(s) that are present, or may become present, during an employee's work activities. Only those respirators which are NIOSH certified shall be used.
2. Specific respiratory protective equipment shall be selected and provided by the site supervisor and/or facility manager.
3. No respirator shall be modified in any fashion not approved by the manufacturer. APR's may be repaired by qualified individuals but no attempt will be made to repair SAR equipment. Repairs of SAR's may only be made by personnel authorized by the manufacturer.
4. Respirators will be inspected monthly and tagged when not in use. Worn or deteriorated parts shall be replaced. The site supervisor and/or facility manager is responsible for the monthly respirator inspection.
5. Respirators shall be inspected prior to each use. After each use, respirators shall be thoroughly inspected, cleaned and disinfected. All filters, cartridges or canisters will be removed and the face-piece disassembled per manufacturer's instructions using warm water, mild detergent and disinfectant. If possible a detergent with a bactericide will be used. A stiff bristle brush may be used to remove dirt. Rinse components in clean warm

water. Components should be hand dried, reassembled and tested to ensure that the respirator is working properly.

6. The date and time shall be recorded with a waterproof marker on all air purifying canisters prior to use.
7. Respirators will be placed in individual plastic bags when not in use and stored in locations designated by the site supervisor and/or facility manager. All respirators shall be stored to protect them from damage, contaminants, dust, sunlight, extreme temperatures, excessive moisture, damaging chemicals and they shall be packed or stored to prevent deformation of the face-piece and exhalation valve.
8. Air supplying respirators depend on a source of uncontaminated breathing air to properly function. This may be supplied through cascade systems that can supply multiple workers or through the use of a Self Contained Breathing Apparatus (SCBA). In order to ensure that the air quality contained in these cylinders is appropriate, documentation of air quality must be secured prior to use of this type of equipment. Only breathing air meeting the requirements of Compressed Gas Association Grade-D will be used. The documentation must be retained on the jobsite until completion of the job. **In no instance is the use of Oxygen permitted in place of Breathing Air**.
9. Air-line respiratory systems for entry into potentially hazardous atmospheres will only be used in conjunction with approved escape packs of five minute duration or longer.
10. Employees who choose to use tight fitting respirators when conditions do not require such usage, or who voluntarily use filtering masks (dust respirators) should be informed that they must read, understand and comply with the manufacturer's instructions regarding storage, maintenance, inspection, cleaning and usage, and use only NIOSH certified respirators. They must use only respirators that will provide them protection from the contaminants to which they will be exposed, and they must keep track of the respirator so that they will not mistakenly use someone else's respirator.
11. Emergency escape-only respirators shall be inspected before being carried into the workplace for use.
12. Elevators of Beaumont, supervisors will ensure that compressors used to supply breathing air to respirators are located in a "clean" atmosphere, with in-line purification and are tagged to indicate date or change out. For compressors that are not oil-lubricated, Elevators of Beaumont, will maintain a carbon monoxide monitor set to alarm at 10 PPM.
13. Elevators of Beaumont, management will conduct evaluations of the workplace as necessary to ensure that the provisions of the current written program are being effectively implemented and that it continues to be effective. Employees will be consulted regularly to assess the employee's views on program effectiveness and to identify any problems. Employees are encouraged to provide input to supervision.

WORKING WITH RESPIRATORS

1. The site supervisor and/or facility manager shall be responsible for monitoring work area conditions and employee exposure including signs of stress during periods of respirator use. Workers should be removed from hazardous environments if they have difficulty using the equipment or if a change in conditions may increase respiratory hazards.

2. Due not only to environmental conditions but also the differences in the human body from day to day, each respirator wearer is required to perform both negative and positive fit checks each time he dons a respirator. Supervisors will ensure that each and every worker performs these checks..
3. Elevators of Beaumont, recognizes the dangers associated with working under conditions where respiratory protection is required. For this reason, no worker shall be allowed to work alone when working under conditions requiring respiratory protection. The *buddy system* shall be employed during conditions requiring respiratory protection. This may be accomplished through the use of an attendant or standby person who will maintain communication or line-of-sight observation of the worker.
4. The site supervisor and/or facility manager shall ensure that respirators are not removed by workers until they have left the area of contamination.
5. If respirator breakthrough is noticed, breathing becomes difficult or odors are detected within the mask, the user will leave the contaminated area to repair, adjust or discard the mask. In no case shall a worker be permitted to return to an area of contamination with a potentially defective respirator.
6. Atmospheres that are oxygen deficient (<19.5% O_2) or oxygen enriched (23% O_2) are considered to be IDLH and will not be entered with negative pressure respirators.

CARTRIDGE CHANGE OUT SCHEDULE DETERMINATION

1. No APR cartridge has an unlimited service life. It is necessary to replace cartridges that have been in service at appropriate intervals.
2. Several factors influence the service life of cartridges. These include but are not limited to:

    a. Work rate of the employee.
    b. Humidity
    c. Level and nature of contaminant concentration

3. In order to determine the specific interval, change out schedules may be determined using the following criteria.

    a. Manufacturers Recommendations
        1) Obtain the name and concentration of the contaminant.
        2) Know the work rate and humidity.
        3) Contact the manufacturer and provide the information from steps 1 and 2 and the name of the respirator model.
        4) Request the cartridge service life and the exact objective information used to project that life.
        5) Create a written change schedule for the cartridges.
    b. Industry Standards/Manufacturers Information
        1) Change schedules may be developed for specific substances.
        2) Care must be taken to assure that work site conditions closely resemble those of the industry study/manufacturers information.
        3) Documentation must be maintained to verify conditions to be expected on the specific work site.

c. Rule of Thumb
    1) If the chemicals boiling point is $>158^0$ F and the concentration is less than 200 PPM you can expect a service life of 8 hours at a normal work rate.
    2) Service life is inversely proportional to work rate.
    3) Reducing concentration by a factor of 10 will increase service life by a factor of 5.
    4) Humidity above 85% will reduce service life by 50%.
4. Change schedules for gases and vapors will be established and maintained. The use of warning properties (smell, irritation of the eyes or skin, throat irritation, etc.) will not be the basis of determination.

EMERGENCY OPERATIONS

1. In the event of respirator failure, the employee shall immediately remove himself, or be removed from, the contaminated area, notify his supervisor immediately of the failure, and check the mask and cartridges for damage **after** reaching safety. Re-entry will not take place until 1) the problem is corrected, 2) appropriate cartridges are selected, 3) worker dons the mask, and 4) a negative and positive pressure check is successfully achieved.
2. Areas for evacuation shall be identified and kept clear of obstructions prior to entry into an area where respiratory protection is required.
3. Communications shall be established through either voice or non-verbal means prior to entering areas where respiratory protection is required.
4. When the SCBA (Self-Contained Breathing Apparatus) is used in IDLH (Immediately Dangerous to Life or Health) atmospheres, trained rescue personnel shall be present with suitable rescue equipment.
5. Safety harnesses and safety lines, or other appropriate emergency equipment for the condition shall be used in areas where IDLH atmospheres are present.

PERSONAL PRECAUTIONS

1. All protective clothing and equipment will be worn at all required times.
2. Eating, drinking, chewing gum or tobacco, smoking, or any practice that increases the probability of hand-to-mouth transfer and ingestion of material is prohibited in any area requiring respiratory protection devices.
3. Hands and face must be thoroughly washed upon leaving the work area.
4. Whenever decontamination procedures for outer garments are in effect, the entire body should be thoroughly washed as soon as possible after the protective garment is removed.
5. Facial hair that interferes with a satisfactory fit of the mask-to-face seal is NOT allowed on personnel required to wear respirators. All employees whose daily activities may require them to use respiratory protective equipment must report to work clean shaven. Any other condition that interferes with the face-to-face piece seal or valve function is also prohibited.
6. If an employee wears corrective glasses or goggles that would interfere with the seal of the respirator, the supervisor shall ensure that they are worn in a manner that will not affect the seal of the face piece to the face of the user. Devices, such as spectacle kits may be supplied.

7. Contact with contaminates or suspected contaminated surfaces should be avoided. Whenever possible, do not walk through puddles, leachate, discolored surfaces, kneel on ground, lean, sit or place equipment on drums, containers, or the ground.
8. Do not depend on the warning properties of the gas or vapor to determine if the respirator is functioning properly.
9. Medicine and alcohol can increase the effect from exposure to toxic chemicals. If prescription drugs must be taken, the person, while on the medications, should not be involved in any project where exposure is possible. Persons on long-term medicinal therapy must get signed approval from their doctor prior to beginning or continuing work.

LIMITATIONS AND RESTRICTIONS

1. The wearer of a respirator must demonstrate proper use during the course of practical application. If the wearer demonstrates any difficulty with the donning, adjusting or use of a respirator, additional training must be supplied prior to the worker using a respirator.
2. The air purifying respirator does not supply oxygen and therefore, must never be used in an oxygen deficient atmosphere.
3. Cartridges must be chosen on the basis of the individual application and concentration level of the specific contaminant. The selection must be made by qualified safety and health personnel or their designee.
4. Cartridge service life is limited. **ALWAYS** leave the contaminated area if smell or taste is detected, when breathing becomes difficult or dizziness, irrigation of the eyes or throat or other distress occurs.

RESPIRATOR PROTECTION FACTORS	
TYPE	**PROTECTION FACTORS**
Air Purifying Half Face	10 X
Air Purifying Full Face	50 X
Supplied Air Pressure Demand Full Face (Air line Respirator)	2000 X
Self-Contained Breathing Apparatus (SCBA)	10,000 X
Escape Only respirators	Unknown

TRAINING

Training in the use, maintenance, storage and inspection of respirators will be successfully completed before on-the-job use of the respirator.

The users shall be instructed and trained in the proper use, inspection practices, maintenance, storage and limitations of respiratory equipment and the general requirements of OSHA Standard 1910.134..

Training will be repeated at annually or whenever an employee does not demonstrate retention of adequate knowledge of respiratory protective practices.

Documentation of employee training will be maintained in the employee's personnel file.

1532 – MOTOR VEHICLE SAFETY

Purpose

This program covers safe operation and maintenance of all company vehicles. Examples of vehicles covered include company owned or leased passenger vehicles, pickup trucks, light trucks and vans.

Policy

All company vehicles will be operated only by employees authorized by company management for specific company purposes.

Vehicles will be maintained in a safe condition at all times. In the event of an unsafe mechanical condition, the vehicle will be immediately placed out of service and the appropriate manager notified.

Only qualified company vehicle mechanics or approved service facilities are permitted to perform maintenance on company vehicles.

All vehicles will be operated, licensed and insured in accordance with applicable local, state and federal laws.

All authorized employees must possess a valid state driver's license for the class vehicle authorized.

Authorized employees must have a driving record at least equal to that required for maintaining a commercial driver's license. Drivers Motor Vehicle records must meet the company expectations outlined later in this program.

Drivers must comply at all times with the following requirements as well as all federal, state, and local traffic rules and regulations.

Scope

This applies to all vehicles within the company and to all areas in which vehicles are allowed to travel.

Responsibilities

Management Provide annual defensive-driver training (or equivalent) for all employees authorized to operate company vehicles. Train authorized employees on vehicle inspection and accident procedures. Maintain company vehicles in a safe condition. Maintain active insurance policies on all company vehicles.

Department Heads Allow only authorized employees to operate company vehicles. Arrange for defensive driving training prior to initial authorization Maintain a list of authorized employees in their department. Arrange for required periodic maintenance checks on assigned vehicles. Maintain a vehicle maintenance file for each vehicle. Immediately remove from service any vehicle with any safety defect. Not allow operation of any company vehicle by an authorized employee taking medication that warns of drowsiness. Establish a key control program for all assigned vehicles.

Authorized Employees Operate company vehicles in a safe, responsible manner and obey all traffic laws. Participate in driver-training programs. Participate in the company drug-testing program. Ensure all vehicle occupants use seatbelts before moving the vehicle. Follow safe fueling procedures. Conduct a pre-use inspection before any first daily use. Immediately report any safety defects or vehicle problems, report use of all prescription medication, do not permit any unauthorized passengers in any vehicle, secure all vehicles, us the vehicle for its purpose and drive with courtesy. Remember that our vehicles represent our company. Do not abuse the vehicle.

Training

All employees authorized to operate company owned or leased vehicles will participate in initial and annual driver safety training that will include: Defensive driving Vehicle inspection Accident procedures Hazardous weather driving Procedure for notification of unsafe vehicle Backing procedures (light truck & van operators) Cargo area storage and security (light truck & van operators) Loading & unloading (light truck & van operators)

Requirements

A. Seat Belts

1. Seat belts must be worn by all occupants of passenger vehicles and truck cabs when on company business.
2. All occupants of Elevators of Beaumont, furnished vehicles must wear seat belts any time the vehicle is in operation.
3. An allowable exception to the seat belt requirement is equipment that is received from the manufacturer without seat belts and is not required by law to have them.

B. Vehicle Accidents

1. Do not admit responsibility
2. All accidents must be reported immediately to the appropriate Elevators of Beaumont, supervisor.
3. Notify our company and law enforcement as soon as possible
4. Cooperate with any law enforcement officers
5. Move the vehicle only at the direction of a law enforcement officer
6. Fill out all sections of the accident report in the glove box
7. Do not sign any forms unless required by a law enforcement officer
8. At the scene get the following information
    - Investigating officer name and law enforcement agency
    - Make, Model & License Plate number of other vehicles

- Names, addressed and phone numbers of all witnesses
- Name, address & license of other drivers
- Photos of accident using camera in glove box
  a. all 4 sides of all vehicles
  b. roads and intersection at the scene
  c. interior of all vehicles - seating & floor areas

C. Traffic Violations

Authorized drivers will report any traffic violation while driving on company duties to the appropriate personnel.

D. Vehicle Condition

All vehicles shall be in condition to operate on the highway. This includes a valid certificate of insurance.

E. Inspections

1. Each vehicle must have a current inspection sticker. The assigned driver is responsible for this process.

2. **Driver Inspections** - Prior to each first daily use the driver shall inspect the vehicle for proper operation of the following safety features, as applicable:

   - Horn
   - Backup warning
   - Head, tail & signal lights
   - Windshield wipers
   - Tire inflation (visual check)
   - Brakes
   - Steering control
   - Mirrors
   - No operational warning lights
   - Accident kit in glove compartment
   - Fire extinguisher (light trucks & vans)
   - Broken glass

3. **Mechanical Inspections** - Every company vehicle will be inspected by a qualified vehicle mechanics at least every 3 months. Inspection & maintenance points include:

   - Road test
   - Visual inspection of brake system - wheel removal required
   - Fluid system levels & visual inspection
   - Brake pad wear
   - Belts & hoses

- Battery condition
- Filter replacement
- Lubrication
- Oil change
- Emissions systems visual inspection
- Tire tread

F. Driving Safely

1. Starting

- Conduct pre-use inspection
- Use seatbelts at all times
- Adjust seat & mirrors before starting vehicle
- Allow a 15 second warm up time
- Check for warning lights

2. Driving

- Drivers shall not operate a motor vehicle while under the influence of alcohol, illegal drugs, or prescription or over-the counter medications that might impair their driving skills.
- Think ahead - anticipate hazards
- Don't trust the other driver to drive properly
- Don't speed or tailgate
- Drive slower in hazardous conditions or hazardous areas
- Pass only in safe areas and when excessive speed is not required
- No loose articles on floor
- Do not read, write, **text**, apply make-up, drink, eat or use a phone while driving (unless the phone is hands free, a speaker phone or bluetooth enabled).
- Do not talk on a cell phone while driving in any client facility
- Stay at least two seconds behind the vehicle ahead
- Do not stop for hitchhikers or to provide roadside assistance

3. Backing

E. Back slowly & be ready to stop
F. Do not back up if anyone is in path of vehicle travel
G. Check clearances
H. Don't assume people see you
I. Get out & check if you cannot see from the driver's seat

5. Parking

   - Vehicles must never be parked in such a manner that they block access to emergency systems (fire equipment, safety showers, etc.) or access of emergency vehicles to the area. Parked vehicles inside refineries, chemical plants, marketing terminals, or pipeline terminals should have the keys in the ignition in case of an emergency.
   - Park only in proper areas, not roadsides
   - Use warning flashers & raise hood if vehicle becomes disabled

G. Operation During Emergencies

1. Vehicles must not be used to evacuate an area that is experiencing a spill. A vehicle is spark producing and a source of ignition.
2. Vehicles must not be driven into or through an area when red lights are flashing, unless they are emergency vehicles.

H. Unattended Vehicles

Unattended vehicles must not be left with the engine running except for emergency vehicles, vehicles undergoing maintenance, industrial diesel, and those vehicles whose engine provides power to auxiliary equipment such as pumps. These must have the brakes set, transmission disengaged, and persons in sight and within 25 feet of the vehicle. Parked vehicles inside the refineries and/or marketing terminals must comply with local requirements.

I. Railroad Crossings

All railroad crossings are marked with either cross bucks, lights or a combination of both. Vehicle drivers approaching railroad crossings must yield the right-of-way to trains that may be approaching the crossing or that may be stopped and partially blocking the crossing, unless a flag man indicates that the vehicle may pass. If the crossing is partially obstructed by pipe racks or other obstacles, the vehicles must stop and ensure the crossing is safe prior to proceeding.

J. Loading and Carrying of Personnel

1. Vehicles must not carry more people than allowed by their design.
2. No more than six people are allowed to be seated inside the bed of a pickup truck. They must be seated away from the tailgate and with the tailgate closed. Persons must not stand or sit on the side rails while riding in truck beds.
3. Vans not having seats installed can be used with the same precautions as pickup trucks when transporting personnel.
4. Flatbed trucks used to transport personnel must have side rail supports that extend at least 18 inches above the level of seating, a safety line or guardrail across the back, and an access ladder for loading and unloading of personnel.

K. Carrying of Materials

1. Loads shall be secure and shall not exceed the manufacturer's specifications and legal limits for the vehicle.
2. Material that overhangs four feet or more from the rear of a vehicle must be red flagged.
3. Materials must not overhang from the sides of a vehicle unless it is escorted or the vehicle is designed to carry loads close alongside.
4. Materials carried in truck beds should be secured. If both materials and people are in the bed, then the materials must be secured.
5. Loads carried along roadways by mobile cranes must have a tag line to secure the load and reduce swing. If the load extends 15 feet or more from the end of the boom, a flag-man is required.

L. Driving Onto Other Vehicles

If it is necessary to drive equipment onto a vehicle for loading or unloading, the wheels of the vehicle must be chocked and, if the motive power source (tractor) is still attached, the brakes must be set.

M. Spotting Tractor Trailers

1. Any trailer with product in it, hazardous or non-hazardous, when unsupported by a tractor, must have a jack placed under the fifth wheel for additional support. If left in an area without sufficient ground support (such as an unpaved parking area), the landing gear and jack must have portable landing pads sufficient to support the load.
2. The landing gear on empty trailers offers adequate support and no jack is needed under the fifth wheel in a paved staging area. However, if the staging area is unpaved, the landing gear should be supported by portable landing pads.
3. In addition, brakes must be set and wheels chocked after a trailer is spotted and while connecting or disconnecting the tractor from the trailer.

N. Reporting the Spills

Spills (oil, gas, hydraulic fluid, etc.) from any vehicle must be reported immediately to the designated authorities.

O. Jump Starting and Charging Batteries

There are several potential hazards associated with jump starting a vehicle or charging a battery. They include:

1. Hydrogen, an explosion hazard, is released while charging.
2. Batteries contain acid that can damage the skin or eyes.
3. Sparks can be created when connecting or disconnecting cables.

Attachment 1 contains the procedure to be followed for jump starting a vehicle. Attachment 2 contains the procedure for charging a battery.

P. Reviewing Drivers An annual review will include the evaluation of the driver's files for:
   a. Public complaints
   b. Excessive maintenance expenses or vehicle abuse
   c. Accident and violation history from a current Motor Vehicle Reports

Motor Vehicle Reports (MVR) Each year, every driver will go to the Motor Vehicle Office and obtain a copy of their current Motor Vehicle Report (or equivalent in their state).

Acceptable driving records include the following expectations:
No major violations within the last three years
No more than two at-fault accidents or moving violations within the last three years.
Drivers who develop an unacceptable record will be considered for one-year probation. If the record continues to be unacceptable, our company will consider the following actions:

- Reassignment to a non-driving position
- Termination of employment

The driver will sign a statement indicating that he or she understands the reason for the probation and the consequences if the probation is violated.

Evaluating New Drivers Each new driver will receive a road test to evaluate his or her driving ability.

Violation Point System The following point system will be used for violation and accident potential:

Category Points
Age……_____
25 to 30 (1 point)
22 to 25 (2 points)
Under 25 tractor driver (3 points)
Under 22 (7 points)

Length of employment in last job……_____
Under one year (3 points)

Number of at-fault accidents or moving Violations in the last three years._____
1 (1 point)
2 (2 points)
3 and over (7 points)
Any major violations (7 points)
(Refer to the list below)

Total……_____
(Applicants with seven points or more pose a significantly greater risk of accident potential)

Major Violations
We will not hire drivers with any major violation in the past three years.

Evading arrest
Illegal possession
Operating without care
DUI/DWI (alcohol or drug)
Refusing an alcohol test
Driving while impaired
Failure to stop for an accident
Driving to endanger life
Participating is a racing contest
Misrepresentation to avoid arrest
Traffic violation resulting in death
Vehicle use in connection with a felony
Misrepresentation to obtain a driver's license
Revocation of driver's license for any reason
Driving 25 mph or more over the posted limit
Operating while driver's license is suspended or revoked
Operating after driver's license has been denied

ATTACHMENT 1

Jump Starting a Battery

Consult the owner's manual before jump starting any vehicle.

Required PPE includes chemical goggles and leather gloves. Also remove any rings and metal watch bands or other metal jewelry prior to beginning the job.

STEP	ACTION
1	Set parking brake and set automatic transmission in "PARK" (Neutral for manual transmissions) in both vehicles.
2	Make sure both batteries are the same voltage. (12-volt batteries have six cell caps and a 6-volt battery has three.)
3	Turn off all unnecessary electrical loads, such as air conditioning, lights, etc., so as not to cause a spark when cables are attached. Do not allow vehicles to touch.
4	Make sure the cable clamps to the dead battery are tight.
5	Remove filler caps to both batteries, if provided, and leave off during the jump start operation to avoid accumulation of hydrogen in the battery. Consider covering the holes (not the clamps) to prevent acid splashes.
6	Check the fluid levels in the battery to be charged to make sure it is above the plates in all cells. If not, add water to the appropriate level.
7	Securely attach one end of a jumper cable to the positive terminal (marked "+" or "P" or "POS"), of one of the batteries. Attach the other end to the positive terminal of the other battery.
8	Securely attach the other cable to the negative terminal (marked "-" or "N" or "NEG") on the good battery.
9	If the negative terminal of the dead battery connects to the engine block or frame, attach the other end of the cable to the dead vehicle's frame, at least a foot from the battery. If the negative terminal of the dead battery does not connect to the engine block or frame, connect the other end to the negative battery terminal.
10	Start the engine in the vehicle providing the jump start. Let it run for a few minutes, then start the engine with the dead battery.
11	Remove the cables in reverse order.
12	Replace the caps.
13	Have the battery that was discharged repaired or replaced.

ATTACHMENT 2

Charging a Battery

Follow the charging rate instructions from the manufacturer.

Minimum PPE includes chemical goggles and leather gloves.

STEP	ACTION
1	Ensure charging area is well ventilated and free of all sources of ignition.
2	Disconnect battery cables.
3	Clean off any accumulation of battery salts from the terminals (these salts are corrosive to the eyes).
4	Remove filler caps, if provided. Leave off during the charging operation to avoid accumulation of hydrogen in the battery. Consider covering the holes to prevent acid splashes.
5	Check the liquid levels in the battery cells. Make sure the liquid levels are above the plates. If not, fill appropriately.
6	Check to see that the charger switch is in the “off” position.
7	Locate the positive battery terminal (marked “+” “P” or “POS”), and securely attach the positive charger cable.
8	Attach the negative charger cable to the negative battery terminal (marked “-“, “N” or “NEG”).
9	Turn the charger switch to “on.”
10	When the battery is charged, turn the charger switch “off”.
11	Put protective equipment on for disconnecting and handling the battery.
12	Remove the charger cables.
13	Replace filler caps.
14	Replace battery cables.

V. Equipment and Facilities

1534 – ASSURED FIELD EQUIPMENT GROUNDING CONDUCTOR PROGRAM

Purpose

The purpose of this procedure is to establish the methods to 1) ensure the working condition of equipment grounding conductors; 2) increase the margin of safety in the use of electrical equipment for all personnel, and 3) provide an inspection and maintenance program for electrical equipment.

Scope

All electrical equipment used in field operations is subject to this procedure. Elevators of Beaumont, will maintain a written grounding conductor program. This program will be available at each jobsite for inspection and copying by the Assistant Secretary and any affected employee.

Responsibilities

Regional Managers have been designated as the competent persons to implement this program. They may designate employees within their region to carry out the day-to-day activities of the program.

Standard Practices

A. All generators, welding machines, and other power sources shall be equipped with ground fault circuit interrupter (GFCI) protection, and all power sources shall be properly grounded.

B. All cord sets (extension cords) and receptacles shall be tested to ensure proper grounding conductivity and continuity. All equipment shall be tested before first use and then at a minimum of quarterly thereafter.

C. All electrically powered hand tools shall be visually inspected prior to use. Only tools that are double insulated or equipped with a third grounding conductor shall be used.

D. Elevators of Beaumont, does not permit the use by employees of any equipment which has not met the requirements of this program.

Test Procedures

THE FOLLOWING TESTS SHALL ONLY BE PERFORMED BY INDIVIDUALS PROPERLY TRAINED IN TESTING TECHNIQUES.

A. Test for Continuity

1. Use flashlight type tester or ohm meter to ensure all equipment grounding conductors are electrically continuous and without shorts. This test is required on all cord sets (extension cords), receptacles (that are not a part of permanent wiring of the building structure) and cord and plug-connected equipment that are required to be grounded. A receptacle tester or any testing device that can determine electrical continuity can be used.
2. In addition to the continuity test, a test must be performed on receptacle attachment caps and plugs to ensure that the equipment grounding conductor is connected to its proper terminal. This test can be performed by the same equipment used to perform the first test.

B. Testing is required

1. Before first use.
2. Following any repairs.
3. After damage has occurred.
4. Three month intervals (quarterly).

C. Color Coding

1. Each piece of equipment must be marked with colored tape (preferably near plug end) using colored vinyl tape following successful testing.
2. Color of tape will be changed each quarter of the year. *See log sheet for color designations*.

D. Recording Tests

Upon completion of tests each piece of equipment shall be logged by some means of documentation to indicate which equipment passed the test and the date it was tested.

Inspections

Equipment, except cord sets and receptacles that are fixed and not exposed to damage, must be inspected before each day's use for visible damage or defects. Faulty equipment found on any inspection must be removed from service immediately and not used until it is retested.

The following methods may be used as part of the training program for employees:

A. Safety meetings.
B. Safety memos and posters.
C. On-site safety inspections.

1535A – COMPRESSED GAS CYLINDERS

Receiving and Storage

1. Cylinders must be properly identified with labels. Do not rely on the color or shape of the cylinder to determine the contents. Any cylinder without legible written identification of contents shall not be received or used.
2. All cylinders shall be secured. Secure cylinders in an upright position with a chain, cable or other suitable means, to keep them from falling. Fiber rope, lanyards, nylon chokers, etc., are not suitable for securing cylinders.
3. Cylinders will not be received or stored if the protective cap is not over the cover and screwed down.
4. Visual and other inspections shall be conducted to determine that cylinders are in a safe condition. Cylinders that are leaking, are severely corroded, have dents, holes, cracks, fire burns or other signs of container deterioration will not be received, stored or used.
5. Compressed gas cylinders must be hydrostatically tested every five years unless the cylinder is less than 35 years old and has a star by the pressure test date. It must then be tested every ten years.
6. Cylinders shall be stored in a safe, and as much as possible, dry, well ventilated place that is clean and free of combustible material.
7. Compressed gas cylinders will never be stored inside of tanks or other similar vessels.
8. Group cylinders by types of gas contained. Store oxygen cylinders at least twenty (20) feet from flammable gas containers or combustible material unless they are separated from flammable gas cylinders by a fire resistant barrier with a one-hour fire rating.
9. Storage areas must have adequate fire extinguishers available. Elevators of Beaumont, requires dry chemical type extinguishers.
10. Full and empty cylinders shall be stored separately. Empty cylinders will have their valves closed and shall be visibly marked as *EMPTY* or *MT*.
11. Cylinders shall always be kept away from heaters or other sources of heat.
12. When work ceases for an appreciable amount of time, for instance one hour, and equipment is left unattended, bottles will be turned off and the torch removed from the tank.
13. *Acetylene cylinders will always be stored, transported and used vertically with the valve end up. They will not be allowed to lie horizontally.*
14. Only tolls provided by the supplier should be used to open and close cylinder valves.
15. Employees are trained on the proper use, handling and storage of compressed gas cylinders.

Using Cylinders

1. Secure cylinders in an upright position.
2. Take care not to engage the valve when opening the cylinder. Check hoses and connections daily to make sure they are in good condition. A flashback arrester shall be installed at the gauges on the cylinders in both fuel and oxygen lines
3. *All oxygen, acetylene or other fuel gas cylinders and outlets shall be kept free of oil or grease. They shall not be handled with oily hands. A jet of oxygen will not be allowed to strike an oily surface or enter a fuel oil or other storage container. Never lubricate the fittings. Regulators and cylinder valves shall be inspected for grease, oil, dirt and solvents.*

4. Appropriate pressure regulators will be used to reduce the high cylinder pressure to the required working pressure.
5. **Do not substitute one gas for another. Oxygen shall never be used as a substitute for compressed air.**
6. Cylinders must not be used as rollers, supports, braces or handled roughly. Empty cylinders must be handled as if they were full. First close the cylinder valve, then open the regulator to relieve pressure before disconnecting. Do not stand in front of exhausting gas.
7. If cylinders are found to have leaking valves or fittings that cannot be stopped from leaking by closing the valves, they shall be removed from all sources of ignition and either emptied slowly or removed from the facility.
8. **When a cylinder cap cannot be removed by hand, cylinder shall be tagged "Do Not Use" and returned to the designated storage area for return to vendor.**

Transporting or Transferring Cylinders

1. Never move, transport or transfer cylinders without the valve protective cap in place.
2. Cylinders must be moved in as near an upright position as possible. Special hand trucks are recommended for handling of a single cylinder.
3. When compressed gas cylinders are being transported, the regulator shall be removed, the valve shall be closed and the cap shall be put in place. The cylinder will be secured in an upright position.
4. When cylinders must be hoisted, they will be secured in a cradle, sling board or pallet. They will not be transported or hoisted by means of magnets or choker slings.

1535B – COMPRESSED AIR SAFETY

General safety requirements for compressed air

The following precautions pertain to the use of compressed air by Elevators of Beaumont.

1. All pipes, hoses, and fittings must have a rating of the maximum pressure of the compressor. Compressed air pipelines should be identified (psi) as to maximum working pressure.
2. Air supply shutoff valves should be located (as near as possible) at the point-of-operation.
3. Air hoses should be kept free of grease and oil to reduce the possibility of deterioration.
4. Hoses should not be strung across floors or aisles where they are liable to cause personnel to trip and fall. When possible, air supply hoses should be suspended overhead, or otherwise located to afford efficient access and protection against damage.
5. Hose ends must be secured to prevent whipping if an accidental cut or break occurs.
6. Pneumatic impact tools, such as riveting guns, should never be pointed at a person.
7. Before a pneumatic tool is disconnected (unless it has quick disconnect plugs), the air supply must be turned off at the control valve and the tool bled.
8. Compressed air must not be used under any circumstances to clean dirt and dust from clothing or off a person's skin. Shop air used for cleaning should be regulated to 15 psi unless equipped with diffuser nozzles to provide lessor pressure.
9. Goggles, face shields or other eye protection must be worn by personnel using compressed air for cleaning equipment.
10. Static electricity can be generated through the use of pneumatic tools. This type of equipment must be grounded or bonded if it is used where fuel, flammable vapors or explosive atmospheres are present.

Safety Requirements for Operating & Maintaining Compressed Air Machinery:

All components of compressed air systems should be inspected regularly by qualified and trained employees. Maintenance superintendents should check with state and/or insurance companies to determine if they require their own inspection of this equipment. Operators need to be aware of the following:

Air receivers:

The maximum allowable working pressures of air receivers should never be exceeded except when being tested. Only hydrostatically tested and approved tanks shall be used as air receivers.

1. Air tanks and receivers should be equipped with inspection openings, and tanks over 36 inches in diameter should have a manhole. Pipe lug openings should be provided on tanks with volumes of less than five cubic feet.
2. The intake and exhaust pipes of small tanks, similar to those used in garages, should be made removable for interior inspections.
3. No tank or receiver should be altered or modified by unauthorized persons.
4. Air receivers should be fitted with a drain cock that is located at the bottom of the receiver.

5. Receivers should be drained frequently to prevent accumulation of liquid inside the unit. Receivers having automatic drain systems are exempt from this Requirement.
6. Air tanks should be located so that the entire outside surfaces can be easily inspected. Air tanks should not be buried or placed where they cannot be seen for frequent inspection.
7. Each air receiver shall be equipped with at least one pressure gauge and an ASME safety valve of the proper design.
8. A safety (spring loaded) release valve shall be installed to prevent the receiver from exceeding the maximum allowable working pressure and tested yearly.
9. Only qualified personnel should be permitted to repair air tanks, and all work must be done according to established safety standards.

Air Distribution Lines:

1. Air lines should be made of high quality materials, fitted with secure connections.
2. Only standard fittings should be used on air lines.
3. Operators should avoid bending or kinking air hoses.
4. Air hoses should not be placed where they will create tripping hazards.
5. Hoses should be checked to make sure they are properly connected to pipe outlets before use.
6. Air lines should be inspected frequently for defects, and any defective equipment repaired or replaced immediately.
7. Compressed air lines should be identified as to maximum working pressures (psi), by tagging or marking pipeline outlets.

Pressure regulation Devices:

1. Only qualified personnel should be allowed to repair or adjust pressure regulating equipment.
2. Valves, gauges and other regulating devices should be installed on compressor equipment in such a way that cannot be made inoperative.
3. Air tank safety valves should be set no less than 15 psi or 10 percent (whichever is greater) above the operating pressure of the compressor but never higher than the maximum allowable working pressure of the air receiver.
4. Air lines between the compressor and receiver should usually not be equipped with stop valves. Where stop valves are necessary and authorized, ASME safety valves should be installed between the stop valves and the compressor.
5. The Safety valves should be set to blow at pressures slightly above those necessary to pop the receiver safety valves.
6. Blow-off valves should be located on the equipment and shielded so sudden blow-offs will not cause personnel injuries or equipment damage.
7. Case iron seat or disk safety valves should be ASME approved and stamped for intended service application.
8. If the design of a safety or a relief valve is such that liquid can collect on the discharge side of the disk, the valve should be equipped with a drain at the lowest point where liquid can collect.
9. Safety valves exposed to freezing temperatures should be located so water cannot collect in the valves. Frozen valves must be thawed and drained before operating the compressor.

Air Compressor Operation:

1. Air compressor equipment should be operated only by authorized and trained personnel.
2. The air intake should be from a clean, outside, fresh air source. Screens or filters can be used to clean the air.
3. Air compressors should **never** be operated at speeds faster than the manufacturer's recommendation.
4. Equipment should not become overheated.
5. Moving parts, such as compressor flywheels, pulleys, and belts that could be hazardous should be effectively guarded.

Compressed Air Equipment Maintenance:

1. Only authorized and trained personnel should service and maintain air compressor equipment.
2. Exposed, non-current-carrying, metal parts of compressor should be effectively grounded.
3. Low flash point lubricants should not be used on compressors because of its high operating temperatures that could cause a fire or explosion.
4. Equipment should not be over lubricated.
5. Gasoline or diesel fuel powered compressors shall not be used indoors.
6. Equipment placed outside but near buildings should have the exhausts directed away from doors, windows and fresh air intakes.
7. Soapy water of lye solutions can be used to clean compressor parts of carbon deposits, but kerosene or other flammable substances should not be used. Frequent cleaning is necessary to keep compressors in good working condition.
8. The air systems should be completely purged after each cleaning.
9. During maintenance work, the switches of electrically operated compressors should be locked open and tagged to prevent accidental starting.
10. Portable electric compressors should be disconnected from the power supply before performing maintenance.

1536 – ELECTRICAL SAFETY QUALIFIED

Training

All employees of Elevators of Beaumont will be trained annually in the requirements of this program. Employees who may be working on or near exposed energized equipment who face the risk of electrical shock that is not reduced to a safe level will be trained in the following:

a. The skills and techniques necessary to distinguish live parts from other parts of electrical equipment.
b. The skills and techniques necessary to determine the nominal voltage of exposed live parts.
c. The clearance distance as specified within this program and corresponding voltages to which exposure will result
d. That when employees work will involve either direct contact or contact by means of tools or materials, the Qualified person(s) will also have training on the proper use of precautionary techniques, personal protective equipment, insulating and shielding materials, and insulating tools
e. All safety related work practices that pertain to their respective job assignments

A. Electrical Safety

The installation, use, and maintenance of any fixed or portable wiring or equipment shall comply with the provisions of NFPA 70 (National Electric Code).

1. Only qualified, authorized personnel may perform electrical work or repairs.
2. Provide lockout tags and locks for use by all personnel when working on equipment.
3. Remove from service and report all defective or unsafe electrical equipment to the supervisor.
4. Do not use water hoses to clean around generators and electrical switchboards.
5. When changing light bulbs, caution and proper procedures should be used to avoid electrical shock.
6. Wherever possible, electric cables and/or extension cords will be run overhead and not laid on the ground or deck.
7. Broken or defective cords will be cut to shorter lengths or discarded.
8. Only grounded or double insulated power tools will be used.
9. Never assume an electrical cord is harmless. Always check its source of connection to ensure the power is off before attempting repairs.
10. Electrical hand tools will not be used while standing in water or outside during foul weather conditions.
11. Always use proper personal protective equipment, such as eye and face protection, and gloves, when using electrical hand tools.
12. All lighting fixtures shall be kept in good repair. Broken/burned out bulbs shall be replaced as soon as possible and vapor-proof globes and guards shall be kept in place over lights.
13. Explosion-proof and/or intrinsically safe equipment that has been repaired must be returned to its original construction.
14. All switch box, junction box, and connector box covers shall be in place. Devices in excess of 115v shall be appropriately labeled.
15. Periodic checks for proper circuit grounds of all electrical outlets will be performed.

16. Each generator skid shall be equipped with a secure system for pinning the doors open, and warning signs posted alerting workers to the high voltage.
17. All high voltage panels (440 volts and above) will be clearly marked *DANGER - HIGH VOLTAGE* and have a sign prohibiting unauthorized access.
18. Personnel rescuing a victim of electrical shock shall first switch off the power causing the shock. If this is not possible, attempt to pull the victim away from the contact with the live conductor using a dry stick, a dry rope, or other non-conducting material.
19. Conductive clothing or jewelry (such as watchbands, bracelets, rings, key chains, necklaces, metabolized aprons or metal headgear) shall not be worn.
20. Only portable ladders with non-conductive side rails (fiberglass) shall be used.

B. Lockouts, Tagging and Work Permits

1. Where there is danger of machinery being started or electrical circuits being energized while repairs or maintenance work is being done, supervisors shall ensure that the electrical circuits are locked open and tagged. Where there is danger of machinery being started, or of compressed air creating a hazard to personnel while repairs or maintenance work is being done, the supervisor shall maintain compliance with lockout/tagout regulations of the host country and:
   a. Disconnect the line, or
   b. Lock and tag the main valve closed, or
   c. Blank the lines on all hydraulic or air driven machinery, pressurized lines, or any lines connected to such equipment if they could create a hazard to personnel.
2. Before any electrical equipment is permitted to move into a restricted area or engage in a restricted activity, a work permit must be obtained from the proponent organization. Employees shall comply with all restrictions imposed by the issuance of any work permit.

C. Illumination

1. The lighting around the jobsite shall be sufficient to provide a minimum illumination at all times.
2. Lighting fixtures shall be kept sufficiently clean, adjusted, and repaired so as not to impair the illumination required for the safety of personnel.
3. Light beams shall be directed toward the objects to be illuminated and away from the eyes of personnel in the work area.
4. Vehicle lights shall not be used except in emergency.
5. The emergency lighting shall be kept in good repair, operable, and ready for immediate emergency use.

D. Generators, Motors and Lighting

1. All electrical conductors and switch gear shall be sized in accordance with NFPA 70: National Electrical Code (check latest edition).
2. Light plant generators should have an overload safety device that will provide protection from shorting and burn out.
3. When adequate illumination cannot be made available by other means, safe portable lights should be provided. Where possible, floodlights in use should be placed in positions so as not to impair vision of persons in the work area. Operations should not be performed using vehicle headlights as a substitute for lighting.

4. All electrical extension cords shall be properly insulated and both male and female plugs shall be in good condition.
5. Lighting and fixtures shall be of appropriate electrical classification for the area in which they are located.
6. Repairs to electrical equipment shall not be performed unless the power source has been interrupted at the switch box and the control has been locked or tagged in the open position, and the person making the repairs is authorized to do so.
7. Electric motors, generators, and control panels shall be grounded.

E. Electrical Systems Equipment

1. Electrical equipment used in hazardous locations should be designed for such locations, and where practicable, listed by a nationally recognized testing laboratory. All wiring components and electrical equipment should be maintained in accordance with the original design.
2. Because of exposure to vibration, maximum use should be made of flexible electrical cords intended for hard usage, and with inherent resistance to dampness and petroleum products.
3. Wiring should be installed so as to protect it from abrasion, being run over and trampled by vehicular and foot traffic, burns, cuts, and damage from other sources.
4. Wiring and electrical cords should be replaced when insulation damage is detected. Because of fire and other hazards, makeshift wiring components and installations shall not be used.

F. Overhead Lines

1. When a Qualified person is working in an elevated position near overhead lines, the person and the longest conductive object he/she may contact may not come closer to any unguarded, energized overhead line, as follows:

    a. for voltages to ground 50kV or below - 10 ft;
    b. for voltages to ground over 50kV - 10 ft. plus 4 in. for every 10kV over 50kV

NOTE: For voltages encountered with overhead power lines, objects which do not have an insulating rating for the voltage involved are considered conductive. Unqualified employees must maintain a 10’ clearance distance.

G. Minimum Approach Distances

1. When a Qualified person is working in the vicinity of overhead lines, the person may not approach or take any conductive object without an approved insulating handle closer to the energized parts than:

    a. 300v and less - Avoid contact
    b. over 300v to 750v - 1 foot
    c. over 750v to 2kV - 1 foot 6 inches
    d. over 2kV to 15kV - two feet
    e. over 15kV to 37kV - three feet
    f. over 37kV to 87.5kV - three feet six inches
    g. over 87.5kV to 121kV - four feet
    h. over 121kV to 140kV - four feet six inches

Exception to the above requirement is made when the person is insulated from the energized part with personal protective equipment tested for voltage involved or the energized part is insulated from the person and all other conductive objects at a different potential, or the person is insulated from all conductive objects at a potential different from that of the energized part.

H. Vehicular/Mechanical Equipment

Any vehicle or mechanical equipment capable of having structure parts elevated near energized overhead lines of 50kV or less must be operated so that a clearance of 10 ft. is maintained. If the voltage is greater than 50kV, the clearance must be increased 4 in. for every 10kV. The following conditions may reduce these clearance requirements.

a. If the vehicle is in transit with the structure lowered, the clearance from 50kV or less overhead lines may be reduced to 4 ft. If the voltage is greater than 50kV, the clearance must be increased 4 in. for every10kV.

b. If adequately rated insulating barriers are installed to prevent contact with the lines and are not part of or an attachment to the vehicle or its raised structure, the clearance may be reduced to a distance within the designed working dimensions of the insulating barrier.

c. If an aerial lift is insulated for the voltage involved and if work is performed by a qualified person, the clearance may be reduced to the distance noted in "b" above.

d. Warning devices (i.e., signs and barricades) must be used to ensure that employees on the ground cannot contact aerial lift equipment or grounding points which may cause an electrical hazard.

I. Confined or Enclosed Work Spaces

When working in confined or enclosed work spaces protective shields, barriers or insulating materials must be provided and used to protect each employee from shock, burns, or other electrical injuries.

J. Conductive Materials and Equipment

If an employee must handle long dimensional conducive objects (such as ducts or pipes) in areas with exposed parts, Elevators of Beaumont, will institute work practices (such as the use of insulation, guarding, and material handling techniques) which will minimize the hazard.

M. De-energized Conductors and Parts

When working with conductors and parts of electrical equipment that have been de-energized but not been locked or tagged out shall be treated as live parts.

1538 – HAND AND PORTABLE POWER TOOLS

Responsibility

Following are the Elevators of Beaumont general safety procedures for the use of a variety of power and hand tools. It is the responsibility of every employee to adhere to these policies whenever operating a power or hand tool, and to ensure they have received all required training prior to using a tool for the first time. Employees using hand and power tools and exposed to the hazard of falling, flying, abrasive, and splashing objects, or exposed to harmful dust, fumes, mists vapors, or gases or loud noises shall be provided with particular PPE necessary to protect them from the hazard.

Power and Hand Tools

1. Use the right tool for the job. Short cuts and improvising may turn a simple task into a long recovery period. Try to anticipate the tools that will be used for a job and have them at hand.

2. Cracked handles, mushrooming ends, and torn metal all contribute to an unsafe and defective tool. Replace handles on hammers and screwdrivers when they are cracked, or arrange to have them replaced. File mushrooming ends on chisels and files or replace tools with bent or jagged pieces that are exposed.

3. Use each tool in an appropriate and approved way. Applying pressure in the wrong way or using a tool without proper grounds can lead to serious injury.

4. Store and carry tools in a safe manner. Sharp tools can cause injury if stored without guarding or when carried in a pocket.

5. Every employee using tools shall, in the course of regular inspections, check for defective or damaged tools and advise replacement or repair. Should defects be found, notify your supervisor.

6. Using tools safely can help to avoid unnecessary repair or breakage and ultimate injury.

7. *Hacksaws*: Pressure should only be applied on the forward stroke. Applying too much pressure may result in the blade breaking and injuring the employee. When adjusting the hacksaw, be sure to do so when it is in its frame to prevent breaking or buckling. Do not tighten to the point where pins break off and be sure to install the blades with the teeth forward.

8. *Files*: Never use a file in place of a hammer or pry bar. Grasp the file firmly in one had while using the thumb and forefinger of the other hand as a guide. Always inspect files for cracks in the handle to avoid puncturing the hand.

9. *Tin Snips***:** Choose a tool heavy enough to cut material easily with one hand while holding the material being cut with the other hand. Always check to ensure the jaws of the snip are adequately lubricated. Glove protection is required.

10. *Saws*: Always select the proper saw for the job at hand. A coarse saw with 4 - 5 points per inch should be selected for fast crosscut work on green wood. Select a finer saw for smoother, more accurate cutting of dry wood. Store in a rack when not in use.

11. *Hammers***:**
    a. Check handles to ensure they are free from splinters. Heads must be solid. Use a soft-head, plastic-head, wood-head or rawhide-head hammer when working on hardened steel surfaces. The face of the hammer should always be proportionately larger than the head of the tool it is striking (chisel, punch, wedge, etc.). Strike the hammer squarely and always wear eye protection.
    b. When using a sledge hammer, choose the proper weight for the job at hand as too light a hammer can bounce off the work creating a hazard and too heavy a hammer can cause physical strain.
    c. When prying a nail from wood using a claw hammer, place a block of wood under the hammer head to create additional leverage.

12. *Screwdrivers*: Always choose the screwdriver to fit the screw. Choosing a sharp edge bit requires less pressure than a dull, rounded edged bit and also will not slip as readily. Never hold in your hand the part of the screwdriver doing the work.

13. *Pliers*: Be careful when using side cutting pliers. They can cause injuries when wires are cut. Never use pliers in place of a wrench.

14. *Wrenches*: Always select wrenches that fit the nut properly. Do not use a pipe wrench over single head wrenches as this may lead to injury. Routinely inspect wrenches to ensure the jaws fit as doing so will prevent damage to the head of the nut and are less likely to slip and cause injury.

15. *Knives*: Always maintain a cutting stroke away from the body. Never leave a knife open or laying on tables when not in use. When work is completed, place knife in a sheath or close knife and store properly.

16. *Hand Grinders:* All grinders with stones or discs in excess of two inches in diameter must be guarded and be equipped with automatic shutoffs. Proper operation and care of grinders includes monitoring where the sparks are thrown (away from others) and care must be taken to not drop or abuse grinders that may cause the stone or disc to become damaged. Ensure that the grinder has been properly lubricated.

17. *Electric Drills*: All drills must be double insulated or properly grounded as electric shock is a very real danger when operating a drill. When operating a drill, care should be taken to clamp the material down so that it does not rotate and strike anyone. Always disconnect

the drill prior to changing the drill bit and never place hands between the drill and the materials being drilled.

18. *Electric Saws*: Routinely check the saw guard to ensure it is in proper placement. Care should be taken to keep the power cord away from the stroke of the saw so it is not severed. Grounding prongs are never to be removed from the electrical cord as they are there to ensure safe operation.

19. *Air Hoses*: Although air hoses are not typically considered hand tools, they are a major cause of injuries. Whenever possible, suspend air hoses over the work area. Protect air hoses located on the ground from vehicle damage. Prior to working on an air hose, always shut off the power. Safety check valves are to be installed on all air hoses for automatic shutoff so they do not whip about when they accidentally become disconnected.

20. *Air Guns*: Air pressure for cleaning purposes must not exceed 30 psi. Air guns have been known to cause death when used improperly. Therefore, extreme caution must be taken when operating an air gun.

21. *Powder-actuated tools:* Powder-actuated tools operate like a loaded gun and should be treated with the same respect and precautions. In fact, they are so dangerous that they must be operated only by specially trained employees.

Powder-Actuated Tool Safety:

- These tools should not be used in an explosive or flammable atmosphere.
- Before using the tool, the worker should inspect it to determine that it is clean, that all moving parts operate freely, and that the barrel is free from obstructions.
- The tool should never be pointed at anybody.
- The tool should not be loaded unless it is to be used immediately. A loaded tool should not be left unattended, especially where it would be available to unauthorized persons.
- Hands should be kept clear of the barrel end. To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position, and another to pull the trigger. The tools must not be able to operate until they are pressed against the work surface with a force of at least 5 pounds greater than the total weight of the tool.

If a powder-actuated tool misfires, the employee should wait at least 30 seconds, then try firing it again. If it still will not fire, the user should wait another 30 seconds so that the faulty cartridge is less likely to explode, than carefully remove the load. The bad cartridge should be put in water.

Suitable eye and face protection are essential when using a powder-actuated tool.

The muzzle end of the tool must have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles that might otherwise create a hazard when the tool is fired. The tool must be designed so that it will not fire unless it has this kind of safety device.

All powder-actuated tools must be designed for varying powder charges so that the user can select a powder level necessary to do the work without excessive force.

If the tool develops a defect during use it should be tagged and taken out of service immediately until it is properly repaired.

Powder-Actuated Tool Fasteners

When using powder-actuated tools to apply fasteners, there are some precautions to consider. Fasteners must not be fired into material that would let them pass through to the other side. The fastener must not be driven into materials like brick or concrete any closer than 3-inches to an edge or corner. In steel, the fastener must not come any closer than one-half inch from a corner or edge. Fasteners must not be driven into very hard or brittle materials which might chip or splatter, or make the fastener ricochet.

An alignment guide must be used when shooting a fastener into an existing hole. A fastener must not be driven into a spalled area caused by an unsatisfactory fastening.

Training

1. No employee shall operate any machinery or equipment without providing certification of training through prior experience; or receiving training from his immediate supervisor prior to operating machinery. Upon completion of in-house training, employees are required to complete a *Training Record & a Training Roster* to show proof of understanding. Records to this effect will be maintained in personnel files.

2. All employees shall periodically review safe operating practices for machinery and equipment used routinely under normal working conditions. This shall be accomplished through a regularly scheduled safety meeting.

3. Operation of machinery and equipment shall conform to the standard operating procedures established by the company that manufactures the machinery or equipment. Operation of machinery and equipment that deviates from this is prohibited.

4. Operation of power tools shall also conform to standard operating procedures. Operating power tools in a manner that deviates from *Standard Operating Procedures* is prohibited.

5. The safe operation of power tools, machinery and equipment is mandatory at all times. Any use of these power tools, machinery, or equipment for work they are not intended for is strictly prohibited and subject to disciplinary action.

1539 – LADDERS

Elevators of Beaumont Ladder Safety Guidelines are as follows:

1. Employees shall face ladders when climbing use 3 points of contact all times. Climbing up or going down ladders with hands full of material, or in any other manner that will cause the use of a ladder to be unsafe, is prohibited.
2. Carry the ladder with the front end high enough to clear anyone ahead of you.
3. Select a ladder with the right base or ladder shoe for the surface.
4. Lash or otherwise fix ladder securely in place.
5. Set the ladder at about a 75^{o} angle (base should be 1 ft for every 4 ft of ladder length from wall or point directly under the top support).
6. Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced, when the ladder is in position for use.
7. Reach only within safe limits.
8. Have materials or tools hoisted with a hand line.
9. Never work higher than the third rung from the top of a straight ladder, nor higher than the second step from the top of a step ladder.
10. Before setting a ladder in front of a door, make certain the door is locked or barricaded.
11. Keep ladders free of oil or grease. The condition of these ladders should be brought to the attention of the safety department, superintendent, foreman or a designated representative for immediate replacements or repair.
12. Portable and fixed ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, and shall be withdrawn from service until repaired.
13. If you need an extension ladder, inspect it for defects before using it and be sure to look for overhead hazards.
14. The ladder side rails shall extend at least 3 feet (.9m) above the upper landing surface. When ladders are not able to be extended then the ladder shall be secured at its top to a rigid support that will not deflect.
15. Ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder. (The distance along the ladder between the foot and the top support.)
16. Do not use a ladder in a straight ladder position unless it has proper feet to prevent slippage of the base of the ladder.
17. Ladders come in various styles and configurations. Use ladders only for the uses for which they are designed. Ladders shall not be loaded beyond the maximum intended load for which they were built, nor beyond the manufacturer's rated capacity.
18. All ladders should be OSHA/ANSI specification marked as “for commercial use” or “Type I” or “Type II”. “For household use” or “Type III” ladders should not be used on any of our job sites.
19. All ladders will be inspected by a competent person yearly and by employees before each use.

1540 – SAFE RIGGING PRACTICES

Requirements Applicable to All Types of Slings

The following is a list of Elevators of Beaumont requirements that apply in the use of all five major types of slings listed in the OSHA Standard. Specific requirements applicable to each individual type of sling are outlined.

1. *Safe Operating Practices*: Whenever any sling is used, the following practices shall be observed.

    a) Determine the weight of the load and use a sling with a higher Safe Working Load. The Safe Working Load (SWL) of a sling shall be marked on the sling.
    b) Do not use a sling for any load exceeding its stated SWL.
    c) When using multi-leg sling assemblies, the increasing angle between the legs will reduce the Safe Working Load of the assembly. Consult the sling chart and SWL tables.
    d) Slings that are damaged or defective shall not be used.
    e) Slings shall not be shortened with knots or bolts or other makeshift devices.
    f) Sling legs shall not be kinked.
    g) Slings shall not be loaded in excess of their rated capacities.
    h) Slings used in a basket hitch shall have the loads balanced to prevent slippage.
    i) Slings shall be securely attached to their loads.
    j) Slings shall be padded or protected from the sharp edges of their loads.
    k) Suspended loads shall be kept clear of all obstructions.
    l) Hands or fingers shall not be placed between the sling and its load while the sling is being tightened around the load.
    m) Shock loading is prohibited.
    n) A sling shall not be pulled from under a load when the load is resting on the sling.
    o) Fabric slings should be used when there is close proximity to electrical surface lines.
    p) Rigging equipment not in use shall be removed from the immediate work area.

2. *Inspections*: Each day before use, the sling and all fastenings and attachments shall be inspected for damage or defects by a competent person designated by the employer. Additional inspections shall be performed during sling use where service conditions warrant. Damaged or defective slings shall be immediately removed from service.

Specific Types of Slings

A. <u>Alloy Chain Sling Requirements</u>

Safe operating practices and inspections, previously listed under requirements applicable to all types of slings, must be followed when alloy steel chain slings are used. The following are additional requirements that apply specifically to alloy steel chain slings.

1. Slings must have permanently affixed durable identification stating size, grade, rated capacity, and reach.
2. All slings shall not be used in excess of the rated capacity of the weakest component.
3. Makeshift links or fasteners formed from bolts or rods, or other such attachments, shall not be used.
4. In addition to the inspection requirements listed, each sling shall have a thorough inspection at least every twelve months by a competent person. This inspection must include a thorough inspection for damage, wear, defective welds, deformation and increase in length. Where such defects or deterioration are present, the sling shall be immediately removed from service. A record of the most recent inspection in which each sling was thoroughly inspected must be available for examination.
5. Every new, repaired, or reconditioned sling must be proof tested before use in accordance with paragraph 5.2 or ASTM spec A391-65 (ANSI G61.1-1968) and a certificate of the proof test must be available for examination.
6. Slings must not be used with loads in excess of the rated capacities shown in OSHA table N-184-1. Slings not included in the table must be used only in accordance with the manufacturer's recommendation.
7. Slings heated above 1000^{o}F must be permanently removed from service. When exposed to severe temperatures above 600^{o}F, the rated capacity must be reduced in accordance with the chain manufacturer's recommendation.
8. When welding or heat treating is performed on a sling, it shall not be used unless repaired, reconditioned and proof tested by the sling manufacturer (or an equivalent entity).
9. Broken lengths of chain must not be repaired by means of mechanical coupling links or low carbon steel repair links.
10. A sling must be removed from service if the chain size at any point of any link is less than that shown in OSHA table N-184-2.
11. A sling with weak or damaged master links, coupling links or other components, must be removed from service. Slings shall also be removed from service if hooks are cracked, have been opened more than 15% of the normal throat opening, or twisted more than 10^{o} from the plane of the unbent hook.
12. *Care and Maintenance (Recommendations)*

    a. Periodic cleaning and oiling will reduce wear and ease inspection. When storing, hang in a dry, clean place removed from the immediate work area to avoid accidental damage or entanglement.
    b. When loading slings, make sure to evaluate the effect of leg angles and compare to the sling's rate capacity. Permanent damage may result if lifts are made with twists or knots in chain legs. Avoid force fittings of all kinds. Chain is not highly shock-resistant beyond deformation of links, therefore, shock-loading must be avoided or permanent overstrain can result.

B. Wire Rope Sling Requirements

Safe operating practices and inspections previously listed under requirements applicable to all types of slings in this manual must be followed when wire rope slings are used. The following are additional requirements that apply specifically to wire rope slings.

1. Slings shall not be used with loads in excess of the rated capacities shown in OSHA tables N-184-3 through N-184-14. Slings not included in these tables shall be used only in accordance with the manufacturer's recommendations.
2. *Minimum Sling Lengths*: Slings made from cable laid rope, 6 x 19 class and 6 x 37 class, rope must have a minimum clear length of wire rope ten times the component rope diameter between splices, sleeves or end fittings. Braided slings must have a minimum clear length of wire rope 40 times the component rope diameter between the loops or end fittings. Cable laid grommets, strand laid grommets, and endless slings must have a minimum circumference length of 96 times their body diameter.
3. When exposed to temperatures in excess of 200^{o}F, fiber core slings of all classes shall be permanently removed from service. When metallic core slings are used above 400^{o}F or below -60^{o}F, the recommendations of the sling manufacturer must be followed.
4. Welding of end attachments (except covers to thimbles) must not be performed after sling is assembled.
5. All welded end attachments must be proof tested by the manufacturer (or equivalent entity) at twice their rated capacity prior to initial use and a certificate of the proof test must be available for examination.
6. Slings containing eyes formed by using knots or wire rope clips must not be used.
7. Slings must be immediately removed from service if any of the following conditions exist:

    a. One rope lay containing ten randomly distributed broken wires.
    b. One strand in one rope lay containing five broken wires.
    c. Wear or scraping of 1/3 the original diameter of outside individual wires.
    d. Kinking, crushing, bird caging or any other damage resulting in distortion of the wire rope structure.
    e. Evidence of heat damage.
    f. Corrosion of the rope or end attachments.
    g. End attachments are cracked, deformed or worn.
    h. Hooks opened more than 15% of the normal throat opening or twisted more than 10^{o} from the plane of the unbent hook.

8. *Care and Maintenance (Recommendations)*: When hooking up, avoid twists and loops. All sharp corners of the load should be blunted. Severely scuffed or cut wires and strands can result from pinching sharp load edges and catching between or under loads. The same damage can occur from turning in a basket hitch. If the size of the load is underestimated, the effect of sling angles ignored, or a sling of insufficient capacity used, the result may be a deformed thimble, broken wires in valley and bent fittings. Blocking and using IWRC ropes reduce the chances of crushed rope. Deformed fittings are caused by overloading side pulls, loading out of plane, point loading of hooks and other forms of abuse. Longer life will be obtained if dirt, sand and other foreign material is removed and the sling re-lubed

to forestall rust. When storing, hang up in a clean, dry place away from the work area to avoid accidental damage or entanglement.

C. Synthetic Web Sling Requirements

Safe operating practices and inspections previously listed under requirements applicable to all types of slings in this manual must be followed when synthetic web slings are used. The following additional requirements apply specifically to synthetic web slings.

1. Each sling must be marked or coded to show the rated capacities for each type of hitch and type of web material.
2. Slings must contain web that is of uniform thickness and width, and selvage edges must be of a minimum breaking strength equal to that of the sling.
3. Fittings must be free of all sharp edges that could damage the webbing and must be of a minimum breaking strength equal to that of the sling.
4. Stitching shall be the only method used to attach end fittings to webbing and to form eyes.
5. Slings illustrated in OSHA figure N-184-6 must not be used with loads in excess of the rated capacities specified in OSHA tables N-184-20 through N-184-22. Slings not included in these tables must be used only in accordance with the manufacturer's recommendations.
6. Web slings must not be exposed to fumes, vapors, sprays, mists or liquids of the following chemicals:
   a. *Acids and phenolics*: do not use nylon.
   b. *Caustics*: do not use polyester, polypropylene, or slings with aluminum fittings.
7. Nylon and polyester slings must not be used at temperatures above 200^{o}F.
8. Repaired slings must not be used unless they are repaired and proof tested by a sling manufacturer (or an equivalent entity). The proof test must be twice the rated capacity and a certificate of the proof test must be available for examination. Slings that have been repaired in a temporary manner must not be used.
9. Slings shall be immediately removed from service if any of the following conditions are present:

   a. Acid or caustic burns.
   b. Melting or charring of any part of the sling surface.
   c. Snags, punctures, tears or cuts.
   d. Broken or work stitches.
   e. Distortion of fittings.

10. *Care and Maintenance (Recommendations)*

    a. Slings containing red core warning yarns should be discarded when one or more red yarns clearly appear. Wear on slings can be reduced or eliminated by means of blocking, wear pads or other methods of protection. Sunlight is also a factor. The strength of some slings has been reduce 40% after one year of outside exposure.
    b. Be careful not to overload a sling by underestimating the load, or by using an incorrect hitch. Also be aware of the effect of severe sling angles.

Slinging Safety Rules

All lifting tackle must be examined by a competent person at regular intervals. This includes rope slings.

1. Determine the weight of the load and use a sling with a higher Safe Working Load. The Safe Working Load (SWL) of a sling shall be marked on the sling.
2. Do not use a sling for any load exceeding its stated SWL.
3. When using multi-leg sling assemblies, the increasing angle between the legs will reduce the Safe Working Load of the assembly. Consult the sling chart and SWL tables.
4. When loads are being carried on a crane hook, slings not in use should not be carried on the same hook.
5. *Hooking back* to the leg of a sling is not recommended.
6. Avoid bending wire rope slings around sharp corners of the load as it will effectively reduce its Safe Working Load.
7. A sling that has been doubled around a shackle has an SWL equivalent only to that of a single part of the rope.
8. Ensure the crane hook is positioned over the load's center of gravity to prevent swinging when the load is being raised.
9. Ensure the load is free before lifting and all sling legs have a direct load.
10. If it is necessary to guide a sling with your hands, place the flat of your hand against the sling. Always use a tag line when possible and keep your body away from the overhead load.
11. Correct signals, according to accepted standards, must be given to the crane operator. The signals must be given by the person responsible for the lift. There is to be **ONLY ONE SIGNAL MAN AT A TIME.**
12. The signal person shall ensure that no person remains in the path of the vehicle or load.
13. Never allow the load to be carried over the heads of other persons.
14. No one is permitted to ride a load.
15. If it is necessary to guide or steady a load, use tag lines of sufficient length to ensure the worker controlling the tag line cannot be struck by any movement of the load.
16. Ensure the tips of hooks always face outwards from the center of the load.
17. When eyebolts are used for lifting, ensure the threaded portion (shank) is screwed down tight and the eye is in line with the pull of the sling.
18. Chains must never be jointed by means of bolts or wire.
19. After use, slings should be stored in a dry place, in a tidy manner.
20. When equipment or material has been loaded on top of other equipment or materials on a truck or trailer, and where the equipment or material may slide or roll off during unloading operations, the load tie-down devices shall not be removed until the lifting sling and hoist line have been attached to the equipment or material and the slack in the hoist line has been taken up.
21. The working load on hoists, lines, slings, grommets, hooks and fittings shall not exceed the safe working load recommended by the manufacturer.

Sling Angles

1. The safe working load of a sling depends on the size (cross-sectional area), its configuration, and the angles formed by the legs of the sling and the horizontal.
2. If possible, sling angles should be kept greater than 45°. Sling angles at 30° or less are considered extremely hazardous and should be avoided at all costs.
3. Slings are rated at one-fifth of their ultimate breaking strength. To determine the Safe Working Load of a sling, determine the angle between the sling and the horizontal and multiply the marked Safe Working Load by the factor from the table below.

SAFE WORKING LOADS	
ANGLE, DEGREE	FACTOR
90	1.00
85	.9962
80	.9948
75	.9659
70	.9397
65	.9063
60	.8660
55	.8192
50	.7660
45	.7071
40	.6428
35	.5736
30	.5000
25	.4226
20	.3420
15	.2580

Maximum Safe Working Loads

1. All loading is based on a safety factor of five and apply to slings in new condition, with symmetrical loads that are balanced, and sling legs of equal length.
2. It is also assumed splices and end fittings match the line strength and sharp corners are padded to protect the slings.
3. Check your rope manufacturer's ratings before determining the Safe Working Load as they may differ from the tables. If the manufacturer quotes his rope's capacity in terms of breaking strength, divide that figure by the factor of safety to get the Safe Working Load (SWL).
4. Because of the difficulty in remembering the Safe Working Load of all the different wire ropes, the following rule of thumb can be used as a guideline for estimating the SWL in tons:

SWL = ROPE DIAMETER X ROPE DIAMETER X 8
1/2" diameter rope ∏ SWL = 1/2 x 1/2 x 8 = 2 tons
5/8" diameter rope ∏ SWL = 5/8 x 5/8 x 8 = 3.125 tons
1" diameter rope ∏ SWL = 1 x 1 x 8 = 8 tons

5. The types of wire rope, or the design and construction, while important, are beyond the scope of this manual. For additional information, please contact Corporate Safety.

Use, Handling and Maintenance of Wire Rope

1. Wire ropes, like the machines and hoists on which they are used, require careful use, handling and maintenance for satisfactory performance, long life and adequate safety.
2. The following precautions should be observed to meet these requirements.
    a. Ensure the correct rope is used.
    b. Inspect regularly following the rope manufacturer's guidelines and recommendations.
    c. Never overload.
    d. Minimize shock loading as over stressing of the rope will occur. In order to ensure there is no slack in the rope at the start of loading, start the load carefully and apply the power smoothly and steadily.
    e. Avoid sudden loading in cold weather.
    f. Never use frozen ropes.
    g. Take special precautions and/or use a larger size rope whenever:
        - The exact load is unknown.
        - There is a possibility of shock loading.
        - The conditions are abnormal or severe.
        - There is a hazard to personnel.
3. Protect rope from sharp corners or edges with padding.
4. Avoid dragging the rope from under loads or over obstacles.
5. Avoid dropping the rope from heights.
6. Avoid rolling loads with ropes.
7. Store all unused rope in a clean, dry place.
8. Never use wire rope that has been cut, badly kinked or crushed.
9. Prevent loops in slack lines from being pulled tight and kinking. Once a kink has been made in a wire rope, the damage is permanent. A weak spot will always remain, no matter how well the kink seems to have been straightened. If a loop forms, do not pull it out: unfold it.
10. Ensure the drums and sheaves are of sufficient diameter.
11. Avoid reverse bends.
12. Repair or replace faulty guides and rollers.
13. Ensure the sheaves are aligned and the fleet angle is correct.
14. Replace sheaves having deeply worn or scored grooves, cracked or broken rims, and worn or damaged bearings.
15. Repair faulty clutches.
16. Check for abnormal line whip and vibration.
17. Ensure the rope spools properly on the drum.
18. Never wind more than the proper amount of rope on any drum.
19. Never allow the rope to cross-wind.
20. Ensure rope ends are properly seized.
21. Ensure the ropes do not bind in sheaves. New wire rope requires a run-in period before operating at full load and full speed.
22. Use thimbles in eye fittings at all times.

23. Lubricate regularly according to the rope manufacturer's recommendations.
24. Watch for local wear. Premature wear at one spot is common and can be prevented if the cause is detected. Uneven wear can be minimized by moving the rope at regular intervals so that different stretches are at the critical wear points.
25. Even with the utmost care during installation, it is quite common to find the dead turns on the drum become somewhat slack in operation. This slack arises from a certain amount of stretch that occurs in a new rope under tension, and periodically throughout the life of the rope, from release of the load. When this slack is noted, turns should be rewound to tighten them. If left uncorrected, a wedging action, causing abrasion from the second layer, will occur and broken wires in the dead turns will appear.

U-Bolt Clips

1. U-Bolt clips must have the U-Bolt section on the dead or short end of the rope and the saddle on the live or long end of the rope. If even one clamp is installed incorrectly, the efficiency is reduced to 40%. Reused clips do not develop the proper efficiency. Failure to use a thimble results in a further reduction of efficiency of at least 10%.
2. The procedure for installing U-Bolt clips is illustrated later in this section. After rope has been in operation for an hour, all nuts should be retightened and rechecked for tightness at frequent intervals thereafter. This is necessary to compensate for the changing diameter of the rope as it is worked.
3. Double saddle clips are preferable to U-Bolt clips. They cannot be installed incorrectly and cause less damage to the rope. Still greater efficiency can be obtained by the use of long, double base clamps.

INSTALLATION OF DOUBLE SADDLE CLIPS			
Rope Diameter (Inches)	**Minimum Number of Clips**	**Amount of Rope Turn Back From Thimble (Inches)**	**Torque in Foot-Pounds Unlubricated Bolts**
3/16	2	4	30
1/4	2	4	30
5/16	2	5	30
3/8	2	5-1/2	45
7/16	2	6-12	65
1/2	3	11	65
9/16	3	12-3/4	130
5/8	3	13-1/2	130
3/4	3	16	225
7/8	4	26	225
1	5	37	225
1-1/8	5	41	360
1-1/4	6	55	360
1-3/8	6	62	500
1-1/2	6	66	500
1/8	2	3-1/4	---
1/4	2	4-3/4	15
5/16	2	5-1/2	30
3/8	2	6-1/2	45
7/16	2	7	65
1/2	3	11-1/2	65
9/16	3	12	95
5/8	3	12	95
3/4	4	18	130
7/8	4	19	225
1	5	26	225
1-1/8	6	34	225
1-1/4	6	37	360
1-3/8	7	44	360
1-1/2	7	48	360
1-5/8	7	51	430
1-3/4	7	53	590
2	8	71	750
2-1/4	8	73	750
2-1/2	9	84	750
2-3/4	10	100	750
3	10	106	1200

End Fittings and Connections

Many wire rope attachments, even when made correctly, develop less than the full strength of the rope. Fittings that are *load rated*, those that have the safe working load stamped on the fitting, should be used. The best choice is forged fittings.

1. Types of forged fittings that are rated at 100% efficiency are:

    a. *Zinc (Spelter) Sockets*: Poured molten metal.
    b. *Swaged Sockets*: Compressed steel sleeve.
    c. *Cappel Sockets*: Interlocking wedges.

2. Efficiency of other types of fittings are:

    a. *Wedge Sockets*: 70% efficiency.
    b. *Spliced Eyes*: develop about 70% of the strength of the rope but tend to weaken as the rope unwinds. The efficiencies of the tucked or hand spliced eyes (without metal sleeves) are given on the next page:

ROPE DIAMETER	**EFFICIENCY**
1/4” and smaller	95%
5/16” to 3/4”	90%
7/8” to 1”	85%
1-1/8” to 1-1/2”	80%
1-5/8” to 2”	75%

    c. *Clamp and Thimble*: 80% efficiency.
    d. *Clipped Eye (Cable Clamps With Thimble)*: 80% if done to specifications.

Hooks

1. Hooks, other than grab and sorting hooks, shall be equipped with safety catches.
2. Hooks on overhaul ball assemblies, lower load blocks, or other attachment assemblies shall be of a type that can be closed and locked, eliminating the hook throat opening. Alternatively, an alloy anchor type shackle with a bolt, nut and retaining pin may be used.
3. Hooks shall be inspected frequently for damage. Inspect the saddle for wear. Look for cracks, severe corrosion and twisting of the hook body. Measure the throat opening for enlargement. Check the saddle area and the neck for cracks.
4. The safe working load of a hook only applies when the load is applied in the saddle of the hook. As the load is shifted from the saddle to the point, the efficiency is reduced.

Shackles

1. Shackle pins are not to be replaced with bolts.
2. Shackles with the distance between the eyes greater than specified must not be used.
3. Shackle pins must be straight and cotter pins must be used with all round pin shackles.
4. Shackle crowns or shackle pins worn more than 10% of the original diameter must be destroyed.
5. Never allow a shackle to be pulled at an angle. Centralize whatever is being hoisted with suitable washers or spacers.
6. Do not screw pin shackles if the pin can roll under load and unscrew.

SHACKLES (ALL TYPES) **Weldless Construction** **Forged Alloy Steel**		
Stock Diameter (Inches)	**Inside Width at Pin (Inches)**	**Max. Safe Working Load Single Vertical Pull Pounds**
3/16	3/8	665
¼	15/32	1,000
5/16	17/32	1,500
3/8	21/32	2,000
7/16	23/32	3,000
½	13/16	4,000
5/8	1-1/16	6,500
¾	1-1/4	9,500
7/8	1-7/16	13,000
1-1/8	1-13/16	19,000
1-1/4	2-1/32	24,000
1-3/8	2-1/4	27,000
1-1/2	2-3/8	34,000
1-3/4	2-7/8	50,000
2	3-1/4	70,000
2-1/2	4-1/8	100,000
3	5	150,000
3-1/2	5-3/4	200,000
4	6-1/2	260,000

Center of Gravity

1. It is always important in rigging practice to rig the load so that it is stable. A stable load is one in which the center of gravity of the load is directly below the main hook and below the lowest point of attachment of the slings.
2. The center of gravity of an object is that point at which the object will balance. The entire weight may be considered as concentrated at this point. A suspended object will always move so that the center of gravity is below the point of support. In order to make a level or

stable lift, the crane or hook block must be directly above this point. Thus, a load that is slung above and through the center of gravity will be stable and will not tend to topple or slide out of the slings.

3. In objects having uniform shapes and compositions, there is no problem in determining where the center of gravity lies since it is at the center of the shape or object, but on odd-shaped bodies where it cannot be easily determined, the rigger must guess where it lies, try to lift with the hook over that point, and then correct it by trial and error methods, moving the hook, load and sling suspension a little at a time until a satisfactory result is obtained. The object will usually tilt until the center of gravity is directly beneath the load hook, so there is an indication of the direction in which to shift the slings. Remember that when the center of gravity is closer to one point of the sling attachment than to the other, the sling legs will have to be of unequal length. That means that their angles and loads will also be unequal.
4. If a load tilts when it is lifted, and it is not corrected, one leg of the sling will see a large load increase and the load on the other will decrease. If any load tilts more than 5^{o} after it is lifted clear of the ground, it should be landed and re-rigged.
5. It is equally important to ensure the points of support of a load (i.e., where the slings are attached to the load) lie above the center of gravity and not below it, for the center of gravity will always tend to move to the lowest point possible below the point of support. This precaution is especially applicable whenever lifting from pallets, skids or the base of any object since they all have a tendency to topple. The greatest stability will be achieved when the sling angles are much larger than the angle formed between the plane of support and the line through the center of gravity. Slung this way, the center of gravity will be below the point of attachment.

1542 – FORKLIFT OPERATIONS

Operating Rules

Only authorized drivers who are trained and certified in safe operation may drive powered industrial trucks, industrial tow tractors, and forklifts. Both drivers and employees who work around these vehicles are required to follow the operating rules listed below.

Responsibilities

Elevators of Beaumont supervisors are expected to enforce, and drivers to exercise, these responsibilities.

1. Demonstrate safe, responsible driving skills. Do not use the vehicle for stunt driving or recreation.
2. Do not allow employees to:

    a. Ride on the forks of lift trucks.
    b. Ride on the vehicle as a passenger unless there are adequate safeguards for transporting passengers.
    c. Place any part of their bodies outside the running lines of an industrial truck, or between mast uprights or other parts of the truck where shearing or crushing hazards exist.
    d. Stand, pass, or work under the empty or loaded elevated portion of any industrial truck, unless it has been blocked effectively to prevent it from falling.

Safe Operation Procedures

1. Any vehicle in need of repairs should not be used until repairs have been made.
2. Cross over railroad tracks diagonally wherever possible. Do not park closer than 8 ½ feet from the center line of railroad tracks.
3. Forklifts are available for use by trained employees who require material to be moved from one location to another.
4. No person, other than the operator, can ride on the forklift unless riding in an approved passenger cage.
5. When operating a forklift, safety glasses and hard hats will be worn.
6. When approaching an area where people are working, sound your horn to alert them of your presence.
7. No move shall be made unless the driver is positive that he is not endangering anyone's safety.
8. When other forklifts are operating in the same area, keep at least three truck lengths behind the one ahead. Never travel two abreast.
9. Always slow down and look when approaching intersections.
10. Greasy, oily, or slippery hands are a hazard to safe driving.
11. Never drive over hoses, welding or electrical leads unless they are properly protected.
12. Keep forklift free from all objects and materials not essential to normal and successful operation.

13. When traveling with a load, the forks should be positioned at the lowest possible level.
14. It is important to know the weight of the load before picking it up.
15. If a load sticks, never reach through the boom uprights to free it.
16. It is never acceptable to load your forklift beyond its load limit.
17. Never park a forklift on an incline.
18. When delivering material to a work area, never leave it where it will block an aisle or walkway.
19. Transporting bulky loads or loads of excessive length and width are acceptable if the load is centered and secured.
20. Riders should never be carried on the forks.
21. A forklift is always steered by the rear wheels.
22. The first operator of the day will always pre-trip check the vehicle before starting that day's operation. See *Forklift Inspection Checklist*.
23. Know the under clearance of your forklift and the surface upon which you are traveling at all times.
24. Do not move overloaded or improperly loaded scrap bins and skip boxes.
25. When leaving your forklift unattended, you should always:

    a. Lower the forks.
    b. Engage the parking brake.
    c. Remove ignition key.

30. To reverse the direction of travel, bring the forklift to a complete stop and move control levers to the proper positions.
31. By definition, a forklift has been left unattended when you are off the forklift and leave it running.
32. When dismounting from your forklift, you must set the parking brake.
33. Never back up without looking to the rear.
34. Forklifts operate by special rules to ensure the health and safety of the operator and other employees and equipment.
35. Know the rated capacity of the forklift and do not permit it to be loaded beyond that point.
36. Never start and stop quickly.
37. Pallets never make a satisfactory work platform.
38. When refueling the forklift, make certain that the brake is set and the engine is not running. NEVER smoke during refueling. Use a ground when appropriate to do so.
39. Smoking within 50 feet of the fuel tank refueling site is prohibited.
40. Batteries can explode. Use all precautions when checking or adding water to them.
41. Never travel with your load lifted high in the air.
42. When stacking material, it is not proper to tilt the uprights backward and then pull out of the pallet to release the load.
43. Do not operate a forklift in a direction in which your vision is obscured.
44. A forklift should always be driven forward whenever possible.
45. It is never permissible to have people stand or add weight to the back of the forklift in order to lift more weight.
46. Forklifts are rated in pounds of capacity. Be sure that you are using the right forklift for the job.

47. Avoid working around low electrical lines.
48. The brakes must be set and wheel chocks placed under the rear wheels to prevent the forklift from rolling prior to loading or unloading.

Training

Training will be provided for all forklift operators prior to actual operation of the truck. Initial training is to be accomplished by Elevators of Beaumont. qualified in-house trainers or third party training providers. Formal instruction includes lecture, discussion, interactive computer learning, videos, and written materials. Practical training involves instructor demonstrations and trainee exercises. Operator evaluations are required and recorded. Training content is to include load capacity, instructions, distances, refueling, ramps, visibility and balancer and counterbalances.

This training will be repeated whenever the type of equipment to be operated is of a different configuration.

An employee must be evaluated and re-certified whenever:

1. He is involved in an incident resulting in property damage or injury.
2. He demonstrates poor operating techniques.
3. No less than a minimum of once every three years.

Elevators Of Beaumont shall document all training and evaluations and records maintained in the individual employee personnel file. Certification shall include operator name, training date, evaluation date, and trainer/evaluator name.

Elevators of Beaumont

Forklift Inspection Checklist

Forklift Model: _____ Vehicle No:_____

Inspector Name: _____ Date: _____

Inspect each part below. Put check marks next to all unsafe parts. Explain the safety hazards and the necessary corrective actions at the bottom of this form. **Do not operate a forklift that has any unsafe parts.**

( ) 1. Forks
( ) 2. Mast & Mast-guard.
( ) 3. Hydraulic Cylinders
( ) 4. Roll Cage
( ) 5. Lights
( ) 6. Steering/Steering Wheel
( ) 7. Control Levers and Knobs
( ) 8. Gauges/Indicators
( ) 9. Backup Alarm
( ) 10. Pedals
( ) 11. Brakes
( ) 12. Emergency Brake
( ) 13. Handholds/Footholds
( ) 14. Signs/Labels/Markings
( ) 15. Load Chart
( ) 16. Seat/Seat-belt
( ) 17. Engine Cover Latches
( ) 18. Tires/Wheels
( ) 20. Fuel Tank/Mounting Bracket
( ) 21. Fuel Hoses and Connections
( ) 22. Other: _____

Engine Inspection

Inspect engine while it is shut off. Be careful of hot areas!

( ) 23. Radiator
( ) 24. Fan Belts
( ) 25. Exhaust System
( ) 26. Leaks
( ) 27. Air Filter
( ) 28. Battery
( ) 29. Automatic Shut Off
( ) 30. Electrical Wiring
( ) 31. Hydraulic Fluid Level
( ) 32. Fuel Level
( ) 33. General Condition
( ) 34. Other: _____

Describe safety hazards:

Corrective Action Required:

I, the undersigned, do hereby certify that to the best of my knowledge this forklift is in safe operating condition.

Inspector Signature: _____ Date: _____

1544 – SCAFFOLDING GUIDELINES

PURPOSE:

This guideline provides a method to establish minimum safe erection, use, maintenance, dismantling, inspection and training of employees in the hazards of scaffolds. Each employer has the responsibility to follow the OSHA Guidelines under 29 CFR, 1926.450 through 1926.454 in establishing the proper use of scaffolds and elevated work locations for their employees.

DEFINITIONS:

Competent Person: (1926.450 (b)) means a person who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Qualified Person: (1926.450 (b)) means a person who by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work, or the project.

Scaffold Bracket: means a device that is used to support a scaffold platform. Brackets shall be designed by a qualified person and fabricated according to that design.

Scaffold Bracket Lug: means a specially fabricated device welded or mechanically fastened attaching the scaffold bracket. Lugs shall be designed by a qualified person and fabricated to that design.

Scaffold Platform: means a work surface elevated above lower levels. Platforms may be constructed using individual wood planks, fabricated planks, fabricated decks or fabricated platforms. The manufacturers' recommended loading for fabricated items shall be used. Platforms shall be a minimum of 18" width. For spans greater than 6 feet, the platform shall be equivalent to two (2)2 by 12 inch or three (3) 2 by 10 inch rough full dimensional lumber made of Douglas Fir or Southern Yellow Pine of select structural grade. Douglas Fir planks shall have a fiber stress of at least 1,900 pounds per square inch, and a modulus of elasticity of 1,900,00 pounds per square inch, while Yellow Pine planks shall have a fiber stress of at least 2,500 pounds per square inch and a modulus of elasticity of at least 2,000,000 pounds per square inch.

Guardrail System: means a vertical barrier consisting of, but not limited to toprails, midrails, safety lines and posts erected to prevent employees from falling off a scaffold platform or walkway to lower levels. Guardrail components shall have a smooth surface to prevent injury to employees from punctures or lacerations and to prevent snagging of clothing. A typical guardrail system is composed of:

a) **Toprail (Hand-line):** means a taut wire rope of at least 3/8” diameter installed on posts at a height between 38 and 45 inches above the platform surface. Each toprail shall be capable of

withstanding without failure, a force applied in any downward or horizontal direction at any point along its top edge of at least 200 pounds. When this load is applied the Toprail (Hand-line) shall not drop below 38" from the scaffold platform surface.

b) **Midrail (Midline):** means a taut wire rope of at least 3/8" diameter installed on posts at a height approximately midway between the toprail and the scaffold platform surface. Each midrail must be capable of supporting without failure a minimum of a 150-pound force in a downward or horizontal direction at any point along its length.
c) **Handrail Post:** means a support for a toprail and mid rail made of 1-1/4 inch by 1/4 inch structural angle iron; or 1 inch by .070 inch wall steel tubing; or 1.990 inch by .058 inch wall aluminum tubing.
d) **Safety-line (third line):** means a taut wire rope of at least 3/8" diameter installed on the scaffold bracket at the scaffold platform level, between the inner most edge of the scaffold platform and the structure, where the space between the scaffold platform and the structure exceeds 12 inches. In the event the open space on either side of the safety-line exceeds 12 inches, a second safety-line appropriately placed, shall be installed in order to reduce the open space to less than 12 inches.

ERECTION PROCEDURE

Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person. Only experienced and trained employees selected for such work by the competent person shall perform such activities.

1. The scaffold bracket lug location shall not exceed 10 feet 6 inches for scaffold bracket location. The lug location should be free of rust, millscale, non-weldable paint or other surface irregularities that may hinder the attachment of the lug to the tank surface.
2. The scaffold lug should be tack welded or mechanically fastened and checked for levelness. Unleveled scaffold bracket lug may cause undue stress to be placed on the scaffold bracket.
3. If the scaffold lug is welded, a weld procedure developed by a qualified person shall be used. Only qualified welders shall weld scaffold bracket lug to tanks.
4. Weld slag shall be removed from the weld before weld inspection.
5. Welds shall be inspected for proper size and quality according to the weld procedure, circled and initialed by a competent person before attaching the scaffold bracket to the scaffold lug. The welder may initial the weld if he is a competent person for scaffolding.
6. Scaffold brackets shall be inspected for damage before placing into scaffold lug. After placing scaffold bracket into scaffold lug, the bracket shall be visually inspected for levelness.
7. Scaffold platforms shall be placed onto the scaffold brackets. When scaffold planks are used they shall be supported at each scaffold bracket location with a minimum of 6 inches and a maximum of 18 inches of overhang. Planks should be overlapped in the same direction to help secure the planks. In windy conditions, the planks should be secured to scaffold brackets.
8. A taut wire rope supported on the scaffold brackets, shall be installed at the scaffold platform level between the innermost edge of the scaffold platform and the curved plate structure of the tank shell to serve as a safety-line in lieu of an inner guardrail system where the space between the scaffold platform and the tank exceeds 12 inches. In the event the space on either side of the safety-line exceeds 12 inches, a second safety-line shall be appropriately placed to reduce the open space to less than 12 inches.

9. The handrail posts shall be installed on the scaffold brackets. The handrail post shall be pinned to the scaffold bracket. Posts shall be checked for plumbness and structural integrity.
10. Toprail and midrail shall be installed on the scaffold posts. The toprail shall be installed between 38 and 45 inches above the platform surface. The midrail shall be installed approximately midway between the toprail and the platform surface.
11. The capacity of scaffold as erected according to this guideline is three persons on a platform (Maximum Capacity is 600 lbs) supported between scaffold brackets at a maximum spacing of 10 feet 6 inches. Scaffold is not designed to support heavy tools and equipment.
12. In addition to wearing required PPE including hard hats, each employee working on scaffold shall be protected from falling hand tools, debris and other small objects through the use of tool containers secured to the scaffold platform to prevent their upset or dislodgment.
13. For scaffolds 10 feet or higher above a lower level and where there is a danger of tools, equipment or materials falling from the scaffold onto employees below, a barrier shall be erected warning of overhead danger.
14. Any access point underneath erected scaffolding shall be provided with a barrier to prevent possible injury from falling objects.
15. When used, barriers shall be established below the scaffold area with traffic cones, or yellow and black caution tape or flagging indicating work is being performed overhead.
16. Scaffold under construction shall be tagged with the Elevators of Beaumont **UNSAFE SCAFFOLD - DO NOT USE** tag **(Red)** indicating the scaffold is not completed. This tag should be removed and replaced with the Elevators of Beaumont **SCAFFOLD RELEASED FOR USE (Green)** tag when the scaffold has been completed, inspected, and is ready for use.
17. *Scaffolds which have been completed but are undergoing alteration or modification should be tagged with an* Elevators of Beaumont ***yellow tag*** *indicating the scaffold is no longer complete and work on the scaffold must be performed with caution. When alterations or modifications are completed, the scaffold will be re-inspected and the scaffold should be re-tagged with a green tag.*
18. Inspection and tagging will be the responsibility of a competent person.
19. An authorized competent person will determine the feasibility and safety of providing fall protection for employees erecting and dismantling supported scaffolds. Elevators of Beaumont will provide fall protection for employees erecting or dismantling supported scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.

ALTERING *I* DISMANTLING PROCEDURE:

A competent person shall:

1. Determine the feasibility and use of personal fall protection for the employees altering and/or dismantling scaffold.
2. Ensure the hand-line is secure for other employees who continue to work on the undisturbed portions of the scaffold.
3. Assure that when scaffold components are moved or lowered to another level, they shall not be dropped or thrown from elevated work locations.

The competent person or a designee shall tag the scaffold with the appropriate tag indicating alteration or dismantling.

GENERAL RULES FOR SCAFFOLD USE:

1. A competent person is to survey the jobsite for hazards such as high voltage power lines, debris, unguarded openings, hazardous conditions created by others on the site and adequacy of structure to support the scaffold**.**
2. All scaffold components shall be inspected prior to erection or use by a Competent Person. Inadequate or deficient parts shall be tagged for repair or removed from site. Each scaffold component shall be capable of supporting, without failure, its own weight and at least four (4) times the maximum intended load applied to it.
3. *All scaffold planks must be tested (inspected) before initial use at each jobsite. For full dimensional lumber, it is advisable to use corrugated steel end fasteners or bolt the ends of each plank to prevent splitting.*
4. Manufactured platforms must be erected in accordance with design and/or manufacturer's recommendations.
5. All scaffolds are to be erected by trained employees under the supervision and direction of a competent person.
6. All scaffold assemblies are to be inspected under the supervision and direction of a competent person after erection, each shift and after any maintenance or repair. Inspection shall include but is not limited to:

    a. The correct scaffold assembly.
    b. Guardrails in place and adequate.
    c. Scaffold platform is correctly planked and secured.
    a. Scaffold barricades erected under scaffold or toe boards installed.
    b. Adequate scaffold access has been provided.
    c. Scaffold tags (green, yellow or red) are in place.
    g. Tools and equipment are stored safely on scaffold and scaffold is not overloaded

1. Erected scaffolds should be continually inspected by users to be sure they are maintained in a safe condition. Report any unsafe conditions to your supervisor or the competent person.
2. Employees should not work on any scaffold if their physical condition is such that they feel dizzy or unsteady in any way. *Employee(s) should report prescription medication use to their supervisor.*
3. Scaffold platforms more than 24" above or below the point of access shall be provided with a safe means of access/ egress, such as stairs, ladders or ramps. These ladders or stairs will be installed and used in accordance with applicable rules and regulations.
4. Temporary or permanent ladders used for scaffold access must have a rest platform at 35-foot maximum vertical intervals or ladder climbing fall protection shall be used.
5. Ladders shall not be placed on scaffold platforms.
6. Each employee on a scaffold subject to a fall of 6’-0” or more shall be protected by a guardrail system or a personal fall arrest system.
7. A tag system will be used to indicate that the scaffold <u>is or is not safe</u> for use. The tag(s) will be located at all points of access to the scaffold. A green tag will be used to signify that the scaffold is complete and safe to use. *A yellow tag will indicate the scaffold can only be used with a personal fall arrest system as specified on the tag.* A red tag will indicate the scaffold is not complete and can only be accessed by scaffold erectors.

8. Scaffold brackets will be plumb and fixed to the tank or structure by an appropriate scaffold bracket lug.
9. Planks, decking, etc., on the scaffold platform shall be kept together and as close as the handrail posts as possible. Maximum allowable space between planks is 1".
10. Scaffolds must be kept free from ice, snow, mud, oil and other materials which create a hazard.
11. Excessive storage and accumulation of tools, materials, and equipment must not be permitted. Good housekeeping must be maintained on scaffolds at all times.
12. Maximum allowable spacing of scaffold brackets and posts is 10-6".
13. The minimum scaffold platform (see definition) shall be 18" wide. Where wood planks are used for spans greater than 6-0", the platform shall consist of two (2) 2" thick by 12" wide (California – three (3) 2" thick by 10" wide) scaffold planks of rough full dimensioned lumber of Douglas Fir or Southern Yellow Pine of Select Structural Grade. Where other materials are used for the platform, they shall be equivalent strength.
14. A guardrail system will be installed on the outside of the scaffold and at the ends of the scaffold consisting of handrail posts, a toprail, and midrail.
15. Never leave openings in scaffold platforms or toprails unprotected**.**
16. Do not lean against top rails or midrails.
17. Do not hang weld cables, hoses, electrical cables, or materials or equipment from toprails or midrails. They should be hung from scaffold handrail posts.
18. Personal fall arrest systems must be used if you get your head and shoulders outside the guardrail system, below the scaffold platform, or your buttocks above the toprail.
19. Never jump on a scaffold or jump from a scaffold to the ground.

TRAINING:

All employees who work on scaffolds shall be trained by a Qualified Person to recognize the general hazards as outlined in 29 CFR 1926.454.

This training will be performance oriented for the circumstances required for each particular workplace.

<u>General training for scaffold users will include</u>:

1. The general rules for scaffold use as described in this guideline.
2. Fall hazards, guardrail systems and personal fall arrest systems.
3. Scaffold access and egress.
4. Falling object hazards and proper barriers around scaffolds.
5. Electrical hazards including welding hazards.
6. Scaffold capacity.
7. Tagging and inspection of scaffold by competent person(s).
8. Erection, maintenance and alterations of scaffold by trained employees.
9. Storing equipment and materials on scaffold.

<u>Training for scaffold erectors. maintenance. and dismantlers will include</u>:

1. General rules for scaffold use as described in this guideline.
2. Scaffold components and their functions.

3. Scaffold erection, maintenance and dismantling procedures.
4. Welding and weld inspection procedures.
5. Inspection of component parts.
6. Fall hazards, guardrail systems and personal fall arrest systems.
7. Falling object hazards and proper barriers around scaffolds.
8. Electrical hazards including welding hazards.
9. Scaffold capacities.
10. Tagging and inspection of scaffold by competent person(s).
11. Storing equipment and materials on scaffolds.

Training for erection, dismantling and maintenance of additional scaffolding types will be conducted before such scaffold types are employed by Elevators of Beaumont personnel.

All training will be documented.

RETRAINING:

Changes in the scaffold, fall protection requirements, falling object protection or other equipment changes about which the affected employees have not been trained will require retraining.

Where an employee shows lack of understanding or skills to work on, erect, alter or dismantle the scaffold, the employee should be retrained.

All retraining will be documented.

1546 - WASTE MINIMIZATION

Waste Management

These Elevators of Beaumont guidelines are designed to help the supervisor manage industrial waste. The United States Environmental Protection Agency (EPA) has issued regulations governing the handling, storage, and disposal of waste that is generated by a company. Waste can be solids, liquids, or gaseous and can be hazardous or non-hazardous to human life, depending on its characteristics. Large amounts of hazardous waste, i.e., about one half barrel (or approximately 220 pounds) generated in one month can initiate stringent regulations that are costly and that the company must comply with to properly dispose of. Failure to follow applicable regulations regarding different types of waste can result in serious fines to the company and potential loss of work from the customer. Employees are instructed on the proper disposal method for wastes. This includes general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes generated are classified as hazardous, employees are trained to ensure proper disposal.

Guidelines

A. Use all of the product and properly dispose of the empty containers

Always read the label on the container and follow its instructions before using the product. Read the Safety Data Sheet (SDS) for more detailed information. Ask the supervisor to get one for you if you do not have one available. If you have a partial container of product left over, store it and use it before opening a new container. Containers can be paint cans, aerosol cans, compressed gas cylinders, drums, etc.

B. Keep used oil waste separate from other waste

Do not mix hazardous waste, i.e., thinners, solvents, etc., with used oil or related oil-based waste. Used oil, by itself, is a non-hazardous waste but becomes hazardous waste if mixed with hazardous waste. The used oil must be removed by, or brought to, an approved used oil recycler (an approved recycler has an EPA identification number). Weekly inspections of the used oil collection site will be made to ensure that oil is not spilled on the ground.

C. Return used batteries for regeneration

Used or spent lead-acid batteries are to be exchanged or recycled and are not to be retained.

D. Observe safety rules and good housekeeping rules

Personal protective equipment is available for the employee to use when handling products. The employee must always read the label on the product before using it. Also, the employee can read the SDS sheet for more safety information. The employee must also know where the first aid station and fire extinguishers are located. Good housekeeping procedures must be used. The employee must make sure the original containers of products are completely empty before the product is thrown away. *Use all of the product***.** Avoid spills or leaks of products and avoid using more of a product than is actually needed. If there is a spill, do whatever is

necessary to contain the spill to protect the individual and the environment, and then notify the supervisor. The supervisor will determine if further reporting requirements and cleanup is needed.

E. Do not discard, throw, or put hazardous waste in domestic waste receptacles

F. Properly dispose of all abrasive blasting agent packaging

Use all of the product. Take the empty sack to the waste container area. Return any broken sacks, or partially used sacks, to the supplier. Keep spillage to a minimum. Clean up any spillage and return it to the supplier.

G. Take waste to the waste container area

A number of different levels of government (federal, state, local) are involved in waste regulation and have requirements for the proper handling of waste. The customer will also have requirements. These requirements must be met for the proper treatment of any hazardous or non-hazardous waste.

H. Use cleaning agents sparingly

Sometimes it may be necessary to use a solvent type cleaning agent. Use the least amount necessary and use all of the agent. If a portion of the agent is left over, store it in a labeled container and use it again.

I. Transporting waste

Shipments of company waste must be accompanied by transaction and/or shipping documents. Used oil recycler or haulers must provide the shipping supervisor with an EPA identification number. Ask the recycler or hauler for the number and record it. In all events, ask where the waste's final destination will be. The company does not want its waste to be found in a bar ditch, creek, pasture, etc.

J. Project Specific

Project wastes, trash, and/or scrap materials will be taken into consideration before work begins to determine the need for containers and waste removal. Segregation of waste materials to ensure opportunities for reuse or recycling is encouraged and utilized where possible.

1547 – ELEVATED WORK PLATFORMS

Purpose

The purpose of this section is to outline policies and procedures for the safe operations of scissors lift and aerial lifts operated by Elevators of Beaumont employees. It applies to all operations, programs and locations that require employees to access elevated locations and/or use aerial work platforms; in particular steel erection and inspection.

Definitions

Aerial Lift – A piece of equipment, extendable and/or articulating, designed to position personnel and/or materials in elevated locations.

ANSI – American National Standards Institute.

Lanyard – ANSI approved line designed for supporting one person, with one end connected to a safety harness and the other end attached to a suitable anchorage able to support 5,000 pounds of force. The anchorage can be a structural steel member, an approved lifeline, or other approved anchorage points.

Full Body Harness – ANSI approved body device designed for fall protection, which by reason of it's attachment to a lanyard and safety line or an approved anchorage point, which will limit a fall to six (6) feet or less.

Fall Protection

Full body harnesses and lanyards shall only be used, as intended by the manufacturer, for employee fall protection. Appropriate devices shall be used to provide 100% fall protection. The "D" ring on the body harness shall be positioned in the back up between the shoulder blades to minimize impact forces of the body in the event of a fall.

All fall protection equipment shall be carefully inspected prior to each use and periodically throughout the day. Safety equipment showing any signs of mildew, torn or frayed fabric or fiber, burns, excessive wear, or other damage or deterioration which could cause failure shall be permanently removed from service. All fall protection equipment shall be properly maintained and stored when not in use. This includes keeping dry and out of sunlight, away from caustics, corrosives or other materials that could cause defects.

Hard hats and safety harnesses shall be worn by employees in the bucket or platform of any aerial lift device. Other safety personal protective items may be required by either company or client safety policies. High visibility clothing is NOT required for employees, but it is recommended while working in the air.

Consideration must be given to water hazards and appropriate precautions. When 100% fall protection is employed, OSHA water safety standards are not mandated. However it is advisable to take minimum precautions such as readily available buoy and safety line, and a rescue boat.

Equipment

Aerial lift devices shall conform to ANSI Standards applicable to the type of equipment being used – bucket truck, under-bridge inspection vehicle, portable and/or self-propelled personnel lift. Aerial lift devices shall only be used for the purpose(s) intended by the manufacturer. **All manufacturer and maintenance department recommendations and warnings regarding operation, capacity, load limits and safety precautions shall be strictly followed.** Permanent labeling must be conspicuously posted to indicate lifting capacity and travel height.

Only devices approved for lifting personnel shall be used as aerial lifts. Loaders, forklifts or other material lift devices shall NOT be used to transport employees to elevated locations nor as work platforms. Forklifts and cranes may ONLY be used as a last resort, and then only with approved personnel baskets.

Modifications shall not be made to any aerial lift device without the expressed written authorization from the manufacturer. Buckets and bucket liners shall not be drilled, cut, welded on, etc.

Procedures

Lift equipment shall be inspected upon delivery to the jobsite, and daily prior to use. The daily inspection will include testing the controls prior to use, and all inspections shall be documented on the Aerial Lift Daily Inspection form.

Before extending or raising the boom or platform, outriggers (if so equipped), shall be positioned properly and the lift will be level. Outriggers shall be placed on mud mats or other SOLID surface, and shall not be used to level the vehicle. If the lift is on unleveled ground, the wheels shall be chocked and the parking brake set. Sufficient clearance shall be checked before raising the lift. For under-bridge units, adequate clearance beneath the boom shall be assured.

Employees shall keep both feet on the floor of the bucket or platform at all times. When the lift has to be moved, it shall only be moved when the bucket or platform is at the lowered position. For scissorlifts, this is lowered all the way down, and for aerial lifts, this is lowered to the lowest point that the operator can safely see to drive the vehicle.

Employees are required to wear full body safety harnesses with lanyards. The lanyards shall be attached to an engineered anchorage point inside the lift. Do Not wrap the lanyard around a rail and tie back onto itself. Employees are Not to anchor on structural members outside of the lift, unless exiting the lift to get on the structural members.

Platform lifts (scissorlifts) shall have a top and mid rail and a kick plate (toe board), along with an engineered anchorage point to tie off. Employees shall not climb nor stand on the mid or top rails, keeping both feet on the floor of the platform.

Tools, parts or any materials shall not be dropped or thrown from the bucket or platform. When using welding or heating equipment from the bucket or platform, the vehicle shall be protected from sparks and slag and special care shall be taken to remove flammable objects away from the lifts.

Electrical Safety

When working near electrical lines or equipment, avoid direct or indirect contact. Direct contact is body contact. Indirect contact is when the body touches or is in dangerous proximity to any object that is in contact with energized systems. Always assume lines are "live" and carry high voltage. Electrical lines can only be considered "dead" when verified by licensed electricians from the utilities department, and proper lockout and tagout has been performed.

Employees shall not position any aerial lifts closer than ten (10) feet to a power line that carries up to fifty (50) kilovolts. For each kilovolt over 50, add four (4) inches.

Employees are to be trained concerning the hazards and precautions of working near power lines.

Ensure posted warning placards are in place concerning electrical lines.

If the operator is unable to assess the clearances while operating the aerial lift, then a "spotter" must be used to observe the clearances and warn the operator.

Training

Aerial lift operators shall be trained and certified to use the various lifts on the jobsites.

Training may be obtained from the rental companies supplying the lifts. If not available from the rental companies, contact the Safety Director for training options.

All employees operating lifts shall be issued a Elevators of Beaumont operator's card, to be carried at all times on their person, when working on a Elevators of Beaumont jobsite. Retraining shall be accomplished annually or when an employee shows a lack of understanding of aerial lift safe operating procedures.

1547B – PREVENTATIVE MAINTENANCE

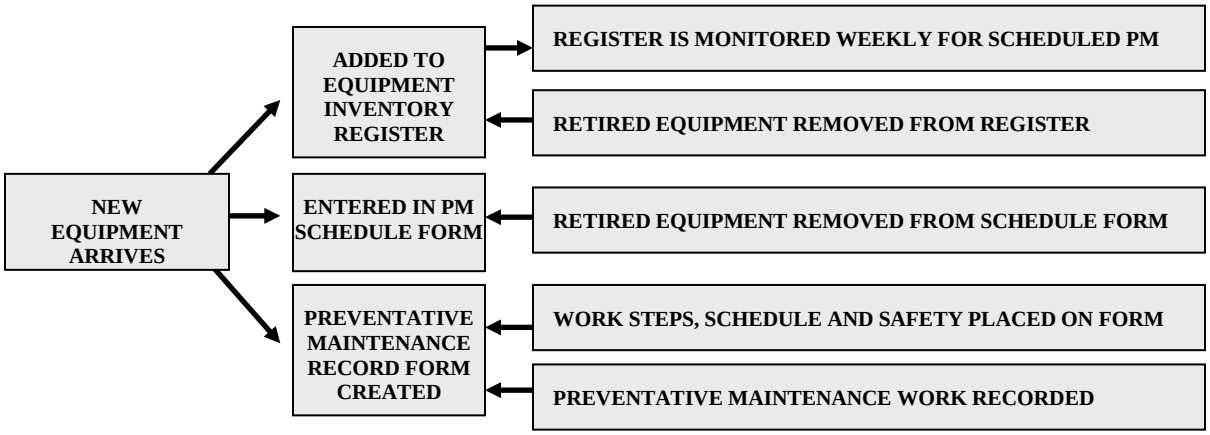
Purpose
The purpose of the Preventative Maintenance program is to set forth the procedures for the tracking, care, and maintenance of equipment.

Scope
This program applies to all Elevators of Beaumont employees and locations. When work is performed on a non-owned or operated site, the operator's program shall take precedence, however, this document covers Elevators of Beaumont employees and contractors and shall be used on owned premises, or when an operator's program doesn't exist or is less stringent.

Procedure

Process
As equipment arrives at the site a determination is made if the equipment should be placed on a preventative maintenance schedule based on the type of equipment, calibration requirements, etc.

To ensure equipment is tracked and preventative maintenance work is performed on a timely basis the following process is used. The site management representative is responsible for ensuring the process is followed.



All records must be legible, readily retrievable, protected and stored to prevent damage, deterioration or loss.

Equipment Inventory and Register
An equipment inventory is established and maintained. An inventory of Elevators of Beaumont machinery/ equipment has been established and must be kept current. When new machinery or equipment is acquired, it must be added to the inventory via the Equipment Inventory Register. The Equipment Inventory Register includes all equipment at a site that requires calibration or routine preventative maintenance and is updated by the designated maintenance representative for the site.

The register contains information on equipment's:

- Description
- Make
- Model
- Serial Number
- Location
- Next Scheduled PM Date

As appropriate equipment is added to a site's inventory it is added to the register as well as equipment that is removed permanently from the site is removed from the register.

Each week the Equipment Register is reviewed for scheduled preventative maintenance for equipment at the site.

Each quarter a copy of the Equipment Register is sent to the appropriate management representative for the site.

Preventive Maintenance Inspection Schedule and Maintenance Record
A preventive maintenance and inspection schedule has been established to meet manufacturer and legislated requirements. A preventative maintenance schedule has been established based on manufacturer requirements and industry standards.

Each piece of relevant equipment on the Equipment Register is entered onto the Preventative Maintenance Schedule Form and assigned a Preventative Maintenance Record form. The maintenance schedule form contains the item name, required frequency of inspection and tracks the inspection dates and completion. The maintenance record form contains information on the equipment including:

- Equipment data
- Safety instructions for the specific equipment
- Description of preventative maintenance requirements for the specific equipment
- Preventative maintenance frequency and history for the specific equipment

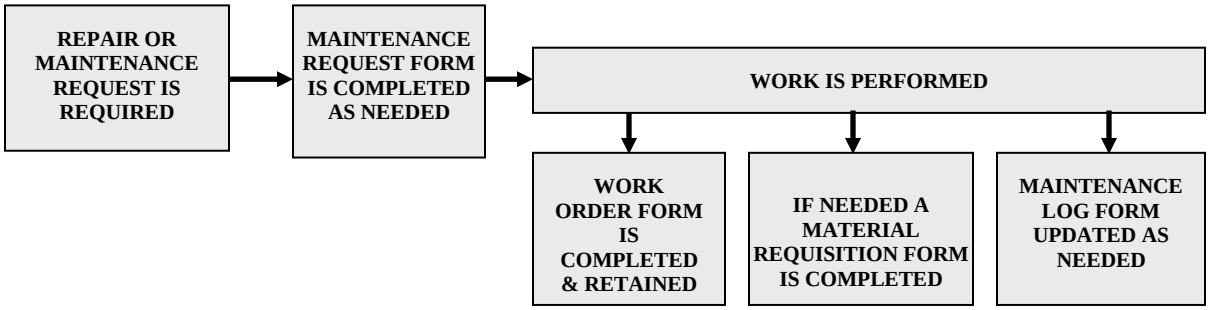
Records of maintenance activities are kept. Preventive maintenance performed on machinery or equipment must be documented and retained for the life of the machinery or equipment. As scheduled preventative maintenance is performed on the equipment the Preventative Maintenance Record Form shall be completed and the Preventative Maintenance Schedule Form Updated. All forms are to be retained locally with a copy sent to the Elevators of Beaumont main office.

Repair Procedure

Process
Equipment found to be defective is removed from service until it is repaired. Defects observed in machinery or equipment shall be reported to a supervisor and must be repaired or replaced before being used again.

During preventative maintenance work or other requests repairs activity is tracked and documented by use of the following process.

This process ensures documented work performed, costs and management approval for material associated with the project activity.



All records must be legible, readily retrievable, protected and stored to prevent damage, deterioration or loss.

Maintenance Request Form
Maintenance requests are originated by the client or internal requestor completing a Maintenance Request Form and submitting the form to the designated maintenance representative for the site. The form contains information regarding:

- Originators Information
- Location of the problem
- Defective equipment details
- Description of the problem or corrective action requested

Each Maintenance Request Form is to be retained in a file folder with all appropriate other documents, copies of invoices, etc. and retained locally at the site.

Work Order Form
The designated maintenance representative takes information from the Maintenance Request Form investigates the problem and documents work performed on the Work Order Form. Data contained on the Work Order Form includes:

- Maintenance Request input
- Corrective actions completed
- Manpower details
- Materials used or needed for repairs and cots

Each Work Order Form activity is then entered onto the Maintenance Log form. If equipment, parts, etc. are required the Material Requisition Form shall be completed and approved prior to purchasing.

Maintenance Log Form
The Maintenance Log contains in chronological order all Work Order activity with line item summaries of reported date, maintenance issue, location, costs and completion date.

Each quarter a copy of the Maintenance Log is sent to the appropriate management representative for the site.

Material Requisition Form
Material is requested for and approved via the Material Requisition Form.

A purchase order is assigned by the designated maintenance representative (which must appear on all invoices).

The form is submitted to the Project Manager for review and approval.

Any single Material Requisition Form representing a single value of $1,000 or more requires approval from senior management prior to placing any orders.

The Material Requisition Form is to be kept with all Work Order Forms.

FORMS

EQUIPMENT INVENTORY REGISTER

Description	Make	Model	Serial Number	Location	Next Calibration or PM Date

PREVENTIVE MAINTENANCE SCHEDULE

	Comments	Frequency	Month:		Month:		Month:		Notes
			Schedule	Actual	Schedule	Actual	Schedule	Actual	
Item Name									
PM 1									
PM 2									
PM 3									
Item Name									
PM 1									
PM 2									
PM 3									
Item Name									
PM 1									
PM 2									
PM 3									
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PM 2									
PM 3									
Item Name									
PM 1									
PM 2									
PM 3									

Frequency: A=Annual; Q= Quarter; M=Month

Schedule: R=Required; I=Inspect and perform if necessary: Blank=Not Required

Actual: Check Mark=Performed; D=Delayed

WORK ORDER FORM

SECTION 1 Information received from "Maintenance Request Form"

DEFECT DESCRIPTION & CORRECTIVE ACTION REQUIRED
(paste photograph below if required)

SECTION 2 To be completed by Definitive Optimization

Location:		Date Reported:		Completion Date:	

Task Item	Corrective Action	Date	Tech Initials

SECTION 3 MANPOWER SUMMARY LIST — Manhour Details

Task Item	Surname	ID	Craft	Start Time	Finish Time	Total Man Hrs	Date	Initials
					Total Manhours			

SECTION 4 MATERIALS SUMMARY LIST *Complete Material Requisition Form to order new or replacement stock*

Task Item	Stock Code	Stock Description	QTY	Unit ($)	Total Cost ($)	Date
				Total Material Cost		

Completed By Name		Completed By Signature	
		Date	

ENTER ALL WORK ON THE MAINTENANCE LOG

MAINTENANCE REQUEST FORM

Complete all relevant information below and email to maintenance department or designee.

Originator Name: Contact Phone Number:

Location of Problem:

Date: Time:

Location of Problem:
(mark x in appropriate box)

Location 1	
Location 2	
Location 3	
Location 4	

Defective Equipment - Facility Details	
Equipment Type:	
Serial Number:	
Make:	
Model:	

PLEASE DESCRIBE PROBLEM OR CORRECTIVE ACTION REQUESTED
(paste photograph below if required)

MATERIAL REQUISITION FORM

Requestor			Manager Approval			PO Number	enter number
Priority		Project Code		Phone #		E-mail	
Deliver To		Work Order No		Summary Description			

End Use Requirement		Originator Contact Details		Recommended Supplier Details if Known	
Manufacturer		Name		Supplier Name	
Equipment		Department		Address Line 1	
Make/Model		Tel. No		Address Line 2	
Project		Fax No.		Tel / Fax No.	
Other		Date Required		Email Address	

Additional Information	
Airfreight Justification	

#	Qty	UOM	Stockcode	Material Description	Supplier Part Number	Unit Price ($)	Extended ($)
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
						-	-
					Requisition Total		

VI. Emergency Response

1548 – WELDING, CUTTING AND BURNING

Introduction

Welding, burning and cutting processes are hazardous by definition of the work. Fires and explosions with resulting injuries and/or loss of life have resulted within our industry due to misapplication of these processes.

Purpose and Scope

It is the purpose of this policy to aid in the prevention of fires, explosions, injury or loss of life in which Elevators of Beaumont personnel could be involved. This policy is applicable in all regions and in all offices of Elevators of Beaumont.

General

1. Welders and their supervisors must be suitably trained in the safe operations of their equipment and the safe use of the process.
2. Welding, cutting or burning within customer facilities shall follow the procedures of that facility. No welding, cutting or burning shall be performed by Elevators of Beaumont, employees in areas that have not been authorized and permitted.
3. If welding, burning or cutting is to be performed in areas where the customer does not provide a hot work permit, then follow the procedures outlined in Elevators of Beaumont, program 1517 -*Confined Space Entry* and 1510 - *Permits*.
4. Welding and cutting shall only be performed by trained and qualified personnel.
5. Suitable fire extinguishing equipment shall be available for immediate use. Fire watch attendants trained in the use of the equipment must be present and shall know how to sound the alarm and recognize their limitations on trying to extinguish fires within the capacity of the fire extinguishing equipment. If and when the intensity of the fire exceeds their extinguishing capabilities they must sound the alarm and call for an evacuation of all personnel.
6. Conditions which include the use of a fire watch include:

    a. Locations where other than a minor fire could develop.
    b. The presence of flammable or combustible materials within 35’ of the area where the hot work is to be performed.
    c. Presence of flammable liquids or other easily ignitable products within the near vicinity which could become ignited.
    d. Potential for flammable material to be within concealed spaces.

6. Fire watches shall be maintained for at least a half-hour after the completion of the welding or cutting operation.
7. Do not weld over open sewers, floor openings or cracks unless they can be adequately protected (i.e., being covered or closed).
8. If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

9. Do not weld over unprotected flammable objects such as paint, oily rags, combustible trash, gasoline, etc. If the fire hazard cannot be removed from the area of the operation, then screens or other protective devices shall be employed.
10. When necessary, all arc welding or cutting operations shall be protected by flame-proof screens to protect employees from welding arc flash and slag spatter.
11. When arc welding, make sure the area is dry and that all cables and electrodes are in good condition.
12. Protect welding cables and hoses where they cross a pathway, roadway or vehicle traffic aisle.
13. Electrodes shall be removed from the holder when welding has ceased or they are unattended.
14. Never strike an arc on a compressed gas cylinder.
15. Cables should not enter a confined space through the same passageway that workers use for access and egress.
16. Hoses, cables and other equipment shall be kept clear of ladders and stairways.
17. Proper personal protective equipment shall be worn by welders and burners. The PPE shall follow the requirements of Elevators of Beaumont,. procedure 1529 - *Personal Protective Equipment*.

Safe Welding Procedures

A. Welding, burning, cutting, hot tapping, and other types of hot work are strictly prohibited without a safe work permit unless work is done in a designated area (such as shops). The following sections discuss elements of Elevators of Beaumont, welding, burning, cutting and hot tapping practices and procedures plan. Specifically, they discuss hot and safe work permits, supervision, and safe work practices.

B. Welding and cutting should be kept to a bare minimum and extra safety precautions must be taken when welding or cutting on any tank, pump, or line containing flammable gas or liquid. In addition, a specific area should be designated as the welding area. This area must be approved by an Elevators of Beaumont, supervisor and all welding and cutting should be restricted to this area.

C. Before welding or burning, equipment must be inspected for the following:

1. Welding leads must be completely insulated and in good condition.
2. Cutting tool hoses must be leak free and equipped with proper fittings, gauges, regulators, and flashback devices.
3. Oxygen and acetylene bottles must be secured in a safe place.
4. Defective equipment must be red-tagged or otherwise marked and not used until repaired by authorized personnel or replaced.

D. In addition, the following general safety practices apply to most cutting or welding procedures:

1. Cutting and welding should be done in a designated area free from flammable materials. When welding or cutting is necessary in hazardous or undesignated areas, one person must stand as a fire watch with a fire extinguisher.
2. Welding and cutting areas must be checked periodically for combustible atmosphere.
3. All employees must wear eye and face protection. Depending on the nature of the work and the proximity of other welders, employees may also need to wear the following as appropriate: Flame Retardant Clothing (FRC), hard hat, ear protection, respiratory protection.
4. Care must be taken to prevent sparks from starting fires.
5. Gas cylinders require careful treatment. If possible, remove unused gas cylinders from the welding and cutting area.
6. Acetylene and oxygen regulators must be equipped with flame or flashback arrestors. Only authorized factory personnel can service or repair regulators.
7. Acetylene bottles must be stored in an upright position.
8. Oxygen cylinder fittings and hoses must be free from oil and grease.
9. Hoses should be kept out of doorways and away from other workers. If the hose is flattened, a flashback may occur.
10. If flammable gas is detected, welding or cutting operations must be shut down.
11. All welding operations must be performed according to authorized procedures.
12. Hot metal should be marked with a sign or other visual or verbal warning when welding is complete.
13. When working in confined spaces, workers must follow additional safety precautions and procedures as outlined in 1517 - *Confined Space Procedures*.

Acetylene (Gas) Welding and Cutting Tools

The following precautions should be taken with gas welding and cutting equipment:

1. Field employees must be qualified to use welding equipment.
2. Set pressure on the acetylene at or below 15 psig.
3. Close cylinder valves whenever work is finished, the cylinder is moved, or the cylinder is empty.
4. Repair, replace, or clean dirty or defective hoses. Do not repair or tamper with cylinders, valves, or regulators.
5. Carefully purge hoses and torches before connecting a cylinder.
6. Do not interchange regulator or pressure gauges with other gas cylinders.
7. Before opening the cylinder valve, remove the valve protection cap and attach a regulator and flow restrictor. Check that the pressure adjusting screw on the regulator is released. Open the cylinder valve slowly.
8. Always use the minimum acceptable flow rate.
9. Keep cylinders in an upright position when in use.
10. Never try to transfer acetylene from one cylinder to another.
11. Never use cylinders as rollers or supports.
12. Never use a match to ignite a welding torch. Always use an approved lighter.
13. Never carry a torch lighter into a combustible atmosphere.
14. Never heat a cylinder to raise the pressure.

15. Store acetylene cylinders as follows:

    a. Upright.
    b. Secure with chain, wire or other noncombustible device.
    c. Discharge valve closed.
    d. Protective valve cover screwed on.
    e. At least 20 feet away from oxygen cylinders or separated by a five foot high fire barrier..
    f. Empty cylinders marked EMPTY or MT.
    g. Away from heat and sun in a well-ventilated and dry area if possible.
    h. At least 20 feet from combustible materials.
    i. Away from elevators and stairs.
    j. Near signs stating *No Smoking or Open Flame*.
    k. In an area unavailable to unauthorized employees.

Controlling Sparks and Heat

Use the following precautions to control heat, sparks, and slag when welding, burning, or performing hot work:

1. Cover cracks, holes, and openings with spark-resistant material. Take precautions to protect people and equipment below the worksite.
2. Check both sides of a partition or tank shell before welding on it. Remove any combustibles.
3. When working near wood, have someone stand as a fire watch with a fire extinguisher.
4. When working in confined spaces, place all cylinders and welding machines outside the confined space.
5. Do not open equipment, piping, or containers with flammable materials adjacent to a welding area.
6. Avoid working over oily ground.
7. Try to weld upwind of potential vapor releases.
8. Have a fire watch monitor the welding area for 30 minutes after completion.

Electric Welding and Cutting Tools

The following precautions should be taken with electric welding and cutting equipment:

1. Store arc welding tools in an area free from combustible vapors.
2. Hood or screen arcs.
3. Wear proper and appropriate eye protection.
4. Ground electrical circuits as close to the worksite as possible.
5. Ground frames or cases of arc welding equipment.
6. Spread out coiled cable to prevent overheating.
7. Keep welding cables away from passageways to prevent trips and falls.
8. Replace welding cable if there is a splice within 10 feet of the electrode holder.
9. Replace any welding cable having damaged insulation or exposed conductors.
10. Avoid contact with grounded circuits when changing electrodes.

11. Never leave electrodes unattended in the holder.

Health Protection and Ventilation

The factors that govern the amount of contamination those welders in arc and gas welding may be exposed to include:

1. The dimension of space, especially the height of the ceiling, in which the welding is to be done.
2. The number of welders.
3. The possible evolution of hazardous fumes, gases, or dust according to the metals involved. Proper ventilation or respiratory protection shall be provided.
4. For ventilation, when welding is done in an entirely screened space, the screens must be arranged so as not to restrict ventilation. Screens should be mounted about two feet above the floor unless the work is done at a very low level, near the floor, when the screen must be extended to protect nearby workers.
5. Local exhaust or general ventilating systems must be provided and arranged to keep the amount of toxic fumes, gases, or dust below the maximum allowable concentration as specified in OSHA's *Standard on Air Contaminants* (29 CFR 1910.1000).
6. A number of potentially hazardous materials are used in fluxes, coatings, coverings, and filler metals in welding and cutting or are released in the atmosphere during welding and cutting. Some of these include beryllium, cadmium, cleaning compounds, fluorine compounds, lead, mercury, stainless steel, and zinc.
7. The suppliers of these materials must determine the hazard, if any, associated with their use in welding and cutting and provide warnings through tags, signs, etc., on boxes and containers. Employers must also follow the ventilation requirement specified in the standard for these materials. Respiratory protection may also be required.
8. Goggles or other suitable eye protection (helmets, hand shields) must be used during cutting operations as a protection against sparks and debris. Workers adjacent to the welding areas must be protected from ultraviolet rays by noncombustible or flameproof screens or shields or must be required to wear appropriate goggles (29 CFR 1910.252(e)(2)(iii)).
9. Employees in welding, cutting and brazing operations must be protected by personal protective equipment that meets OSHA's *Personal Protective Equipment Requirements* (29 CFR 1910.132).

Additional Guidelines

1. Only authorized supervisors can sign a hot or safe work permit for welding, burning, cutting, hot tapping, or other hot work procedures. They must review the job and necessary safety requirements with field personnel.

2. Employees must establish areas for cutting and welding based on the fire potential of the area. Occupational Safety and Health Administration (OSHA) standards are very specific. Cutting or welding should be done in an area with no surrounding combustible materials. If combustibles in the immediate vicinity are unavoidable, guards must be erected to protect the fire hazards from the heat and sparks of the welding or cutting operations. Suitable fire extinguishing equipment (pails of water, buckets of sand, hose, or portable extinguisher) must be available for instant use, and fire watchers must be in attendance.

3. Torch cutters and welders must be suitably trained in the safe operations of their equipment. Printed rules and instructions covering operation of equipment supplied by the manufactures must be strictly enforced. Replacement tips for torches are acceptable as long as they are made to the same specifications as the original tip of the torch at the time it was approved. They are also acceptable when their use in conjunction with converters or adapters results in the same specifications as the original tip at the time it was approved.

4. A welder or helper working on platforms, scaffolds or runways must be protected against fall hazards. Welding cables and other equipment must be kept clear of passage ways, ladders and stairways.

5. If fire hazards cannot be taken to a safe place or guards cannot be used to confine heat, sparks, slag and protect the immovable fire hazards, the welding and cutting shall not be performed.

6. Burn injuries have a significant potential for allowing secondary infections on or in the body. For this reason a first-aid kit appropriately stocked with first-aid supplies including burn dressings must be maintained on-site whenever welding is performed.

1549 – SPILL PREVENTION PLAN

Purpose

The purpose of this plan is to prevent injury to personnel and damage to the environment caused by the spillage of hazardous or damaging materials into the work environment.

Scope

All chemicals brought onsite by Elevators of Beaumont, shall be identified in accordance with OSHA regulations and Elevators of Beaumont, programs and policy. An ongoing chemical inventory will be maintained and subject to review by facility personnel. No extremely hazardous or acutely hazardous substances will be allowed on the jobsite.

No excess quantities of chemicals or products will be accumulated onsite beyond those needed to perform required job tasks.

Personal Protective Measures

1. No employee shall handle, transfer or use potentially hazardous chemicals or materials in a manner that could expose him to possibly harmful effects or damage the environment.
2. Personal Protective Equipment (PPE) shall be utilized when using or transferring such materials. This may include, but is not limited to, hard hat, chemical resistant gloves, eye and face protection, Fire Retardant Clothing (FRC) and sturdy shoes.
3. Transfer of flammable or combustible liquids requires appropriate grounding and bonding systems.

Spill Containment Procedures

1. All drums, tanks and other containers shall be inspected for leaks on a weekly basis. Drums, containers or portable tanks that show deformation (such as bulging or swelling) shall not be removed until appropriate containment procedures have been implemented.
2. Damaged or leaking drums or containers must be emptied of their contents using a device classified for the materials being transported and properly discarded.
3. All portable fuel containers in excess of 55 gallons shall be provided with a secondary containment system that will be connected to an earth ground to prevent static electrical discharges. Any hoses, dispensing nozzles or fuel containers of five gallon capacity or less shall be of an OSHA approved type and/or be listed to comply with applicable codes.
4. All air compressors and welding machines shall be inspected prior to placement on the job to ensure that no leakage of lubricants or fuel exists. Refueling or adding of fuels and/or lubricants shall be accomplished with the equipment in the shut-down mode and with an acceptable containment system in place to prevent spillage of liquids from ground contact.
5. Welding machines and air compressors shall be grouped to minimize the impact of any spillage that could occur.
6. All compressed gas cylinders shall be stored and used in an approved manner. When in storage, cylinder valves will be turned off, protective caps shall be in place, and cylinders

secured upright to prevent toppling. All gas hoses, cutting torches and regulators shall be in good condition and inspected to ensure they are leak free.

7. Any compressed gas cylinder that develops a leak shall be removed from service and turned off, if possible, to stop the leak or moved to an isolated safe area and the gas supplier contacted for removal from the facility.
8. Welding rod stubs shall be collected **daily**, or more frequently, and stored in appropriate containers until such time as they can be discarded in compliance to jobsite waste rules. Welding slag and scrap material shall be disposed of in containers provided by the facility on a regular basis.
9. Containers that have been emptied of their contents, including drums, barrels and other disposable containers, shall not be allowed to accumulate onsite but will be capped or sealed and properly discarded on a frequent basis.
10. Chemical substances should be stored in proper containers to minimize the potential for a spill. Whenever possible, chemicals should be kept in closed containers and stored so they are not exposed to storm water.

Spill Reporting

1. All potential spill sources shall be observed on a continuing basis and spills of magnitude reported to Elevators of Beaumont, management and the facility spill response personnel to ensure remediation and disposal of spilled material and/or contaminated soils.
2. Should a spill be observed, onsite supervision shall see to the shutdown of necessary Elevators of Beaumont, equipment, stoppage of the leak on Elevators of Beaumont, equipment, if possible, and take other necessary actions as permitted by federal, state or local regulations, as well as those prescribed by the facility and Elevators of Beaumont guidelines.

Cleanup Procedures

All cleanup procedures shall be in accordance with manufacture guidelines as prescribed on Safety Data Sheets (SDS) for the product or material spilled. A proper spill kit will be kept onsite containing the appropriate supplies for materials that may be spilled. Supplies must be easily accessible when required, and considerations must be made for both the type and quantity of materials. Disposal of contaminated PPE, soils and containers will comply with applicable facility and governmental regulations.

Training

Employees must be instructed on the proper response procedures for spilled materials. The training should include materials available for use, proper waste disposal, and communication procedures.

VII. Health and Sanitation

1550 – EMERGENCY ACTION AND PANDEMIC PLAN

Purpose and Scope

This contingency plan describes the *actions* that must be *taken immediately* by Elevators of Beaumont,. personnel in response to any pandemic, fires, explosions, natural disaster, or any unplanned sudden or non-sudden release of hazardous substances or hazardous wastes at the company's complexes and must include emergency evacuation procedures.

Responsibility

The emergency coordination for Elevators of Beaumont, is the responsibility of the facility manager or his designate. In a pandemic there must be hand washing stations or wipes for employees and to limit large gatherings. All surfaces and equipment must be cleaned periodically. The emergency supervisor is responsible for coordinating all emergency response measures and must be thoroughly familiar with:

1. The facility's contingency plan.
2. All operations and activities at the facility.
3. The location and characteristics of waste handled.
4. The location of all records within the facility.
5. The physical layout of the facility if sick or exposed.
6. Evacuation Plan and Employee accountability after evacuation.

The Emergency Coordinator has the authority to commit company resources and to contact outside contractors in emergency situations and if majority of employees are ill.

General Information

Copies of the *Contingency Plan* are kept at each operating location manager's office and at Corporate Headquarters. The *Contingency Plan* will be reviewed and amended, if necessary, whenever:

1. The plan fails in an emergency.
2. The facility changes in its design, construction, operation, maintenance, or other circumstances in such a way that it increases the potential for fires, explosions, or releases of hazardous substances or changes the response necessary in an emergency.
3. The list of emergency coordinators changes.
4. The list of emergency equipment changes.
5. After each required annual review.

The primary emergency coordinator is responsible for these changes and for ensuring that all copies are up-to-date and to make sure that employees that are ill or taking care of ill does not come to work. They can work from home till safe to return to work. All internal communication with employees are through cell phones and/or email. We communicate with our customers internally and externally through cell phones and/or emails.

Should a release, fire or explosion involving hazardous substances occur the emergency coordinator, or an alternate, will respond and provide coordination for control of hazardous

substance releases, collective emergency actions and assistance to local responding emergency services personnel.

Emergency Notification

1. Whenever there is an emergency situation, the Emergency Coordinator or designated alternate must:
   a. Immediately notify facility emergency personnel that emergency actions must be taken.
   b. Immediately sound alarms in work areas where alarm systems are required.
   c. If the emergency involves a fire or the need to evacuate areas outside of the facility, notify:
      Local Fire Department:
      Local Police Department:
      Appropriate State Agency:

2. When a spill results in a reportable quantity release, **immediately notify the Corporate HSE Manager**. The following information must be provided:

   a. Identify yourself.
   b. State nature of emergency.
   c. State location of emergency.
   d. Remain in a safe area near the scene until emergency help arrives.
   e. If required, instruct other employees in danger to evacuate immediately.

Assessment

The emergency coordinator shall assess the possible hazards to human health, property and the environment that may result from the release of hazardous substances, fire, flood or explosion. The pandemic plan is reviewed yearly. The following will be considered during an assessment:

1. Identity, quantity, source and extent of the release..
2. Effects of hazardous surface water **runoff** from water or chemical agents used to control fire and heat induced explosions.
3. Downwind hazardous exposure in relation to wind direction.
4. The most expeditious techniques employed promoting containment.
5. After a pandemic lessons learned will be communicated to employees.

Personnel Training

Employees shall successfully complete a classroom training on how to not spread disease and get appropriate immunization, program directed by the Corporate HSE Department in safety meetings. This classroom training program instructs individuals on emergency response procedures relevant to the positions held, and ensures that personnel are capable of responding effectively to emergencies and are familiar with emergency procedures, emergency equipment and emergency systems such as:

1. The use, inspection, repair and maintenance of facility emergency monitoring equipment.
2. Communication and alarm systems.
3. Appropriate response to incidents such as fire, explosion or discharge to groundwater.
4. The safe shut down of operations.
5. Contact information for additional information respective to the plan or job duties.

1551 – ASBESTOS EXPOSURE CONTROL PROGRAM

Asbestos Awareness training is required of all employees and is training is documented. The purpose is to train our employees to be aware of the health effects caused by asbestos and how to identify potential sources of asbestos fiber Elevators of Beaumont, **does not engage in asbestos removal. Employees must not disturb and must abide by all warning signs and labels are prohibited from handling asbestos containing materials (ACM) or entering controlled areas where ACM is being removed.** All areas of job that may contain Asbestos will be communicated to employees.

Asbestos is a mineral fiber mined from natural deposits. The most common form of asbestos used in construction is Chrysotile, a whitish mineral fiber. Other types used include Amosite (used in elbows and around boilers) and Crocidolite. Asbestos was used prominently in fire protection, insulation, wrapping of boilers, hot water and steam pipes, textiles, plaster, ceiling tile, floor tile, siding, and roofing materials. Asbestos was a popular building material because of its natural fire retardant properties. Asbestos is found in the majority of buildings built or remodeled between 1930 and 1976 such as schools, hospitals, offices, and homes. It is most dangerous when disturbed, sending microscopic fibers into the air to be inhaled by workers. Materials are considered to be ACM (Asbestos Containing Materials) when they contain more than 1% of asbestos fiber by weight and shall be handled in accordance with applicable OSHA and EPA standards. **Employees who suspect that ACM is present shall notify their Supervisor immediately.** The Safety Director or other person competent in the recognition of Asbestos shall inspect the suspect ACM material. If the material is found to be ACM, work will cease in that area immediately and the property owner notified. Employees will be not work immediately adjacent to ACM removal projects.

Diseases related to asbestos exposure include:

- Asbestosis – scarring of lung tissue that may become so severe that the lungs are unable to get enough oxygen to the bloodstream and vital organs. Symptoms include coughing, shortness of breath and a tightness or pain in the chest. Causes of death include heart failure, respiratory infections or the later development of lung cancer.
- Lung Cancer – malignant tumors may grow in the lungs. Symptoms include cough or change in cough habit and chest pain.
- Pleural Mesothelioma – malignant tumors may grow in the lining of the chest or abdominal cavity. Symptoms include shortness of breath, pain in the chest wall, weight loss and cough. Death usually occurs one year after diagnosis.
- Gastrointestinal Cancer – tumors may grow in parts of the digestive tract, esophagus, stomach, colon or pancreas.

Risks of getting asbestos-related diseases depend upon the following:

- Level of asbestos exposure (primary consideration)
- Length of asbestos exposure
- Smoking habits (smokers are more susceptible than non-smokers)

Symptoms could occur as much as 10-40 years after exposure.

Asbestos fibers get into the lungs by being inhaled through the mouth or nose. The fibers are so small, that the body's natural defenses against inhalation of dusts are ineffective. Asbestos fibers reach all parts of the lungs and injure the lungs by scarring the tissue. As scar tissue develops, the lungs are less able to transfer oxygen from the air to the bloodstream and to transfer carbon dioxide from the bloodstream to the air. Some scarring may also result in the growth of cancerous tumors. The smallest fibers of asbestos are smaller than human cells, and the fiberscanmigrate into other parts of the body. Ingested asbestos fibers may damage the stomach and intestinal tract.

1551B - SILICA

Purpose

The purpose of an exposure control plan (ECP) is to set out our approach to protecting workers from harmful exposure to airborne silica dust.

A combination of control measures will be required to achieve this objective. We commit to being diligent in our efforts to select the most effective control technologies available, and to ensure that the best practices, as described in this ECP, are followed at our worksites.

The work procedures we establish will protect not only our workers but all workers on our worksites.

Key Responsibilities

Due to the significant risk posed by respirable silica, it is critical that all personnel involved in operations that could potentially create silica dust take specific action to ensure that, as much as possible, a hazard is not created.

Elevators of Beaumont is responsible for:

- Substitution of less hazardous products for those that contain crystalline silica is required.
- Ensuring that the materials (e.g., tools, equipment, personal protective equipment) and other resources (i.e., worker training materials) required to fully implement and maintain this exposure control plan (ECP) are readily available where and when they are required.
- Providing a job-specific ECP for each project, which outlines in detail the work methods and practices that will be followed on each site. Considerations will include
- Availability and delivery of all required tools/equipment
- Scope and nature of grinding work to be conducted
- Control methods to be used and level of respiratory protection required
- Coordination plan
- Conducting a periodic review of the effectiveness of the ECP. This would include a review of the available dust-control technologies to ensure these are selected and used when practical.
- Initiating sampling of worker exposure to concrete dust when there are non-standard work practices for which the control methods to be used have not been proven to be adequately protective.
- Ensuring that all required tools, equipment, and personal protective equipment are readily available and used as required by the ECP.
- Ensuring supervisors and workers are educated and trained to an acceptable level of competency.
- Maintaining records of training, fit-test results, crew talks, and inspections (equipment, PPE, work methods/practices).
- Coordinating the work with the prime contractor and other employers to ensure a safe work environment.

- There is a copy of the written exposure control plan available for all employees.

The supervisor (foreman and lead hand) is responsible for:

- Obtaining a copy of the ECP from the employer, and making it available at the worksite
- Selecting, implementing, and documenting the appropriate site-specific control measures
- Providing adequate instruction to workers on the hazards of working with silica-containing materials (e.g., concrete) and on the precautions specified in the job-specific plan covering hazards at the location
- Ensuring that workers are using the proper respirators and have been fit-tested, and that the results are recorded
- Directing the work in a manner that ensures the risk to workers is minimized and adequately controlled
- Communicating with the prime contractor and other sub-contractors to ensure a safe work environment

The worker is responsible for:

- Knowing the hazards of silica dust exposure
- Using the assigned protective equipment in an effective and safe manner
- Setting up the operation in accordance with the site-specific plan
- Following established work procedures as directed by the supervisor
- Reporting any unsafe conditions or acts to the supervisor
- Knowing how and when to report exposure incidents

Silica Properties

Silica is the second most common mineral on earth and makes up nearly all of what we call "sand" and "rock." Silica exists in many forms—one of these, "crystalline" silica (including quartz), is the most abundant and poses the greatest concern for human health. Some common materials that contain silica include:

- Rock and sand
- Topsoil and fill
- Concrete, cement, and mortar
- Masonry, brick, and tile
- Granite, sandstone, and slate
- Asphalt (containing rock and stone)
- Fibrous-cement board containing silica

Silica is a primary component of many common construction materials, and silica-containing dust can be generated during many construction activities, including:

- Abrasive blasting (e.g., of concrete structures)
- Jackhammering, chipping, or drilling rock or concrete
- Cutting brick or tiles
- Sawing or grinding concrete
- Tuck point grinding
- Road construction
- Loading, hauling, and dumping gravel
- Demolition of structures containing concrete

- Sweeping concrete dust

Unprotected workers performing these activities, or working in the vicinity, can be exposed to harmful levels of airborne silica. Workers in other industries can also be exposed to silica, for example in the manufacture of toothpaste or pottery, or when loading coal (which can contain quartz) into the hold of a ship.

Health Hazards

Exposure to silica has been shown to cause silicosis, lung cancer, pulmonary tuberculosis and other airway diseases. Crystalline silica dust can cause a disabling, sometimes fatal disease called silicosis. The fine particles are deposited in the lungs, causing thickening and scarring of the lung tissue. The scar tissue restricts the lungs' ability to extract oxygen from the air. This damage is permanent, but symptoms of the disease may not appear for many years.

A worker may develop any of three types of silicosis, depending on the concentrations of silica dust and the duration of exposure:

- Chronic silicosis—develops after 10 or more years of exposure to crystalline silica at relatively low concentrations
- Accelerated silicosis—develops 5 to 10 years after initial exposure to crystalline silica at high concentrations
- Acute silicosis—develops within a few weeks, or 4 to 5 years, after exposure to very high concentrations of crystalline silica

Initially, workers with silicosis may have no symptoms; however, as the disease progresses, a worker may experience:

- Shortness of breath
- Severe cough
- Weakness

These symptoms can worsen over time and lead to death. Exposure to silica has also been linked to other diseases, including bronchitis, tuberculosis, and lung cancer.

Code of Practice

A-1 Sheet Metal has a code of practice governing the storage, handling, use and disposal of silica if there is potential for exposure. The code of practice includes measures to be used to prevent the uncontrolled release of silica and the procedures to be followed if there is an uncontrolled release. Engineering controls such as ventilation or wet methods must be used to control silica-containing dusts.

Risk Identification, Assessment and Control

The potential for worker exposure to silica should be identified during the hazard assessment. A worker's exposure to silica is kept as low as reasonably achievable. Employees must not be exposed to airborne concentrations of silica in excess of 0.025 mg/cubic meter over an 8 hour time period. Atmospheric testing results should be assessed before a worker is exposed. Employers must provide medical surveillance of employees who are required to wear a respirator for 30 days or more per year. All records must be kept.

A key step in developing a silica exposure control plan is to identify the work activities that would put workers at risk of exposure.

- Work activities — that may generate airborne silica dust—for silica, the route of exposure is through the inhalation of airborne dust. The employer should have a qualified person review the planned work activities to identify those that may generate airborne silica.
- Identify workers at risk of exposure—For example, workers who finish concrete would be at greater risk of exposure than plumbers or electrical workers.
- Amount of exposure—some work activities generate more dust than others, and the amount of exposure should be estimated. Published resources are available that provide air sampling data and compare silica dust levels from various construction activities.
- Duration of exposure—Workers who grind concrete for a full shift would be at greater risk than workers jackhammering for an hour.

Control Options

Effective control options must be used to eliminate or reduce the risk to workers from the hazards of silica dust exposure. The following hierarchy of control measures must be followed:

- Elimination/substitution (e.g., using products with less silica or using work methods that would eliminate the need for surface grinding)
- Engineering controls (e.g., water, local exhaust ventilation, enclosure)
- Administrative controls (e.g., coordination of tasks with subcontractors, signage)
- The use of proper PPE such as gloves, coveralls and eye protection when exposed to silica. Personal protective equipment such as gloves, coveralls and eye protection will be used to control silica exposures.

Our firm commits to developing knowledge and expertise about these controls, and to establishing policies/procedures to protect workers from harmful exposure and to minimize reliance on respirators. Effective engineering controls such as HEPA vacuum attachments and wetting methods, which control silica dust at its source, are readily available. These controls have been proven to reduce airborne dust levels significantly when selected and operated in accordance with best practices. We know that engineering controls alone do not reduce airborne silica to safe levels; so in most cases other control measures, including respiratory protection, will be necessary.

If we take on a job that could release an unusually high amount of dust, and we are unsure of the adequacy of our control measures, we will conduct air sampling in order to ensure that control methods are protective.

We will reduce or eliminate worker exposure to silica dust by selecting a combination of the following controls listed in order of preference:

- Elimination and substitution
- Engineering
- Administrative
- Personal protective equipment

Elimination and Substitution

We recognize the importance of planning the work in order to minimize the amount of silica dust generated. During the project planning phase, we will advocate for the use of methods that reduce the need for cutting, grinding, or drilling of concrete surfaces (e.g., formwork planning). Whenever possible, we will schedule work when concrete is still wet, because we know that much less dust is released at that time.

Engineering Control of Dust

Selecting an appropriate control measure depends on the specifics of the operation. In some cases, local exhaust ventilation (LEV) is more effective at controlling exposure (e.g., during grinding operations) than wetting methods. In a different application, wetting may be more effective (e.g., during cutting operations) than LEV. However, using LEV may reduce the amount of final cleaning required, as the silica dust is captured.

Our dust control systems may employ three well-established techniques:

- Local exhaust ventilation (LEV)
- Wet dust suppression (WDS)
- Restricting or isolating the work activity with barriers or full enclosures (this may be the only option where LEV or WDS is not practical or effective)

Local Exhaust Ventilation (LEV)
When LEV is used in our work, we will employ the following systems and safe work practices:

- Vacuum attachment systems to capture and control the dust at its source whenever possible.
- Dust control systems (used regularly and well maintained).
- Grinding wheels operated at the manufacturers' recommended rpm (operating in excess of this can generate significantly higher airborne dust levels).
- Retrofit shrouds or exhaust cowlings for corner grinding; use manufacturer-specified rpm speeds and a well-maintained HEPA vacuum.
- Diamond stone grinders, which allow for the use of a more efficient suction casing on the grinder, whenever practicable.
- HEPA or good quality, multi-stage vacuum units approved for use with silica dust. [The vacuum units should be capable of creating a target airflow of at least 70 cfm. This should achieve a face velocity at the shroud of about 1.3 m/s (260 fpm)—the higher the face velocity, the more dust captured at source.]
- Work planning, so that concrete grinding can be completed when wet (dust release can be significantly reduced).
- Good housekeeping work practices (for example, use vacuums with high-efficiency particulate air (HEPA) filters, or use wet sweeping).
- Train workers and supervisors on how to properly use and maintain the equipment.

Wet methods for Dust Control

When water spray systems are used in our work, we will follow these safe work practices:

- Pneumatic grinders will be used instead of electric-powered grinders if water is the method of control.
- Pressure and flow rate of water will be controlled in accordance with tool manufacturers' specifications (for cutting saws, a minimum of 0.5 liters of water per minute should be used).
- When sawing concrete or masonry, we will use only saws that provide water to the blade.
- Wet slurry will be cleaned from work surfaces when the work is completed, using a wet vacuum or wet sweeping.

Barriers and Enclosures

When barriers or enclosures are used in our work, we will follow these safe work practices:

- The site foreman will determine the type and design of barrier or enclosure (based on the work activity and the work area) and ensure it is constructed in accordance with the work plan. Barriers may be simple hazard-flagging ribbon or more restrictive hoarding.
- We will use commercially available negative air units when constructing a full enclosure.

Administrative Controls

We will follow these safe work practices:

- Exposure control plans and the site risk assessment/work plan will be submitted to the general contractor prior to the start of work.
- We will establish procedures for housekeeping, restricting work areas, personal hygiene, worker training, and supervision.
- As part of our project planning, we will assess when silica dust may be generated and plan ahead to eliminate or control the dust at the source. We recognize that awareness and planning are key factors in the prevention of silicosis.
- Warning signs will be posted to warn workers about the hazards of silica and to specify any protective equipment required (for example, respirators).
- Work schedules will be posted at the boundaries of work areas contaminated with silica dust.
- Work that generates silica dust will be conducted after hours, when access to other unprotected workers cannot be restricted.
- We will develop a site-specific exposure control plan to cover project-specific issues (e.g., scope of work, project location and site-specific hazards) and to be kept available at the worksite.

Personal Protective Equipment

Respiratory protection

- All workers who wear respirators will do so in adherence with our respirator program.
- Respirators must be selected based upon measured exposure levels and the assigned protection factor of respirators.
- Only approved respirators will be used.
- Workers who wear respirators will be clean-shaven. Filtering face piece respirators give little or no protection to workers with beards, and even a minor growth of stubble can severely reduce the effectiveness of respiratory protection.
- All workers who wear respirators will be fit-tested.

- Workers will be properly trained in the use of respirators, and a high standard of supervision, inspection, and maintenance will be followed.

Protective clothing
Elevators of Beaumont will provide workers in a restricted area with protective clothing that protects other clothing worn by the worker from silica contamination, ensure that workers' street clothing is not contaminated by silica, and ensure that a worker does not leave a restricted area until the worker has been decontaminated.

Health monitoring
Exposures to airborne concentrations of Silica must be kept below the permissible exposure limits shown in 29 CFR 1910.1000 Table Z-3.

Full shift personal samples shall be representative of the employee's regular, daily exposure to silica.

Documentation
Records must be kept of the following:

- All workers who are exposed to respirable silica dust while on the job
- Worker education and training sessions
- Respirator fit-testing
- Equipment maintenance and repair
- Worksite inspections

The exposure control plan must be reviewed at least annually and updated as necessary by the employer, in consultation with the workplace health and safety committee or the worker health and safety representative.

Education and Training

A worker who may be exposed to silica is to be informed of the health hazards associated with exposure to that substance, is informed of measurements made of airborne concentrations of harmful substances at the work site, and is trained in procedures developed by Elevators of Beaumont to minimize the worker's exposure.

Training is required prior to using silica-containing materials or working in an environment known to contain airborne concentrations of Silica. Periodic refresher training is also required. We will train all silica dust in the following:

- Hazards associated with exposure to silica dust
- The risks of exposure to silica
- Signs and symptoms of silica disease
- Safe work procedures to be followed (e.g., setup of enclosures, disposal of silica waste, personal decontamination)
- Use of respirators and other personal protective equipment (e.g., donning and doffing of personal protective equipment, and cleaning and maintenance of respirators)
- Use of control systems (e.g., LEV and wet methods)
- How to seek first aid (for example, the location and use of eyewash station.

CONTROL PLAN

Date control plan completed:		
Prime contractor:	Superintendent:	
Project manager:	CSO/First aid attendant:	
Project:	Address:	
Company completing work:		
Address:	Contact:	
Contact phone:	Contact fax:	
On-site supervisor(s):		
Worker(s):		
Scope of work to be completed:		
Work start date:	Duration: ☐ Days ☐ Months ☐ Years	
Employer responsible for:		
Supervisor responsible for:		
Worker responsible for:		

HAZARDS IDENTIFIED (other than [illegible])	**CONTROL MEASURE(S)**
☐ Falls	
☐ Slipping	
☐ Confined space	
☐ Workers above	
☐ Workers below	
☐ Noise	
☐ Electrical	
Overview of work procedure (How are you going to work safely?):	

Workers trained in (training records must be available for review):			
Proper use of grinding equipment	Y☐ N☐	Proper use of admin controls	Y☐ N☐
Proper use of engineering controls	Y☐ N☐	Proper use of PPE	Y☐ N☐
Proper disposal methods	Y☐ N☐	Other (fall protection, swing stages, etc.)	Y☐ N☐

Respirators (Refer to ECP for respirator requirements)		
Required: Y☐ N☐	Available: Y☐ N☐	Fit-tested: Y☐ N☐

PPE required for scope of work (other than respirator)		
☐ Coveralls ☐ Gloves ☐ Rubber boots ☐ Eye protection ☐ Reflective vest ☐ Hearing protection		
Documents to be attached to control plan (☑ if present)		
☐ Exposure control program ☐ Respiratory protection program ☐ Training records ☐ SWP (tools and equipment)		
Project management signature	Position:	Date:
Contractor supervisor signature	Position:	Date:

Task/risk management matrix (relating to silica dust) use table 1 for codes, separate with a comma (,)

#	Date/Duration		Task	Controls		PPE	Supplies/ Equipment
				Engineering	Administrative		

Notes (For task/risk management matrix above. Use # to indicate which task the note relates to.)

SITE INSPECTION CHECKLIST (complete pre-work & periodically during project)

Engineering controls		Problem noted (DETAIL)	Problem corrected (DETAIL)
Available at site	Y☐		
Operating correctly	Y☐		
Used appropriately	Y☐		
Effective in dust control	Y☐		
Administrative controls			
Available at site	Y☐		
Used appropriately	Y☐		
In place before work start	Y☐		
Effective	Y☐		
Cleanup			
Vacuum used properly	Y☐		

Large pieces picked up	Y☐		
Vacuum capacity maintained	Y☐		
Pre-filters in place	Y☐		
Vacuum attachments used	Y☐		
Collection bags in place	Y☐		
Waste properly disposed of	Y☐		

TABLE 1 (Codes for task/risk management matrix)

Engineering controls		Administrative controls		PPE		Supplies/Equipment	
1	Exhaust fan	1	Signage	1	Respirator	1	Hand grinder
2	LEV	2	After hours work	2	Gloves	2	Ceiling grinder
3	Wetting	3	Scheduling	3	Coveralls	3	Floor grinder
4	Partial enclosure			4	Hearing protection	4	Disposal bags
5	Full enclosure			5	Eye protection	5	HEPA filter (vacuum)
6	Shroud			6	Reflective vest	6	HEPA filter (respirator)
7	Barriers			7	Rubber boots (CSA)	7	Shovel
				8	Fall arrest	8	Lifeline

SITE-SPECIFIC SILICA EXPOSURE CONTROL PLAN

Location: _____ **Date:** _____

Work description:

Primary silica control options (check those options used and explain use if needed)

- Substitution controls (using procedures or products that do not create silica; must review MSDSs)
  - Other means of demo: _____
  - Different products: _____
  - Other substitutions: _____

- Engineering controls (when using ventilation, draw air out and don't expose others to exhaust dusts)
  - Vacuuming: _____
  - Wetting: _____
  - Ventilation: _____
  - Isolation: _____
  - Other means: _____

- Administration controls (reducing exposure by work schedules, timing, or planning options)
  - Control points: _____
  - Work schedule: _____
  - Other means: _____

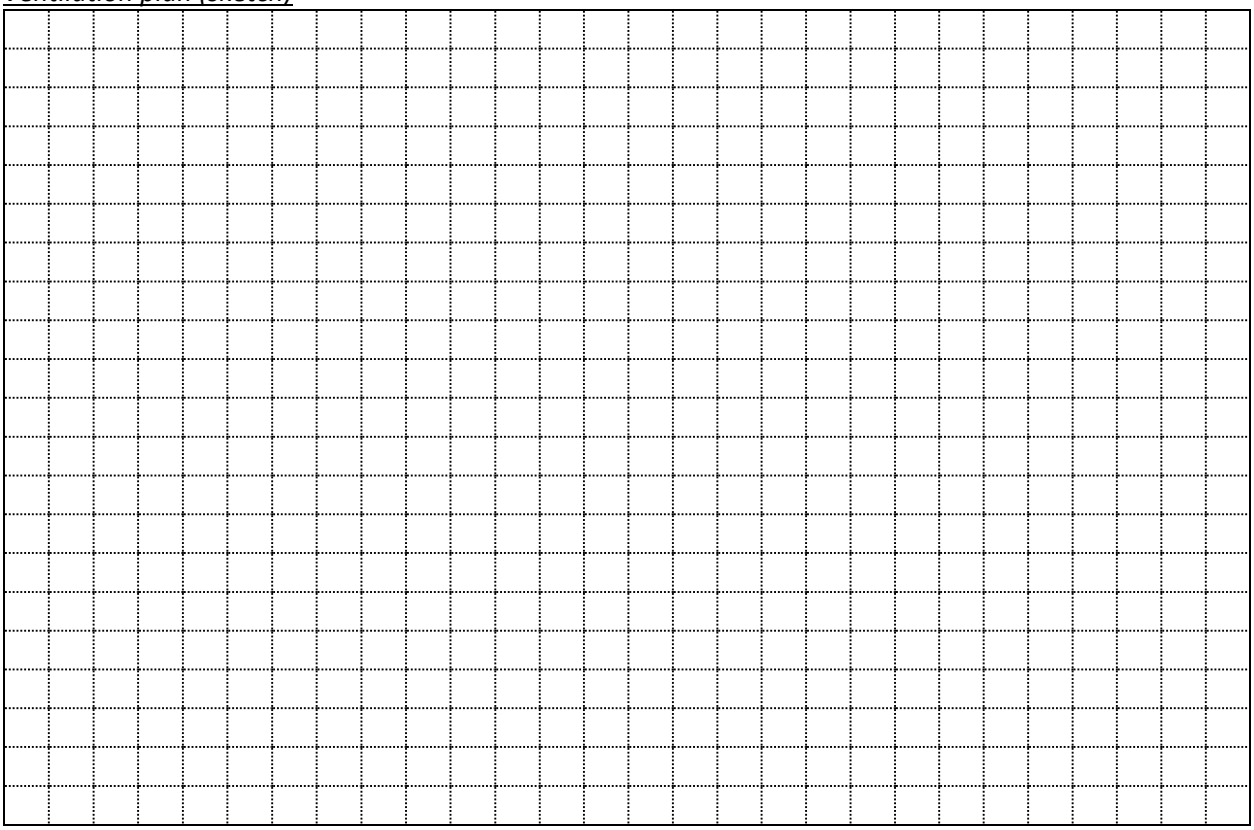
Secondary silica control options (check those options used and explain use if needed)

- Personal protective equipment
  - Half-mask respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
  - Full-face respirators: _____ Cartridge type: _____ Fit tests confirmed: _____
  - Supplied air units: _____
  - Coveralls required: _____

- Hygiene and decontamination options (reducing exposures after work has stopped or during breaks)
  - Water or washing facilities on site: _____
  - Vacuuming clothing/self: _____

  Safe work procedures and other details: _____

Ventilation plan (sketch)



⇦ Show direction of airflow including makeup air locations and discharge air outlets

Area or location in building of ventilation plan (e.g., floor #, wing)

Date plan was reviewed by workers and posted for workers to see

Types of neg. air fans & no.'s *
* Indicate on plan by number the location of the negative air fans

Ventilation safety checklist

- ☐ Makeup air free of possible contaminants
- ☐ Exhaust fan operation has failure warning
- ☐ Dilution fans not stirring up dust
- ☐ Wetting of materials used to keep dust down
- ☐ Workers not placed between contaminants created and exhaust inlet ports
- ☐ Discharge air not affecting others
- ☐ All workers equipped with approved respirators

Note: Attach additional sheets if needed or other documents if required due to hazards or work conditions.

Print supervisor's name

Supervisor's signature

1552 – BENZENE EXPOSURE CONTROL PROGRAM

Purpose

The purpose of this program is to protect Elevators of Beaumont employees from the harmful effects of benzene exposure in areas where exposure may exceed the *Permissible Exposure Limit* (PEL) of 1 part per million (ppm) as an eight hour time weighted average.

Scope

This program covers all occupational exposures to benzene or liquids containing Benzene in amounts equal to or exceeding 0.1%. The program applies to all offices in all regions. It is the policy of Elevators of Beaumont that every employee work in a safe and careful manner. This includes following the requirements of the Benzene Exposure Control Program as well as federal, state or local regulations as they may apply.

Responsibility

The corporate safety director of Elevators of Beaumont shall review the program at least annually and report the results of the review to corporate management. The director is responsible for ensuring that corrective actions, where required and approved, are established. *This program is available for review or copying by the Assistant Secretary of Labor, the Director of the National Institute for Occupational Safety and Health, any affected employee, and his/her designated representative as required.*

All group managers and/or their designates are accountable for the day-to-day administration of the program. They shall review program applications at least annually.

Area managers shall ensure the implementation of approved procedures when working in their areas. They will coordinate activities under this program with project and regional management.

Project managers are responsible for communicating the potentials for benzene exposure to job foremen and area management. In addition, they will provide a resource to all employees as to the requirements under the program. All employees will be made aware of owners' contingency plans and provisions. Employees must be informed where benzene is used in host facilities and must be made aware of additional plant safety rules.

Jobsite foremen shall ensure that protective measures will be instituted as required. Protective measures may include, but are not limited to, respiratory protection, protective clothing, engineering controls (i.e., mechanical ventilation), or work practices designed to reduce exposure potentials.

Regional safety supervisors will review the documentation of records required under this program to conform with federal, state or local rules and regulations as well as customer or Elevators of Beaumont rules, programs or procedures. The supervisor shall be responsible for auditing jobsites where benzene exposure is at or above the PEL expected and coordinates monitoring activities with third parties as necessary.

Definitions

Authorized Person means any person specifically authorized by Elevators of Beaumont whose duties require the person to enter a regulated area, or any person entering such an area as a designated representative of the employees, for the purpose of exercising the right to observe monitoring

Benzene (C_6H_6) means liquefied or gaseous benzene. It includes benzene contained in liquid mixtures and the benzene vapors released by these liquids. It does not include trace amounts of unreacted benzene contained in solid material. Benzene is toxic, colorless and has an aromatic odor. Benzene is not soluble in water and is flammable.

Day means any part of the calendar day.

Emergency means any occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which may or does result in an unexpected significant release of benzene.

Employee Exposure means exposure to airborne benzene that could occur if the employee were not using respiratory equipment.

Regulated Area means any area where airborne concentrations of benzene exceed or can reasonably be expected to exceed the PEL, either the eight-hour time weighted average of 1 ppm or the short term exposure limit of 5 ppm for 15 minutes.

PEL's - Permissible Exposure Limit.

TWA - The eight-hour time weighted average for exposure. No employee shall be exposed to airborne concentrations in excess of 1 ppm benzene as a TWA.

STEL - Short Term Exposure Limit. No employee shall be exposed to airborne concentrations of benzene in excess of 5 ppm over any 15 minute period.

General Requirements

1. No employee shall knowingly enter an area where airborne concentrations of benzene are known to be present unless he is authorized by Elevators of Beaumont management or supervision.
2. The facility owner where Elevators of Beaumont works should have already established the required regulated area to conform to the requirements of 29 CFR 1910.1028. In the event this has not been accomplished, Elevators of Beaumont shall regulate the work area and shall deny access to any unauthorized persons. Only those persons who have tasks to perform within the area will be permitted entry. Examples of possible areas of exposure are Petroleum refining sites, Tank gauging (tanks at producing, pipeline & refining operations) and Field maintenance.

3. When potential employee exposure to benzene is suspected or known, engineering controls shall be instituted to reduce or remove the exposure. Such controls may include, but are not limited to, additional natural ventilation, removal of the product by means of auxiliary pumping of liquids, or addition of mechanical ventilation systems.
4. Smoking is prohibited in areas where benzene is used or stored. Benzene liquid is highly flammable and vapors may form explosive mixtures in air. Fire extinguishers must be readily available in areas where benzene is used or stored.
5. Where it has been established that neither engineering nor work practice controls will reduce employee exposure or controls cannot be implemented, PPE in the form of respiratory protection, eye and face protection and/or protection from dermal contact, will be utilized as necessary. Concentrations of vapors must be known so that appropriate respirators may be selected in accordance with the table below.

Airborne Concentration	**Respirator Type**
Less than or equal to 1 ppm	Half Mask APR with organic-vapor cartridge. Full-face APR with organic vapor cartridge or full-face gas mask with chin canister
Less than or equal to 50 ppm	Full Face APR supplied air respirator with full face-piece operated in a positive pressure mode.
Less than or equal to 1000 ppm	Supplied air respirator with a full face-piece operated in a positive pressure mode.
Greater than 1000 ppm or unknown	No entry without management approval.
Escape	Any organic vapor gas mask or SCBA operated in a positive pressure mode.

5. Each worker who may potentially suffer employee-exposure to airborne concentrations of benzene will meet the requirement of the Elevators of Beaumont 1531 - *Respiratory Protection Program.*
6. When the possibility exists that workers may come into direct contact with liquid benzene, protective clothing shall be worn. This may include impermeable gloves, rubber boots and Level B protective clothing such as a fully encapsulated suit.
7. Prior to the starting of jobs where known concentrations of benzene exceed the PEL or STEL, plans will be developed and implemented to prevent employee exposure. Documentation of the plans will be maintained in individual job files.
8. Elevators of Beaumont shall make available a medical surveillance program for employees who are or may be exposed to benzene at or above the action level 30 or more days per year; for employees who are or may be exposed to benzene at or above the PEL's 10 or more days per year; for employees who have been exposed to more than 10 ppm of benzene for 30 or more days in a year prior to the effective date of the standard when employed by Elevators of Beaumont, and for employees who use solvents containing greater than 0.1 percent benzene. Each employee monitored shall be notified of the results, in writing, within 15 days of the receipt of the results.

9. Short term effects of overexposure may include irritation of eyes, nose and skin, breathlessness, irritability, euphoria, headache, dizziness, or nausea. Long term effects may result in blood disorders such as leukemia and anemia.
10. If it is determined by a physician that an individual employee has been over-exposed to the harmful effects of benzene and should be removed from exposure, such evaluation shall be made known to the employee in writing.
11. Information and training for employees shall be provided at the time of their initial assignment and may be repeated periodically, annually for instance, or whenever it has been determined that an individual employee has not retained sufficient information.

Training shall include:

1. Information in accordance to 29 CFR 1910.1200(h) (1) and (2).
2. Appendices A (*Substance Safety Data Sheet*), B (*Substance Technical Guidelines*) and C (*Medical Surveillance Guidelines*) of 29 CFR 1910.1028.
3. Appendix E (*Respiratory Fit Testing*) of 29 CFR 1910.1028.

Documentation

The following documentation to support this procedure shall be maintained in the individual employee files.

1. Exposure monitoring and results.
2. Medical surveillance records.
3. Medical removal notifications and plans.
4. Records of training.

1553 – BLOODBORNE PATHOGENS EXPOSURE CONTROL PLAN

Purpose and Scope

Elevators of Beaumont understands the importance of protecting every worker from occupational exposure to Bloodborne pathogens. This *Exposure Control Plan* is written to increase workers' awareness of and, the prevention of, the infectious spread of A.I.D.S. and other diseases through exposure to blood, saliva, and all other potentially infectious materials. This plan is our company's written policy for implementation of procedures relating to the control of infectious disease hazards. The plan includes provisions for the proper selection of personal protective clothing and equipment, labeling and signing requirements, exposure determination, housekeeping practices, record keeping procedures, and training for all employees whose job classifications place them at risk for exposure to blood or other potentially infectious materials. Furthermore, this plan is to be utilized by any employee of our company who has been first aid and CPR trained and who has been granted permission to administer first aid and CPR to employees of the company.

General

This *Exposure Control Plan* shall be reviewed annually and updated whenever necessary to reflect new or modified tasks and procedures. This review is the responsibility of the regional manager.

This plan is available to the Assistant Secretary and the Director of the National Institute for Occupational Safety and Health upon their request for examination or copying.

Exposure Determination

The regional manager is responsible for identifying and providing a list of all job classifications and their associated tasks in which the employee's performance of the job puts him at risk for occupational exposure without regard to the use of Personal Protective Equipment (PPE).

Job classifications in which ALL employees have occupational exposure:

CPR & First Aid Responders
Safety Personnel

Job classifications in which SOME employees have occupational exposure:

List of TASKS & PROCEDURES in which occupational exposure occurs:

CPR & First Aid Responders - administering CPR, assisting in first aid to injured persons
Safety Personnel - administering CPR, assisting in first aid to injured persons
Routine maintenance
Moving materials
Cutting materials
Using power tools
Using general tools
Welding
Assembling equipment

Methods of Compliance

It is the policy of Elevators of Beaumont to require all employees to observe universal precautions to prevent contact with blood or other potentially infectious materials. Whenever a differentiation cannot be made between body fluid types, *all* body fluids shall be considered potentially infectious materials.

Engineering and Work Practices

1. Elevators of Beaumont provides hand-washing facilities throughout its facilities.
2. Whenever work is performed as identified under *Exposure Determination*, where there are no hand-washing facilities readily available, antiseptic soap and towelettes are provided.
3. Employees using the antiseptic soap and towelettes are required to wash their hands with soap and water as soon as possible upon completion of their work.
4. Eating, drinking, smoking, applying lip balm and handling contact lenses in work areas where there is reasonable likelihood of occupational exposure is strictly prohibited.
5. The regional manager is responsible for examining the engineering controls and maintaining or replacing these controls on a regular basis to ensure their effectiveness.

Personal Protective Equipment

1. Elevators of Beaumont shall provide personal protective equipment (PPE) to every employee who is designated as a *First Aid Responder* which places them at risk for occupational exposure to Bloodborne pathogens. **This PPE is contained in a Bloodborne Pathogen Kit that is located with each first aid kit.**
2. The regional manager shall be responsible for selecting the Bloodborne pathogen kits based on the ability to effectively prohibit the passing of blood or other potentially infectious materials through to the employee's clothes, undergarments, skin, eyes, mouth, or other mucous membranes during their normal work. Furthermore, the regional manager is responsible for conveying to all affected employees the circumstances in which they are required to use the personal protective clothing and equipment.
3. Elevators of Beaumont requires the use of personal protective equipment by every employee whose job classification demonstrates the potential for occupational exposure. If an instance arises whereby an employee, through his professional judgment, deems it necessary to remove personal protective equipment in an effort to provide adequate health care or public safety services, the circumstances surrounding the incident shall be investigated. This investigation is the responsibility of the supervising manager as soon as possible after the incident.
4. Elevators of Beaumont shall provide disposal of personal protective clothing and first aid equipment as needed to maintain effectiveness and at no cost to employees.
5. Elevators of Beaumont requires employees to immediately remove all garments that have been penetrated by blood or other potentially infectious materials. The company further requires the removal of all personal protective clothing prior to employees leaving their work area. Contaminated laundry shall be handled with a minimum amount of agitation to reduce the likelihood of further contamination. Upon removal of personal protective clothing, employees are instructed to place clothing in their appropriate containers.
6. It is the responsibility of the supervisor to ensure that all containers are clearly marked for disposal.

Housekeeping

1. Elevators of Beaumont requires employees to clean and decontaminate all contaminated work surfaces.
2. Surrounding work areas or surfaces that may have become contaminated must also be cleaned and decontaminated.
3. All protective coverings including plastic wrap, aluminum foil and imperviously-backed absorbent paper utilized in cleaning equipment shall also be disposed of in appropriate containers.
4. In the event a receptacle is contaminated, the receptacle shall be cleaned or decontaminated immediately or as soon as possible following the incident. It is the responsibility of the employee performing the work that caused the contamination to ensure that cleaning and decontamination is performed. Broken glass shall **never** be handled directly.
5. All specimens of blood, blood soaked bandages, or other potentially infectious materials must be placed in leak proof, puncture resistant bags for handling and labeled with a biohazard label. The safety coordinator will have the responsibility for contacting the proper collection authority to dispose of in accordance with Local, State and Federal regulations.

Hepatitis B Vaccination and Post-Exposure Evaluation and Follow Up

1. Elevators of Beaumont shall make available the Hepatitis B vaccine and vaccination series to all employees who have occupational exposure.
2. The company shall make available post-exposure evaluation and follow-up to any employee who has had an exposure incident.
3. All medical procedures, as described in this plan, shall be scheduled at no cost to the employee, and shall be provided during normal business hours by a licensed physician or heath care provider.
4. All laboratory testing shall be conducted by an accredited laboratory.

Hepatitis B Vaccination

1. The Hepatitis B vaccination shall be made available to the employee upon receipt of training and within ten working days of the employee's initial work assignment.
2. Employees may decline the Hepatitis B vaccination. The company shall make available the Hepatitis B vaccine to those employees who initially declined the vaccine, but who are still covered under this standard and have changed their mind and agreed to the vaccine as outlined above.
3. Elevators of Beaumont shall provide the health care professional responsible for administering the Hepatitis B vaccination with a copy of the OSHA 29 CFR 1910.1030 regulation.
4. Elevators of Beaumont shall obtain and provide every employee with a copy of the evaluating health care professional's written opinion which shall be limited to whether the Hepatitis B vaccination is indicated for an employee, and if the employee has received such a vaccination.

DECLINATION STATEMENT

I UNDERSTAND THAT DUE TO MY OCCUPATIONAL EXPOSURE TO BLOOD OR OTHER POTENTIALLY INFECTION MATERIALS I MAY BE AT RISK OF ACQUIRING HEPATITIS B VIRUS (HBV) INFECTION.

I HAVE BEEN GIVEN THE OPPORTUNITY TO BE VACCINATED WITH THE HEPATITIS B VACCINE, AT NO CHARGE TO ME.

I HEREBY DECLINE THE HEPATITIS B VACCINE AT THIS TIME. I UNDERSTAND THAT BY DECLINING THIS VACCINE, I CONTINUE TO BE AT RISK OF ACQUIRING HEPATITIS B, A SERIOUS DISEASE.

IF, IN THE FUTURE, I CONTINUE TO HAVE OCCUPATIONAL EXPOSURE TO BLOOD OR OTHER POTENTIALLY INFECTIOUS MATERIALS AND I WANT TO BE VACCINATED WITH THE HEPATITIS B VACCINE, I CAN RECEIVE THE VACCINATION SERIES AT NO CHARGE TO ME.

_____

Signature of Person Declining Vaccine Date

_____

Witness Date

Post-Exposure Evaluation and Follow Up

1. Elevators of Beaumont shall immediately make available a confidential medical evaluation and follow up to any employee who reports an exposure incident. This report must include the following:

    a. Documentation of routes of exposure.
    b. Description of the circumstances surrounding exposure.
    c. Identification and documentation of the source individual, unless it is established that identification is not feasible or is prohibited by state or local law.

2. The source individual's blood shall be tested as soon as possible following the exposure incident and after consent is obtained to determine HBV and HIV infection. If consent is not obtained, documentation that legally required consent cannot be obtained must be made. If HBV and HIV status of the source individual is already known, repeat testing is not required.

3. Results of the source individual's testing shall be made available to the exposed individual who shall be informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual

4. The exposed employee's blood shall be collected and tested, upon consent being granted, as soon as possible after the exposure incident. In the event the employee does not grant permission for HIV testing, the blood sample shall be preserved for a period of 90 days, during which period of time the employee may change his mind and request testing.

5. Measures designed to preserve health and prevent the spread of disease, when medically indicated, shall be offered and shall include counseling and an evaluation of the reported illness.

6. Elevators of Beaumont shall provide the health care professional responsible for evaluating an employee after an exposure incident with the following information:

    a. A copy of the OSHA 29 CFR 1910.1030 regulation.
    b. A description of the employee's duties as they relate to the exposure incident.
    c. Documentation of the routes of exposure and the circumstances surrounding the exposure incident.
    d. Results of the individual's blood testing if available.
    e. All medical records relevant to the appropriate treatment of the employee including vaccination status.

7. Elevators of Beaumont shall obtain and provide every employee with a copy of the evaluating healthcare professional’s written opinion, which shall be limited to the following:

    a. A statement that the employee has been informed of the results of the evaluation.
    b. A statement that the employee has been told about any medical conditions resulting from exposure to blood or other potentially infectious materials that require further evaluation or treatment. All other medical findings or diagnoses shall remain confidential and shall not be included in the written report.

HEALTHCARE PROFESSIONAL'S WRITTEN OPINION

POST EXPOSURE FOLLOW-UP

I certify that I have notified (employee's name) _____ of the results of the evaluation; and I certify that I have told (employee's name) _____ about any medical condition resulting from exposure to blood or other potentially infectious materials which may require further evaluation or treatment.

_____ _____

Healthcare Professional's Signature Date

Medical Record Keeping

The regional manager is responsible for maintaining medical records. Medical records including employee's social security number, copies of employee's Hepatitis B vaccination status (dates), any medical records relevant to the employee's ability to receive the vaccination, results of examinations, medical tests, follow-up procedures, and the physician's or health-care professional's written opinion, shall be maintained for no less than 30 years for every employee of the company who is affected by this standard and who has been employed for more than one year.

Medical records for employees who have not worked for one year shall be maintained for the duration of employment.

All such medical records shall be maintained in employee's personnel files (under separate heading) at the regional office for whom the employee works.

Access to Medical Records

Medical records (copies) are made available to employees or their authorized representative upon written request. Refer to 1502 - *Medical Record Keeping*, for specific information concerning access to medical records.

If this facility is closed or there is no successor employer to receive and retain the records for the prescribed period, the Director of NIOSH shall be contacted for final disposition.

Labels and Signs

1. All containers of regulated waste used for storage, transport or shipping of potentially infectious materials shall be clearly marked with a warning label. This warning label shall be fluorescent orange or orange-red with lettering or symbols in a contrasting color.
2. Wherever applicable, red bags or red containers may be used instead of the warning label.
3. The supervisor is responsible for ensuring that all containers are properly labeled at all times.
4. Individual containers of infectious materials that are placed in labeled containers for storage, transport or shipping need not be individually labeled.

Training

1. Elevators of Beaumont shall provide training for every employee who is designated as a *First Aid Responder* or who during the normal course of their work have potential for occupational exposure as defined under *Exposure Determination*. Employees are required to take part in this training as a condition of their employment.

2. Elevators of Beaumont or an authorized out-source is responsible for providing this training. Whoever performs this training is required to be knowledgeable in the subject matter covered in the training program as it relates to the workplace.

3. Training is provided at the time of initial assignment to tasks posing potential for occupational exposure and **no less than annually thereafter**.

4. Employees shall receive additional training whenever there are modifications made to their tasks or procedures that affect an employee's risk of exposure.

5. The Elevators of Beaumont training program shall include the following:

    a. A copy of 29 CFR 1910.1030 standards.
    b. A general explanation of how disease is spread and controlled in the population.
    c. An explanation of how Bloodborne pathogens are transmitted from one person to another.
    d. An explanation of company's *Exposure Control Plan* including how to obtain a copy.
    e. An explanation of methods used to recognize tasks and other activities that may place an employee at risk for exposure to blood and other potentially infectious materials.
    f. An explanation of the methods and their limitations to be utilized to reduce or prevent exposure. These methods must include engineering controls, work practices, and personal protective clothing and equipment.
    g. An explanation of the type of personal protective equipment available, its proper use, location of equipment, and procedures for removal, handling, decontamination, and disposal of equipment.
    h. An explanation of personal protective equipment.
    i. Information on the Hepatitis B vaccine, its effectiveness, its safety, its method of administration, its benefits, its availability to employees free-of-charge, and the employee's option to refuse the vaccine (including signed statement).
    j. An explanation of the appropriate actions to take and the person to contact in the event of an emergency involving blood or other potentially infectious materials.
    k. An explanation of the procedures to follow if an exposure incident occurs including the method of reporting the incident and available medical follow up.
    l. An explanation of employee responsibility for post-exposure evaluation and follow up.
    m. Information on signs and labeling requirements.
    n. Interactive question and answer session.

Training Record keeping

The regional manager is responsible for maintaining training records. Records of training shall be maintained in employee's personnel files for a period of three years from the date of training and shall include the following:

1. Dates of training.
2. Summary of training received.
3. Names and qualifications of the person conducting the training.
4. Name and job title of the person receiving the training.

Training records shall be made available to the Assistant Secretary of Labor and the Director of the National Institute for Occupational Safety and Health upon their request.

1554 – HYDROGEN SULFIDE AWARENESS PROGRAM

Purpose

This program is established to protect employees of Elevators of Beaumont from the potential injurious affects in areas where the presence of Hydrogen Sulfide (H_2S) is known or suspected.

Scope

This program is designed to fit the requirements of Elevators of Beaumont and is applicable in all areas of all regions. It outlines the requirements that will be followed when engaged in work where over-exposure to H_2S may have a great potential.

Responsibility

The corporate Safety Manager has the overall responsibility to ensure this procedure is utilized effectively and shall perform at least an annual analysis of the procedural elements and shall report findings to both corporate and regional management.

Each regional or group manager or his designate(s) is responsible for the administration of the program to ensure its effectiveness. He, too, shall perform at least an annual review of procedure applications and report his findings to corporate management.

Area managers shall periodically (for instance, quarterly) evaluate the application of the procedure within their district and report any discrepancies to the appropriate manager. They shall see that remedial actions are implemented to correct any deficiencies.

All project managers are required to inform management, foremen and other employees of potential H_2S hazards on the jobsite prior to the start of work. They shall assist the foreman to assess the need for specific protective systems that may be required for the work to be performed.

Elevators of Beaumont foremen are required to follow and enforce the requirements of the program. In addition, they will effectively supervise the work and any emergency response activities required in the unlikely event of an overexposure to H_2S. When required, they will actively conduct monitoring for H_2S.

The Regional Safety Supervisor shall ensure that, upon notification of H_2S potentials, respiratory protective equipment required under this program is sufficient for the application, that training has been accomplished for affected employees, and effective safety measures are in effect for the task at hand.

Each employee is responsible for following all required safety procedures in relation to performing work where there is potential H_2S exposure. In addition, employees will attend a training session and demonstrate an acceptable level of understanding of the information presented and appropriately utilize training provided.

Definitions

Hydrogen Sulfide: A colorless, naturally occurring toxic gas with a *rotten egg* odor. It is water soluble and highly flammable. H_2S may be found in oil exploration and production operations, crude oils, sour water streams, waste water reservoirs, petroleum refining and pipeline operations, tank batteries and wells and chemical plants. Hydrogen sulfide can effect nerve centers of the brain which control breathing and cause eye irritations.

SAR: Supplied Air Respirator.

SCBA: Self Contained Breathing Apparatus.

Affected Employee: Anyone who may be exposed to potential harm from H_2S and who participates in operations that fall under the requirements of this program.

PEL: Permissible Exposure Limit. OSHA has set the PEL for H_2S at 10 ppm.

General Requirements

1. When working in confined spaces that contain H_2S, Elevators of Beaumont Guideline 1517, *Confined Space Entry Program*, shall be followed.
2. Areas where H_2S may be expected to be found shall be marked with appropriate signs to alert workers of the hazard. If the owner facility is so marked, no further marking is required.
3. Facility alarm systems may differ. Each worker must be aware of the specific alarm system on the jobsite for H_2S releases. This is usually covered in the site specific training for the facility. Foremen must ensure that each employee knows how to recognize the alarm, where the refuge areas may be found and how to alert facility safety and/or security in case there is an H_2S release or help is needed.
4. Monitoring is required during the work shift in high H_2S areas. Should personal alarms be required, all potentially exposed workers shall ensure that the alarm is functional before entering the hazardous area. Gas monitoring by use of portable gas detectors will be continuous for the duration of the work period. Instrument alarms are set to sound at 10 ppm. Should the alarm sound, every employee will immediately exit the area, go to a designated refuge or safe area and not return until it has been determined that the hazard has been eliminated.
5. Respiratory protection for exposure to H_2S will be in the form of NIOSH-certified SARs or, in case of emergency, SCBAs.

Air purifying respirators will not provide adequate protection against the harmful effects of H_2S due to its poor warning properties and are prohibited.

Training

Elevators of Beaumont employees **shall not** work in known H_2S areas without first completing an approved H_2S training course. The training course should include the following subjects as a minimum:

1. H_2S Properties and Characteristics, including health effects.
2. Laws, Regulations and Company Policies and Procedures.
3. H_2S Monitoring and Detection Equipment.
4. Emergency Procedures.
5. Respiratory Protection and Hands-On Training.
6. Face Seal Requirements.
7. Rescue Procedures.
8. H_2S First-Aid.

Training in H_2S awareness will be repeated on an annual basis for affected employees or when observation determines lack of effectiveness of prior training

1555 – LEAD EXPOSURE CONTROL PROGRAM

Policy Statement

It is the policy of Elevators of Beaumont **not to work in suspected or known leaded environments that would result in the implementation of this abatement and monitoring program. Prior to acceptance of any job that will potentially expose** Elevators of Beaumont **personnel to lead exposure, regional managers shall contact the president of** Elevators of Beaumont **to fully discuss all details of the proposed work. Such discussion shall be prior to undertaking any action that will bind** Elevators of Beaumont **to perform such work! Site Specific compliance programs should address means of engineering & work practice controls, air monitoring, a description of each operation in which lead is emitted and the written program with revisions and annual updates.**

Purpose

The purpose of this program is to ensure that all employees who may be in areas where Lead Containing Material (LCM) has been identified and the exposure exceeds the Permissible Exposure Limit (PEL) of 50 ug per cubic meter (ug/M^3 as defined in 29 CFR 1926.62) are properly protected. No employee should be exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an 8-hour period.

Scope

This program is designed to protect all employees at all worksites. Safety is the responsibility of each supervisor and employee and each is responsible for contributing to the safe operation of the program. It is the policy that every employee work in a safe and careful manner. This includes the following requirements of the *Lead Exposure Control Program.*

Program Elements

General

Protective measures for personnel protection from airborne Lead includes the implementation of engineering controls, such as ventilation or use of methods of Lead removal which will not promote excess particlization of the material. It is the policy of Elevators of Beaumont that only personnel certified to do so perform lead abatements. When airborne levels of Lead exceed the action level of 30 ug/M^3 for an eight-hour TWA, associates will utilize respiratory protective measures and other protective equipment and procedures as required by the needs of the work. NIOSH-certified powered, air purifying respirators (PAPRs) will be provided at no cost to the employee upon request. Employees must abide by any signs/labels/assessment reports indicating the presence of lead containing materials. Appropriate work practices will be followed to ensure the lead containing materials are not disturbed. Lunch room, hygiene, shower and changing facilities will be provided when exposures are above the PEL.

Monitoring

In cases where customer sites have been characterized as requiring protective equipment or administrative procedures for worker protection for Lead exposure, employees will fully comply with those protective measures. If air monitoring reveals exposure to be at or above the action level but below the permissible exposure limit, air monitoring shall be repeated at least every 6 months until at least two consecutive measurements, taken at least 7 days apart, are below the action level at which time monitoring may be discontinued. When monitoring is being performed to elicit compliance to the customer site, additional protective measures required by state, local or federal regulations will be strictly observed.

Regulated Areas

Regulated areas will be identified by appropriate signage to identify the Lead hazard. These signs must remain in place and not be defaced until the hazard has been removed. Only authorized personnel may enter established regulated areas. All employees who enter these areas must utilize, as a minimum, approved respiratory protection equipment and protective clothing. No smoking, eating, drinking or applying cosmetics is allowed in these areas.

Protective Clothing

Employees exposed to an airborne concentration of Lead above the PEL, shall be provided with, and are required to wear protective clothing such as coveralls or similar full body clothing, head covering, gloves and foot covering. Protective clothing is provided at no cost to the employee.

1. Lead contaminated work clothing must be removed in a change room, disposed of in approved, labeled containers to prevent dispersion of lead particles into the ambient environment.
2. Protective clothing and/or equipment must be cleaned, laundered, repaired or replaced to maintain their effectiveness.

Information and Training

Common symptoms of acute lead poisoning are loss of appetite, nausea, vomiting, stomach cramps, constipation, difficulty in sleeping, fatigue, moodiness, headache, joint or muscle aches, and anemia. Long term (chronic) overexposure to lead may result in severe damage to the blood-forming, nervous, urinary, and reproductive systems.

Training has been developed and implemented for all employees who may be exposed to Lead above the action level. This includes those who may work in areas where Lead abatement projects are occurring. Training will be provided prior to the time of initial job assignment and at least annually thereafter.

This training includes regulatory requirements for removal, exposure and results of exposure, operations that could result in exposure (examples: leaded paints, leaded solders, pipes, circuit boards, cathode ray tubes, leaded glass), the importance of respiratory and other protective

equipment, decontamination and medical surveillance. Employees' are instructed to wash hands and faces if lead containing materials are contacted.

Medical Surveillance

A medical surveillance program has been established prior to employee assignment to work requiring the use of respirators or who will be exposed to an airborne concentration of Lead at or above the action level for thirty or more days a year. Medical examinations are mandatory for these employees semi-annually and are provided without cost to the employee.

Monitoring shall be provided at least every two months for each employee whose blood sampling indicated a blood level at or above 40ug/100g of whole blood. This frequency shall continue until two consecutive blood samples and analysis indicate an acceptable level. Any employee with elevated blood lead levels will be temporarily removed and monitoring shall be provided monthly during the removal period. Employees will be notified in writing within five working days when lead levels are not acceptable.

No employee will be assigned to tasks requiring the use of respirators if, based upon his most recent examination, an examining physician determines the employee will be unable to function normally while wearing a respirator.

If employees working immediately adjacent to a lead abatement activity are exposed to lead due to the inadequate containment of such job, Elevators of Beaumont shall either remove the employees from the area until the enclosure breach is repaired or perform an initial exposure assessment.

Record Keeping

Lead awareness training is documented and records are kept on file. Accurate records are kept of all measurements taken to monitor employee exposure to lead. These records are kept for thirty years. An accurate record is also maintained for each employee subject to medical surveillance and is kept for the duration of employment plus thirty years.

Notification

Within five working days of the completion of any exposure assessment, Health and Safety Management will notify each employee, in writing, of the results that represent that employee’s exposure and corrective actions taken.

It is the policy that each employee maintains compliance with OSHA, EPA and state regulations in regard to exposure to lead.

VIII. Safe Operating Guidelines

1558 – RADIATION SAFETY

Purpose

A wide usage of x-ray machines and isotopes for examination of steel plate fabricated and erected structures requires knowledge of the radiation hazard and the precautionary measures to take to prevent exposure to the radiation hazard.

Definitions

In order to better understand what the hazards are, there are certain definitions that must be known.

Roentgen R: A unit of radioactive dose, or exposure. It measures the penetrating external radiation only in the air.

Milliroentgen (MR): 1/1000 of a roentgen. 1 r = 1000 mr.

REM: A measure of the effective radiation in the body, and is used for all types of radiation.

Dosage Rate: Dosage rate, or dose rate, is the time rate at which a dose is administered. That is, dose per unit time. Dosage rates are expressed in roentgens per minute or multiples or submultiples of these units, such as milliroentgens per hour (mr/hr).

Maximum Permissible: The maximum permissible dose is the maximum allowable established by various state dose (MPD) and federal authorities. The allowable weekly average dosage could be 100 millireontgens and the maximum for any weekly period could be 300 milliroentgens. However, the total accumulated dosage in a 13 week period should not exceed 1250 milliroentgens.

Control of Hazard

To understand the effects of radiation, we must first understand what the significance of time, distance and shielding a source have upon exposure. When the effects of these factors are known, proper controls can be introduced to limit one or all and thereby prevent a needless accident.

Effect of Time

The effect of time on radiation exposure is easy to understand. If we are in an area where the radiation level (as measured by a radiation meter) is 50 milliroentgens per hour, then in 15 minutes we could get 12.5 milliroentgens of exposure. If we stayed 30 minutes, we would get 25 milliroentgens, and if we stayed one hour, we would get 50 milliroentgens. Time is important in determining the safe limits since knowing the length of time that the x-ray or gamma source will be in operation will enable us to calculate the allowable radiation level and then, with the use of a radiation survey meter, we can rope off the area where there will be excessive radiation levels.

Effect of Distance

The effect of distance on radiation is determined by the INVERSE SQUARE LAW. That is to say, the intensity of radiation falls off by the square of the distance from the source. Example: If we had a point source of radiation giving off 1000 milliroentgens per hour at a 1 foot distance, we would receive 250 milliroentgens per hour at a distance of two feet from the source because we have doubled the distance and the effect on the radiation level is to reduce it to 1/2 squared or 1/4. When we have tripled the distance, we have reduced the level to 1/3 squared or 1/9 to 111 milliroentgens. This shows us that there is a rapid fall-off in the rate of radiation exposure as we go away from the source of radiation and a relatively very small distance can go a long way in increasing our safety factor.

Effect of Shielding

The use of shielding materials affords an excellent means for controlling personnel exposure in radiographic operations. Shielding material is used to absorb or stop radiation. Materials commonly used to shield radiation are concrete, iron or steel, and lead. Water is used in operations where it is necessary to see through the shielding material and to work through it with special tools and devices. Heavier materials are more effective for shielding radiation than are lighter materials such as aluminum and soil.

Now that you know the effect of time, distance and source-shielding, you must know how to utilize this knowledge in protecting personnel from overexposing themselves to radiation. There are a number of safety devices that will help you in maintaining a controlled area wherever there is examination of weld or metal by radiation.

Film Badges

The film badge consists of a packet of sensitized film placed in plastic or metal holders that contain one or more filters imbedded in the holder. The badge is worn by the worker for a definite period of time, usually one week, at which time the film packet is replaced by a new one, and the used packet is sent to the office. The office, in turn, sends the film packet to an independent laboratory that processes the film. By reading the density (blackening of the film), they can determine the amount of radiation the badge received. These values are reported back to the original office sending them so that a continuous record can be kept of the worker's accumulated dose.

Film badges provide a permanent record of radiation exposure, but not an immediate one, because of the time required for shipping, developing the film, and reading the badges and transmittal of reports.

Dosimeters

A dosimeter is a radiation detecting instrument, about the size of a fountain pen, that can be conveniently carried in a pocket or attached to the worker's clothing. They are particularly adaptable for situations where the advantage for permitting the wearer to read his accumulated dose at any time warrants the additional expense. These tiny pocket chambers will keep a continuous record of the worker's accumulated dose. Some dosimeters can be read directly by holding them up to the light. Others must be read in a reading device provided for the purpose.

This enables the worker to find if it is possible under normal conditions to receive more than the safe tolerance dose and act accordingly.

Survey Meters

A survey is a radiation detecting instrument that is provided with a meter, making it possible to place the instrument in a field of radiation and immediately determine the intensity of the radiation at that location.

The dial of the meter is usually calibrated in milliroentgens per hour so that by knowing the intensity of the radiation at that point, it is possible by multiplying this intensity reading by the length of time the worker will be in the location, to determine the dose the worker will receive.

It should be noted that the survey meter must be recalculated every three months.

X-Ray and Radiation Exposure Records

Under the OSHA regulations, all companies performing radiography must maintain daily x-ray exposure data and radiation exposure data.

Requirements

1. Only authorized and trained Elevators of Beaumont personnel shall operate equipment used for radiographs,
2. Field employees are not authorized to enter areas barricaded and regulated as a radiation exposure area.
3. No unauthorized employee is permitted to handle or use equipment that could expose the person to the hazards of ionized radiation.
4. All employees should be aware of potential radiation sources within their work area (such as lever controllers and other instrumentation).
5. Should an accidental exposure to a source of whizing radiation occur, it must be reported to the supervisor immediately.
6. If there is a hazard of radioactive materials being carried in the air, stay upwind. Do not eat, smoke or drink in the area.
7. In case of fire, summon firefighting personnel and stay out of fumes or smoke.
8. If radioactive containers are broken, stay away from the area and notify customer representatives and Elevators of Beaumont management and safety.
9. Do not remove potentially contaminated equipment until it has been deemed safe to be removed.

1559 – ACCIDENT INVESTIGATION & REPORTING GUIDELINES & PROCEDURES

Purpose

The investigation and reporting of accidents involving personal injury to an employee and/or vehicle or property damages are necessary elements of an effective accident prevention program. The investigative reports required by this section provide a mechanism for gathering information and data relative to the accidents and are invaluable in preventing reoccurrences of similar accidents. The investigation reports shall also be used for the preparation of claim reports as required, notification of regulatory authorities, and to ensure that injured employees receive timely and appropriate medical care and benefits to which they are entitled.

Responsibilities

Elevators of Beaumont supervisors shall ensure that necessary emergency care of injured personnel shall be of the highest priority and any procedures contained herein shall be secondary to ensuring that injured personnel receive adequate medical attention.

Employees involved in, or a party to, an accident involving personal injury and/or illness, vehicle or property damage are responsible for reporting the occurrence to their immediate supervisor as soon as possible. They shall assist the supervisor in completing the required investigative reports. The appropriate supervisor is responsible for conducting the initial investigation of all accidents when an employee has sustained an injury on the job to include non-lost time or medical only type injuries or when property or equipment has been damaged as a result of an accident. The appropriate supervisor will also investigate all near miss occurrences that could have resulted in personal injury and/or property damage. The operating unit safety staff shall review all initial investigation reports and assist in completing the investigations as required.

The completed investigation report shall be submitted to senior management of the operating unit for review and to implement the necessary corrective actions to prevent reoccurrence. Where accidents involve loss of life or serious injuries to any person, catastrophic occurrences (involving three or more victims), and major property and/or equipment losses, legal counsel shall be notified as soon as possible and shall direct all such investigations.

Investigation Process

The supervisor’s investigation shall be initiated as soon as possible after the occurrence of an accident.

The names of all witnesses and their pertinent statements should be obtained and any failed parts or other evidence should be noted, identified, and taken into custody where feasible. Reporting forms are provided and all pertinent information specified on the form should be obtained. Only factual information shall be included in the investigation report. Photos may be taken as appropriate and when taken shall be specifically identified as to the scene depicted. Additional documentation, such as personnel records, maintenance records, etc., may be necessary in order to

complete the investigation report. However, the safety staff and/or legal counsel should be consulted as this becomes necessary.

The **Supervisor's Accident Report** and **Notice of Automobile Accident** forms shall be completed as appropriate and forwarded to the regional office within 24 hours of the occurrence.

Serious Accident Notification and Procedures

In the event of an employment-related accident that involves loss of life, serious injury to any person (hospitalization), catastrophic occurrences, or major property and/or equipment loss, the following procedures shall be implemented:

1. Equipment, material, or product related to the injury or fatality will not be moved or altered until clearance is given by senior company management.

   In situations where compliance with the above would interfere for an unreasonable length of time or create additional hazards to persons, the onsite supervisor is authorized to alter the position of equipment, materials, or products before clearance is obtained from management. Documentation shall be made of any alterations or changes made to the accident scene.

2. The customer safety and emergency response departments and Elevators of Beaumont safety and legal departments shall be notified as soon as possible. Claims management or legal counsel shall determine the scope of further investigative activities. In those situations as described herein, the supervisor should limit his investigation activities to that necessary to report the occurrence and instructions for further investigation shall be obtained from corporate legal counsel.

3. Reports to regulatory authorities shall be made by the appropriate division or company management personnel in accordance with the regulations of the jurisdiction in which the accident occurred.

Claims Reporting Procedures

Workers' Compensation Claims reports shall be filed in accordance with the claim reporting procedures. Insurance brokers and claims adjusting firms may change on occasion, therefore, persons submitting claims reports should ensure the correct firms for submittal of the claims reports. Copies of all claim reports should be submitted to the safety and risk management departments.

1569 – NFPA-70E

Objective

- To provide understanding of electrical safety requirements to all Elevators of Beaumont employees and to facilitate communications of requirements to the employees
- To provide understanding of electrical safety requirements for the Contract and Subcontract Technical Representatives and the Subcontractor
- To facilitate communications of requirements to the subcontractor
- To serve as an aid in assessing a subcontractors performance

Standard for Electrical Safety in the Workplace

- Host Employer Responsibilities
  - The host employers shall inform Elevators of Beaumont of the following:
    a. Known hazards that are covered by this standard, that are related to Elevators of Beaumont work, and that might not be recognized by Elevators of Beaumont or its employees
    b. Information about the employer's installation that Elevators of Beaumont needs to make required safety assessments prior to starting work.
  - The host employer shall report observed contract employer-related violations of this standard to Elevators of Beaumont..
- Contract Employer Responsibilities
  - Elevators of Beaumont shall ensure that each employee is instructed in the hazards communicated to us by the host employer. This instruction shall be in addition to the basic training required by this standard.
  - Elevators of Beaumont shall ensure that each employee follows the work practices required by this standard and safety-related work rules required by the host employer.
  - Elevators of Beaumont shall advise the host employer of the following:
    a. Any unique hazards presented by Elevators of Beaumont's work
    b. Any unanticipated hazards found during Elevators of Beaumont's work that the host employer did not mention
    c. The measures Elevators of Beaumont took to correct any violations reported by the host employer under 110.1(A)(2) and to prevent such violation from recurring in the future
    d. Documentation. There shall be a documented meeting between the host employer and A-1 Elevators of Beaumont.
- Multiemployer Relationship
  - (A) Safe Work Practices. On multiemployer worksites (in all industry sectors), more than one employer may be responsible for hazardous conditions that violate safe work practices.
  - (B) Outside Personnel (Contractors, etc.). When outside service personnel are engaged in activities covered by the scope and application of this standard, the on-site employer and the outside employer(s) shall inform each other of existing hazards, personal protective equipment/clothing requirements, safe work practice procedures, and emergency/evacuation procedures applicable to the work to be performed. This coordination shall include a meeting and documentation.
- Safe work practices.
  - NFPA 70E is intended to provide work practices to minimize the worker from electrical energy when using or working on or near electrical equipment and conductors

- The intent of NFPA 70E is to provide practices that are needed to protect both qualified and unqualified persons from exposure to hazards associated with electrical energy.

NFPA 70E Training is required for the following:

- Employees who face a risk of electric shock that is not reduced to a safe level for installation requirements must be trained.
- When an employee is not complying with safe work practices or the task changes.
- Occupations in Table S-4 must be trained.
- Other employees if they face a risk of shock.

All training must be documented and maintained for the duration of employment.

Table S-4

- **Supervisors**
- Electrical and electronic engineers
- Electrical and electronic equipment assemblers
- Electrical and electronic technicians
- **Electricians**
- **Industrial machine operators**
- **Material handling equipment operators**
- **Mechanics and repairers**
- Painters
- Riggers and roustabouts
- Stationary engineers
- **Welders**

- Footnote(1) Workers in these groups do not need to be trained if their work or the work of those they supervise does not bring them or the employees they supervise close enough to exposed parts of electric circuits operating at 50 volts or more to ground for a hazard to exist.

NFPA 70E Training Requirements

Employees shall be trained to understand specific hazards associated with electrical energy.

- Trained in safety related work practices and procedural requirements for specific job or task
- Trained to understand relationship between electrical hazards and possible injury
- Training shall be classroom or on-the-job type or combination
- Employees working on or near energized conductors shall be trained in release of victims from contact
- Degree of training determined by the risk to the employee.
- Address qualified and non-qualified worker training on and near exposed energized electrical conductors or circuit parts.
- Employee must be retrained at least every 3 years.

NFPA 70E Qualified Person

A qualified person shall be trained and knowledgeable of construction and operation of equipment or work method and trained to recognize and avoid hazard. Documentation shall be maintained that provide evidence of the qualifications of each employee. The

documentation shall define the limits of each employee's qualification. A qualified person must be able to recognize all electrical hazards within the realm of his or her work assignment. He or she must be trained to understand and implement the procedural requirements of the employer. He or she also must be able to select and use adequate protective equipment.

- Familiar with precautionary techniques, personal protective equipment including arc flash, insulating and shielding materials, insulated tools and test equipment
- Distinguish exposed energized parts from other parts
- Determine nominal voltage of live parts
- Understand safe approach distances in Table 130.2C
- Determine personal protective equipment for task

NFPA 70E Job Briefing

Before starting each job, employee in charge shall conduct a job briefing with employees involved.

- Identify hazards
- Identify procedures to be followed
- Special precautions
- Where and how to remove the source of Energy
- Emergency response and communications
- Personal protective equipment
- Other work in the immediate area
- Other work associated with the same electrical circuits

Electrical Safe Work Condition

The primary protective strategy must be to establish an electrically safe work condition. Live parts to which an employee might be exposed shall be put into an electrically safe work condition before an employee works on of near them unless the employee can demonstrate work on energized components can be justified.

- Deenergizing introduces additional or increased hazards (Examples include interruption of life support equipment, deactivation of emergency alarm systems, shutdown of hazardous location ventilation equipment)
- Deenergizing is infeasible due to equipment design or operational limitations. (Examples include start-up or troubleshooting diagnostics and testing)

  - *Infeasible* - adj : not capable of being carried out or put into practice
  - *Inconvenient* - adj : not suited to your comfort, purpose or needs
  - "Financial considerations are not an adequate reason to work on or near energized circuits" (Std. 1584-2002 IEEE)

The difference between infeasible and inconvenient is significant. This paragraph is intended to ensure that inconvenient cannot serve to justify work on or near exposed live parts. If work is performed on or near an exposed energized electrical circuit, the qualified person must document that the work task meets the criteria for one of the acceptable reasons for executing the work with the circuit energized.

Achieving an Electrically Safe Work Condition

An Electrically Safe Condition does not exist until all of the following are completed:

- Determine all sources of electrical supply (Drawings, diagrams)

- Open disconnecting device for each source
- Visually verify all blades of disconnecting devices are fully open or drawout-type breakers are withdrawn
- Apply lockout/tagout devices in accordance with policy
- Test each phase conductor using adequately rated voltage detector
- Ground phase conductors where possibility exists for induced or stored energy

After the electrically safe work condition has been established, no PPE is necessary, and unqualified workers are permitted to execute the remainder of the work.

Electrical conductors and circuit parts that have been disconnected but not under lockout/tagout, tested and grounded (where appropriate) shall not be considered to be in an electrically safe work condition

- Safe work practices shall be used in this case identical to working on or near exposed live parts
- Applies regardless of whether equipment is temporary, permanent or portable

Energized Electrical Work

If live parts are not placed in an electrically safe work condition, work shall be considered energized electrical work

- A written Energized Electrical Work Permit shall be required where live parts are not placed in an electrically safe work condition.
- Exemption: work such as testing, troubleshooting, voltage measurement shall be permitted to be performed without an energized electrical work permit provided appropriate safe work practices and PPE are provided and used.

Permits that cover routine work tasks to be performed by trained and qualified employees can be written to cover a long period of time. For instance, a worker might be trained and qualified to replace a fuse that involves an exposed live part. If the worker is trained to understand the electrical hazards associated with exchanging the fuse and is wearing any necessary PPE, a permit might be issued that covers, for instance, a three-month period. If the work is unusual or other than routine from any perspective, the work task must be covered by an energized work permit. Experience shows that electrical workers tend to accept risk of exposure, believing that they are capable of managing the risk. Experience also shows that managers are less likely to accept increased risk of injury. The energized work permit is intended to ensure that the increased risk (and increased possibility of injuries) associated with exposure to an exposed live part receives adequate consideration.

Elements of Energized Electrical Work Permit

- Permit shall include the following items
  - Description of circuit and equipment to be worked
  - Justification for performing work in energized condition
  - Description of safe work practices
  - Results of shock hazard and flash hazard analysis
  - Shock protection boundary
  - Personal protective equipment
  - Means to restrict access to unqualified persons
  - Evidence of job briefing
  - Work approval signatures

Working on or Near Exposed Electrical Conductors or Circuit Parts

Perform electrical hazard analysis if live parts (50 volts or more) can not be placed in an electrically safe work condition

- Shock Hazard Analysis (Determine limited, restricted and prohibited approach boundaries and shock PPE)
- Flash Hazard Analysis (Determine arc flash boundary and PPE for personnel within this boundary)
- Use Energized Electrical Work Permit

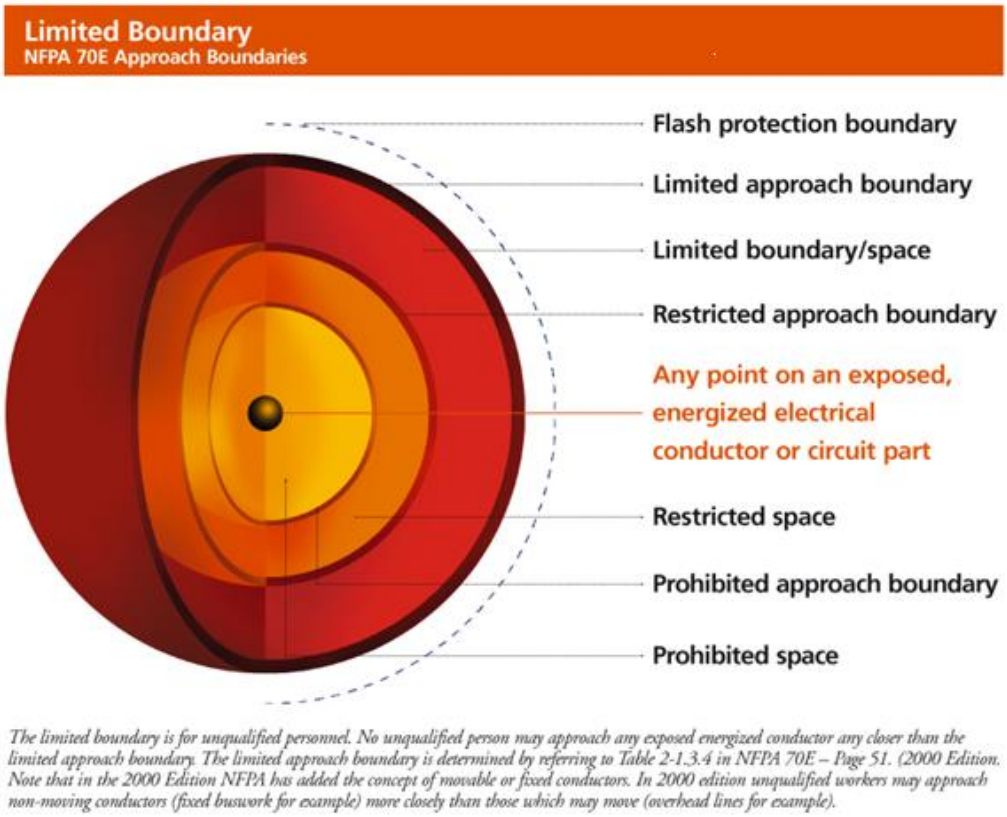
Only qualified workers are permitted to work on or near exposed energized conductors or circuit parts and must select and use work practices that provide protection from shock, arc flash, and other electrical hazards. The work practices that are used must minimize any potential for injury. For instance, body position is one factor that a qualified person should recognize as an element of the analysis that could reduce exposure to electrical shock or arc flash. The hazard/risk analysis must determine whether any conductor will remain energized for the duration of the work task. The analysis must determine the shock approach boundaries and the Flash Protection Boundary.

Both a shock analysis and an arc flash analysis are required before any person is permitted to approach the exposed live part. These analyses must answer the following questions:

- Does a shock hazard exist? Will the worker be exposed to the shock hazard at any point during the work task?
- What is the degree of the hazard? What protective equipment is necessary to minimize the exposure?
- Does an arc flash hazard exist? Will the worker be exposed to a thermal hazard at any point during the work task?
- What is the degree of the arc flash hazard? What protective equipment is necessary to minimize exposure to the thermal hazard?
- Does a co-occupancy hazard exist? What measures will be taken to minimize the impact of other work?
- Will other workers be exposed to an electrical hazard because of the work task? Will the worker be exposed to any other electrical hazard while executing the work task?
- What authorization is necessary to justify executing the work task while the exposed conductor(s) is (are) energized?

Shock and Arc Boundaries

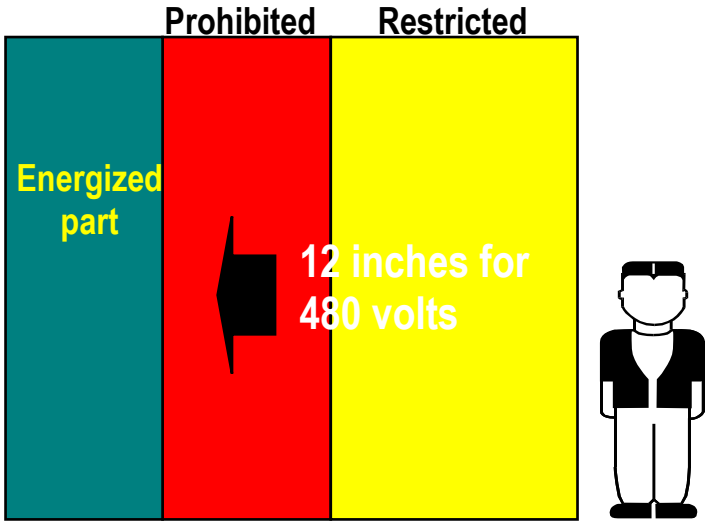
More than one electrical hazard exists to employees working on or near live parts. Section 130.2 is intended to minimize exposure to shock and electrocution. Shock approach boundaries are identified as Limited, Restricted, and Prohibited. Crossing one of these approach boundaries increases the chance that a worker might contact an exposed live part. A person must be qualified before he or she can cross the Limited Approach Boundary. To cross the Restricted Approach Boundary, in addition to being a qualified person, the person must have additional training and must also wear PPE for protection from shock. The Limited Approach Boundary is intended to restrict the approach of unqualified persons. The Restricted Approach Boundary is intended to restrict the approach of qualified persons.



Limits of Approach – Limited Approach Boundary

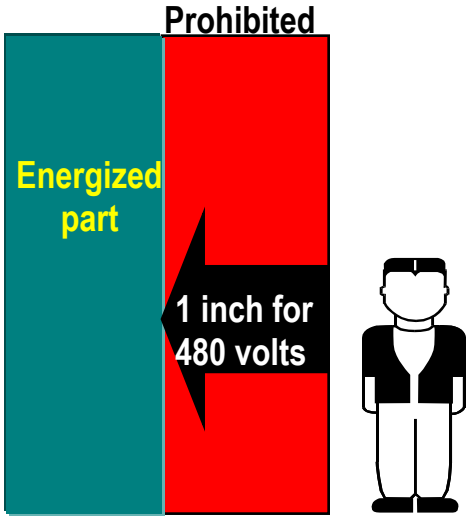
The closest distance an "unqualified" person can approach, unless escorted by a "qualified" person.

Limits of Approach – Restricted Approach Boundary



The closest distance to exposed live parts a "qualified" person can approach w/out proper PPE and tools.
To cross this boundary, the qualified person must wear PPE and have proper tools.

Limits of Approach - Shock



Crossed ONLY by a "qualified" person, which when crossed by body part or object, requires the same protection as if direct contact was made with the live part.

Approach Boundaries for Shock Protection

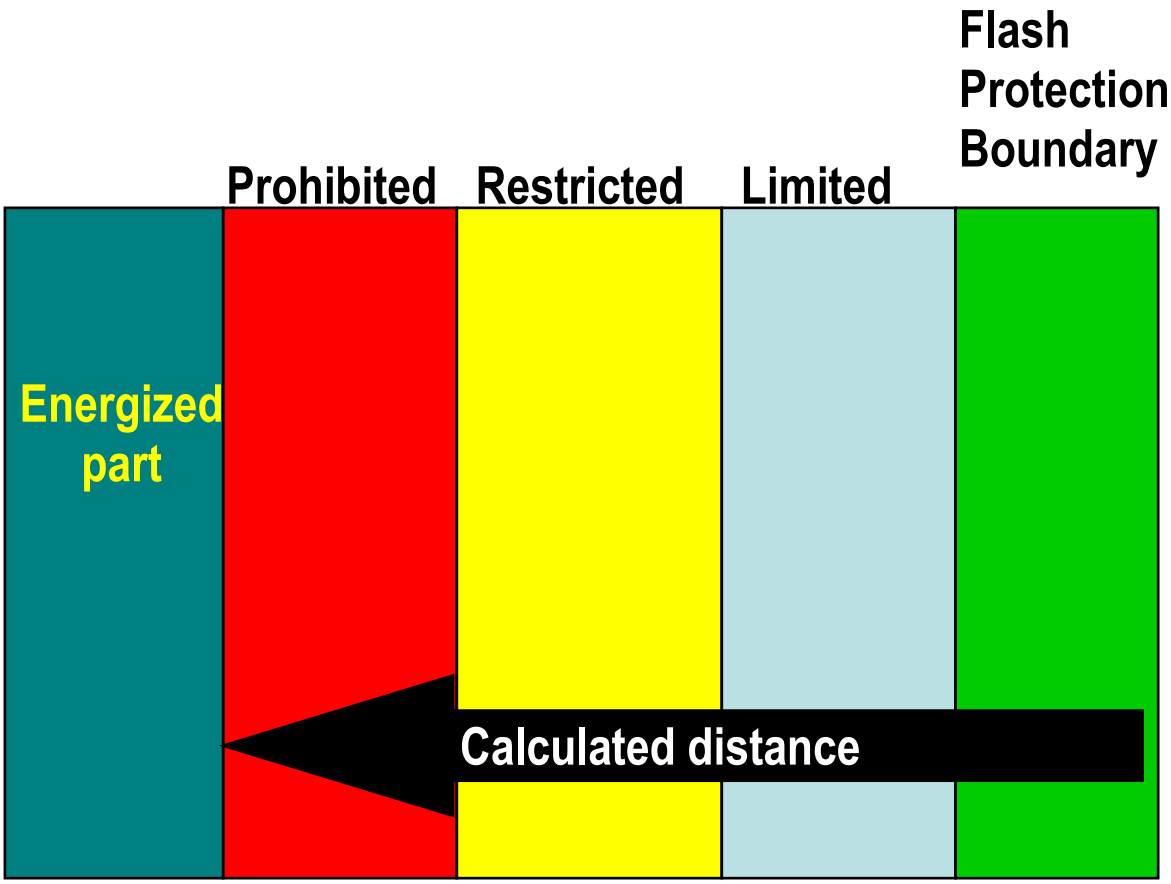
TABLE 130.2(C) Approach Boundaries to Live Parts for Shock Protection.
(All dimensions are distance from live part to employee.)

(1)	(2)	(3)	(4)	(5)
Nominal System Voltage Range, Phase to Phase	Limited Approach Boundary[1]		Restricted Approach Boundary[1]; Includes Inadvertent Movement Adder	Prohibited Approach Boundary[1]
	Exposed Movable Conductor	Exposed Fixed Circuit Part		
Less than 50	Not specified	Not specified	Not specified	Not specified
50 to 300	3.05 m (10 ft 0 in.)	1.07 m (3 ft 6 in.)	Avoid contact	Avoid contact
301 to 750	3.05 m (10 ft 0 in.)	1.07 m (3 ft 6 in.)	304.8 mm (1 ft 0 in.)	25.4 mm (0 ft 1 in.)
751 to 15 kV	3.05 m (10 ft 0 in.)	1.53 m (5 ft 0 in.)	660.4 mm (2 ft 2 in.)	177.8 mm (0 ft 7 in.)
15.1 kV to 36 kV	3.05 m (10 ft 0 in.)	1.83 m (6 ft 0 in.)	787.4 mm (2 ft 7 in.)	254 mm (0 ft 10 in.)
36.1 kV to 46 kV	3.05 m (10 ft 0 in.)	2.44 m (8 ft 0 in.)	838.2 mm (2 ft 9 in.)	431.8 mm (1 ft 5 in.)
46.1 kV to 72.5 kV	3.05 m (10 ft 0 in.)	2.44 m (8 ft 0 in.)	965.2 mm (3 ft 2 in.)	635 mm (2 ft 1 in.)
72.6 kV to 121 kV	3.25 m (10 ft 8 in.)	2.44 m (8 ft 0 in.)	991 mm (3 ft 3 in.)	812.8 mm (2 ft 8 in.)
138 kV to 145 kV	3.36 m (11 ft 0 in.)	3.05 m (10 ft 0 in.)	1.093 m (3 ft 7 in.)	939.8 mm (3 ft 1 in.)
161 kV to 169 kV	3.56 m (11 ft 8 in.)	3.56 m (11 ft 8 in.)	1.22 m (4 ft 0 in.)	1.07 m (3 ft 6 in.)
230 kV to 242 kV	3.97 m (13 ft 0 in.)	3.97 m (13 ft 0 in.)	1.6 m (5 ft 3 in.)	1.45 m (4 ft 9 in.)
345 kV to 362 kV	4.68 m (15 ft 4 in.)	4.68 m (15 ft 4 in.)	2.59 m (8 ft 6 in.)	2.44 m (8 ft 0 in.)
500 kV to 550 kV	5.8 m (19 ft 0 in.)	5.8 m (19 ft 0 in.)	3.43 m (11 ft 3 in.)	3.28 m (10 ft 9 in.)
765 kV to 800 kV	7.24 m (23 ft 9 in.)	7.24 m (23 ft 9 in.)	4.55 m (14 ft 11 in.)	4.4 m (14 ft 5 in.)

Note: For Flash Protection Boundary, see 130.3(A).

[1]See definition in Article 100 and text in 130.2(D)(2) and Annex C for elaboration.

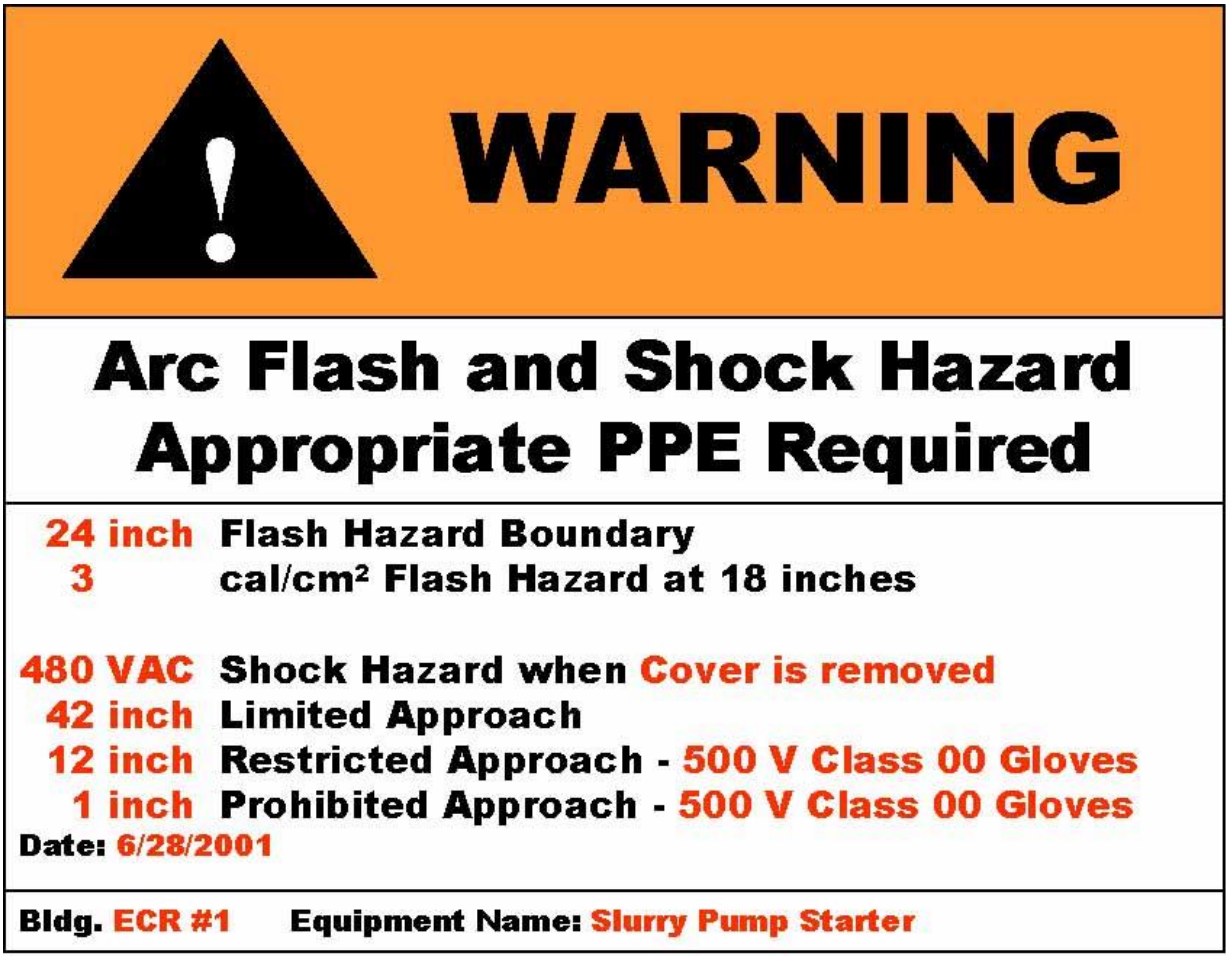
Limits of Approach – Flash Protection Boundary



Flash Hazard Analysis

- An arc flash hazard analysis shall be done to protect personnel from injury by arc flash exposure
- This analysis determines the flash protection boundary and potential thermal exposure to personnel working on or near exposure live parts within the boundary
- Personal protective clothing and protective equipment for workers inside the flash protection boundary are then selected to mitigate potential thermal exposure
- Equipment may be labeled with the results of the arc flash hazard analysis and shock protection analysis

Typical Equipment Label



Personal Protective Clothing

Table 130.7(C)(11) All PPE must meet the requirements in 130.7(C)(14)

Incident Energy From (cal/cm2)	Incident Energy To (cal/cm2)	Hazard Risk Category	Clothing Description	Clothing Layers	Required Minimum Arc Rating of PPE (cal/cm2)	Notes
0.0	1.2	0	Untreated Cotton	1	N/A	
1.2	4.0	1	FR Shirt & Pants	1	4	
4.0	8.0	2	Cotton Underwear + FR Shirt & Pants	1 or 2	8	
8.0	25.0	3	Cotton Underwear + FR Shirt & Pant + FR Coverall	2 or 3	25	
25.0	40.0	4	Cotton Underwear + FR Shirt & Pant + Multi Layer Flash Suit	3 or more	40	

Examples of PPE

Hazard Risk Category 0

Hazard Risk Category 1

Hazard Risk Category 2

Hazard Risk Category 3

Hazard Risk Category 4

The Table is intended to provide general information that could assist a worker understand the process for selecting clothing based on a hazard/risk category designation. This table describes the protective nature of clothing that meets a specific hazard/risk category.

Alternative to Flash Hazard Analysis

- The PPE requirements of NFPA 70E, 130.7(C)(9)(a) shall be permitted in lieu of the detailed flash hazard analysis
  - Use Table 130.7(C)(9)(a) to determine hazard/risk category for task
  - Ensure the short circuit capacities and fault clearing time for task listed in the text and notes are not exceeded
  - Use Table 130.7(C)(10) to determine the PPE for the task

Table 130.7(C)(9)(a) lists common work tasks and may be used to determine a hazard/risk category. A hazard/risk, including an arc flash analysis, has been performed for each common task listed in the table. The hazard/risk analysis (arc flash analysis) is based on parameters that commonly are found in industrial workplaces and are identified as notes at the bottom of the table. An arc flash analysis must be performed for fault-clearing times and short-circuit capacities that exceed the information contained in the notes. The work tasks and protective equipment

identified in Table 130.7(C)(9)(a) were identified by a task group, and the protective equipment selected was based on the collective experience of the task group. The protective equipment identified in Table 130.7(C)(9)(a) considers both electrical circuit parameters and the physical attributes of the equipment and work task. The flash hazard analysis must be reviewed prior to beginning work.

Table 130.7(C)(9)(A)

Table 130.7(C)(9)(a) Hazard/Risk Category Classifications

Task (Assumes Equipment Is Energized, and Work Is Done Within the Flash Protection Boundary)	Hazard/ Risk Category	V-rated Gloves	V-rated Tools
Panelboards Rated 240 V and Below — Notes 1 and 3			
Circuit breaker (CB) or fused switch operation with covers on	0	N	N
CB or fused switch operation with covers off	0	N	N
Work on energized parts, including voltage testing	1	Y	Y
Remove/install CBs or fused switches	1	Y	Y
Removal of bolted covers (to expose bare, energized parts)	1	N	N
Opening hinged covers (to expose bare, energized parts)	0	N	N

Table 130.7(C)(10)

Table 130.7(C)(10) Protective Clothing and Personal Protective Equipment (PPE) Matrix

Protective Clothing and Equipment	Protective Systems for Hazard/Risk Category					
Hazard/Risk Category Number	−1 (Note 3)	0	1	2	3	4
Non-melting (according to ASTM F 1506-00) or Untreated Natural Fiber						
a. T-shirt (short-sleeve)	X			X	X	X
b. Shirt (long-sleeve)		X				
c. Pants (long)	X	X	X (Note 4)	X (Note 6)	X	X
FR Clothing (Note 1)						
a. Long-sleeve shirt			X	X	X (Note 9)	X
b. Pants			X (Note 4)	X (Note 6)	X (Note 9)	X
c. Coverall			(Note 5)	(Note 7)	X (Note 9)	(Note 5)
d. Jacket, parka, or rainwear			AN	AN	AN	AN
FR Protective Equipment						
a. Flash suit jacket (multilayer)						X
b. Flash suit pants (multilayer)						X
c. Head protection						
1. Hard hat			X	X	X	X
2. FR hard hat liner					AR	AR
d. Eye protection	—	—	—	—	—	—
1. Safety glasses	X	X	X	AL	AL	AL
2. Safety goggles				AL	AL	AL
e. Face and head area protection		—	—	—	—	—
1. Arc-rated face shield, or flash suit hood				X (Note 8)		
2. Flash suit hood					X	X
3. Hearing protection (ear canal inserts)				X (Note 8)	X	X
f. Hand protection			—	—	—	—
Leather gloves (Note 2)			AN	X	X	X
g. Foot protection						
Leather work shoes			AN	X	X	X

Example Using Alternative Method

Work task involves testing for absence of voltage inside a 480 volt MCC cubicle to establish a lockout point.

- What is the Hazard/Risk Category?

- What notes apply to the task?
- Are V-rated glove and tools required?
- What PPE is required for the Qualified Worker?

Answer

- Refer to "600 V Class Motor Control Centers" section in Table 130.7(C)(9)(A) and choose task for "work on energized parts, including voltage testing. Hazard/Risk Category is 2*
- Notes 2 and 3 apply to this task. Confirm with Engineering that short circuit current of 65kA and 0.03 fault clearing time not exceeded. If short circuit current < 10 kA, hazard/risk category can be reduced by one number
- V-rated gloves and tools are required

Using Table 130.7(C)(10), identify PPE requirement listed under Category 2

- T-shirt
- Long sleeve FR shirt and pants or coveralls
- Hard hat
- Safety glasses or safety goggles
- Flash suit hood and hearing protection (2* footnote to Table 130.7(C)(9)(A) requires hood for this task)
- Leather gloves over voltage rated gloves
- Leather work shoes

Personal Protective Equipment Care

- Clothing shall be inspected prior to use by user.
  - Clothing or flash suits that are damaged shall not be used.
  - Clothing that becomes contaminated with grease, oil or flammable liquids or combustible materials shall not be used.
- Rubber insulating protective equipment shall be tested before first issue/every 12 months thereafter.
- Sleeves before first issue and every 12 months
- Covers and Line hose shall be tested if insulating value is suspect.
- V-rated gloves shall be inspected prior to use by user. Shall be tested and certified before first issue and every 6 months.

Inspecting Voltage Rated Gloves in Field

•Visual Inspection
•Inflation
•Reverse glove and repeat
•Store in appropriate glove bag

Precautions Working on or Near Live Parts

- Don't reach blindly into areas that might contain exposed live parts
- Provide illumination in spaces to enable safe work
- Conductive articles of jewelry and clothing such as watchbands, bracelets, necklaces shall not be worn
- Use only insulated tools rated for voltage when working inside the Limited Approach Boundary of exposed live parts where contact might be made

- All test instruments, equipment and their accessories to be rated for circuits to which they will be connected.
- Test instruments are to be verified to be in proper working order before and after an absence of voltage test.

Typical Voltage Rated Insulated Tools

Alerting and Barricades

- How to protect the shock and arc flash approach boundaries from an unqualified person?
  - Barrier tape
  - Orange cones
  - Signage
  - Plastic chain
  - Use an attendant to warn others approaching the area

Safety signs must meet the requirements of ANSI Z535 Table 130.7(F). Barricades must be used in conjunction with safety signs and never by themselves.

NFPA 70E Compliance for Subcontractors

- Summary
  - NFPA 70E is more than just "Arc Flash" requirements
  - Elements provided, but entire standard may be applicable
  - Chapter 1 provides Safety-Related Work Practices
  - Subcontractor responsible for own personnel safety
  - Communication both ways is imperative

Audit of Program

Every year the written program must be audited to ensure the requirements in the program are being performed by employees. The program must be updated if audit determines that employees are not following it or if another issue is identified with potential hazardous exposure.

1570 – SHORT SERVICE WORKER PROGRAM (SSW)

Short Service Worker Program
(SSW)

Purpose

During orientation a new site employee and or short duration subcontractor is exposed to a large amount of information. Because of the amount of information given the ability to understand and retain that information may not be as high as we would like. The purpose of the SSW Program is to give a systematic review of key components of the orientation. This program will reinforce information already given, answer any questions and give additional instructions on tool usage guided by the Mentor.

Scope

Each SSW and or short duration subcontractors are to receive a series of reviews given by their assigned Mentor, which is their immediate supervisor for the employee, and the supervisor or superintendent that is responsible for the short duration subcontractor. A checklist is to be used to document this review.

Process

A testing process will be given to prospective Mentors thru a series of questions by interview process in reference to safety leadership skills, given by Elevators Of Beaumont to qualify them as Mentors (see appendix A). A list of qualified Mentors will be on file in the Safety Dept. (see Appendix B). A Mentors Assessment form, filled out by evaluator, will be on file (see Appendix C). Each SSW and or short duration subcontractor will begin a review of site specific information including, but not limited to, safety procedures, proper tool operation, site alarms, incident/injury report, etc. The short duration subcontractor will be assigned specific modules of training to be completed while they are on site. This review process will be carried out over a reasonable length of time at the Mentor/Coach's discretion to insure understanding by the SSW. Once a SSW and or short duration subcontractor arrives on site and is identified with an orange hardhat *subcontractor identification optional depending upon site specific requirements),* before starting work, an introduction to their Mentor will initiate the SSW process in which the Mentor will sign the SSW Mentor/Coach Agreement (see Appendix D) and SSW or short duration subcontractor will sign the SSW Training Program Agreement (see Appendix E) which also states, if the program is not completed within 6 months *(subcontractor completion timeframe to be determined at time of mobilization on site),* removal of the employee or subcontractor will occur. A Review Checklist will be initialed once each section has been completed. Upon successful completion of the review the orange hardhat can be removed and the checklist form signed and sent to the safety office for filing (see Appendix F). The orange hardhat must be worn by all SSW's a minimum of 60 days.

In the event that a SSW employee is moved to another crew he or she will be assigned a Coach which will be their new supervisor. The SSW's original assigned Mentor is responsible for tracking the review process to completion on their respective SSW. This review process is to be performed weekly and documented on the Review Checklist by both the Coach and Mentor by each of them signing the checklist and dating to verify their review meeting. Upon completion of the SSW process the employee will be identified as a Site Safety Mature Person and a Progression letter will be signed by Mentor, Coach; and Graduate (see Appendix G). If a SSW leaves the site and returns after a period of six months or more, or does not complete the process within six months, then he/she starts the process over from the beginning. The SSW is required to wear the orange hardhat until graduation to a Site Safety Mature Person (SSMP). Should the SSW not complete program within the six month time frame, the employee will not be permitted to work on the site (see Appendix H). For turnarounds, projects and large-scale maintenance jobs, permission will be requested to exceed ratios defined in the Elevators Of Beaumont Short Service Worker Program (see Appendix I).

Target Ratio

Ratio of Mentor to Short Service Workers shall not exceed 1 to 5.

The quantity of Short Service Workers that are working within each crew will be communicated by the Elevators Of Beaumont foreman and his or her superintendent to the appropriate Client Rep. This will insure that all are in agreement with the crew mix being implemented on each job and the risk assessment of the tasks to be performed has been discussed by Client representatives and Elevators Of Beaumont. The job tasks that are discussed will be summarized in writing on "Appendix I". On those jobs that have a short duration and SSW's and or Contractors will be on site for this period of time the specific training modules that they will need to review while on site are to be listed on "Appendix I" as well.

Each SSW will sign *an Experience Form that will be* included in packet, (see Appendix J).

TABLE OF CONTENTS

Short Service Worker Program

Short Service Worker Program

Section One

1. **_____Site Procedures**
   - Audit Cards
   - Project Procedures / SOP's
   - Elevators of Beaumont Safety Hand Book and Jobsite Procedures
   - Plant alarm (explained)
   - JSSA / HRCA & JSA (explained)
   - Safety Suggestion Box (Anonymous Reporting)
2. **_____EMERGENCY AND PERSONNEL ACCOUNTING PROCEDURES**
   - Evacuation paints /2-Minute Drill
   - Site Emergency #_____ for your site (Make sure everyone has sticker)
3. **_____PERSONAL PROTECTIVE EQUIPMENT**
   - FRC/NOMEX
   - Hard hat (Check for damage)
   - Industrial safety glasses with side shields (Must meet ANSI-Z87.1)
   - Steel toe boots with a defined heel (Leather and/or Rubber)
   - Gloves (100% of the time when in field)
   - Safety harness and Lanyard (Inspection)
   - Face shields (When and how to use)
   - Burning goggles I welding shields (When and how to use)
   - Ear plugs (when and how to use)
   - Mono-goggles (SDS, Grinding, etc.)
4. **_____INJURIES**
   - All injuries to be reported to foreman and Clients Rep. immediately
   - All minor injuries to be treated by first aid
   - Must be accompanied by foreman
   - Dr.'s release is required to return to work after being out (3 days in a row) for personal illness or injury
5. **_____Barricades and Travel**
   - Review JSSA / HRCA and permits and comply with all safety requirements
   - Understanding barricading procedures
   - Do not step on process equipment or associated supports
   - Keep an eye on other work groups' activities (other employees or subcontractors)
   - Report all strong odors or any spills / leaks
   - Barricade work area and keep it clean and orderly
   - Do not block emergency equipment such as fire extinguishers
   - In emergencies, always pull to the side of roadways (stay clear of roadways)

Employee Signature: _____ Date: _____

Mentor / Coach Signature: _____ Date: _____

6. _____**Life Saving Rules**
    - **FAILURE TO FOLLOW FALL PROTECTION PROCEDURES**
    - **VIOLATING WORK PERMIT PROCEDURES**
        - Entering a confined space without approval or a valid permit or standby present where required.
        - Issuing/receiving a work permit without a required gas test being conducted.
        - Working without a valid permit on jobs that require a permit.
        - Signing. Issuing or accepting a permit without job-site verification, where required by site safety standards.
        - Walking under a suspended load by entering a barricaded or restricted work zone.
    - **FAILURE TO FOLLOW HAZARDOUS ENERGY CONTROL PROCEDURES**
        - Conducting maintenance on equipment without all hazardous energy isolated or controlled.
        - Unauthorized removal or tampering with Hazardous Energy Control Devices (lock-out/tag-out devices).
        - Opening process equipment without verifying the equipment is properly cleared, isolated and de-energized or without wearing proper PPE.
    - **DEFEAT OF A SHE CRITICAL DEVICE WITHOUT THE PROPER AUTHORIZATION.**

Employee Signature: _____ Date: _____

Mentor / Coach Signature: _____ Date: _____

Short Service Worker Program

Section Two

1. ____**REPORTING FIRES, FUMES RELEASED, LEAKS OR DAMAGE TO FACILITIES**

- Report all fires on appropriate site emergency # and notify your supervisor who will contact the Client Safety Dept.
- Report strong odors or visible fumes to your supervisor and the Client Safety Department.

2. ____**LOCATION OF EMERGENCY EQUIPMENT IN ALL AREAS**

- Portable fire extinguishers - do not use fixed firefighting equipment
- First Aid Supplies (Safety Office)
- Eye wash stations

3. ____**WORK PERMITS - CATEGORIES**

- Hot Work
- Cold Work
- Excavation
- Vessel/Confined space entry
- Power Tools
- Hole Watch
- Bottle Watch/Overseer
- Road Block

4. ____**FALL PROTECTION**

- Any work with potential for falls must utilize a fall protection system. 100% fall protection must be utilized.
- Safety harness and lanyards / SRL'S
- Life lines
- Handrails / mid-rails / toe boards
- Hole Covers
- Anchorage point must support 5000 lbs.

5. ____**HOUSEKEEPING**

- High standards of orderliness
- Use proper containers for disposal of paper, light/heavy metals, aerosol cans etc.
- Keep hoses, leads and cords out of walkways and 7 ft. overhead where possible.
- Use rod stub cans - no stubs on the floor

6. ____**CONTINUOUS IMPROVEMENT**-Making Changes - Making a Difference

- To be safer
- To work more efficiently
- To meet the needs of a changing work force
- To be more competitive
- To meet increasing environmental concerns
- To meet ever-increasing customer expectations
- To be more efficient
- To reach a global market
- To grow with changes in our governmental, legal and social environment

Employee Signature: _____ Date: _____

Mentor / Coach Signature: _____ Date: _____

Short Service Worker Program

Section Three

1._____LOCK, TAG, CLEAR AND TRY

- Policy - All valves, switches or pieces of equipment must be made inoperative and danger tags and locks attached prior to performing work where there is a possibility of injury or property damage. Discuss site specific procedures.
- Standard Procedure - All craftsmen who would be exposed to harm if a valve or switch were operated will place his / her lock and tag at the designated location.

2._____RIGGING

- Rigging Inspection only to be done by qualified personnel

3._____SCAFFOLDS

- All scaffolds shall be erected as complete as possible
- No scaffold shall be erected, moved, dismantled or altered except under the supervision of a competent person
- Personnel on any scaffold and working platform shall be required to wear a safety harness and remain 100% tied off
- All scaffold tags shall be inspected for instruction before use each shift
- Safe means of access / egress must be provided for each scaffold

4._____LADDERS

- Straight / Extension ladders and step ladders must be secured (Rope or #9 wire)
- Proper angle 4 /1 (for extension ladders)
- Top of ladder must extend 3 feet beyond supporting object when used as access
- Keep hands free of tools **/** materials while climbing (Use Yo-Yo's)
- No metal ladders
- Use the proper ladder for the work being accessed

5._____TOOL AND EQUIPMENT INSPECTION

- All electrical tools will be required to use Ground Fault Circuit Interrupters in addition to an assured grounding program.
- All electrical tools receive quarterly inspection (explain inspection tape)
- Other tools and equipment receive quarterly inspection (ladders, chain falls, come-alongs, etc.) (explain inspection tape)
- Fire extinguisher inspection monthly and prior to use
- Give all tools and equipment a daily pre-use and visual inspection
- All guards and handles must be in place and secure
- Equipment procedures

Employee Signature: _____ Date _____

Mentor **/** Coach Signature: _____ Date _____

Short Service Worker Program

Section Four

1._____FIRE PROTECTION

- Fire extinguishers - employee must know how to use

Needed for:
1. Flammable liquid storage areas.
2. Burning and welding operations
3. Any hot work permitted in area.

- Flammable liquids
  1 .Approved containers
  2 .Labeled as to contents
  3 Barricade storage areas with "No Smoking" signs
  4.Smoking - "NO SMOKING" areas are plainly identified

2._____PLANT TRAFFIC RULES

- Obey all posted speed limits. Stop at all stop signs.
- Blow horn when approaching from the rear (Also when Backing Up)
- No more than 5 people in the cab of the truck All passengers must be in seatbelts
- Do not use a cell phone while operating any equipment or in operating areas
- Parking lot rules

3._____EXCAVATION WORK

- Permit is required
- Barricade 3 feet from edge
- Keep soil back from the edge 3 feet
- If greater than 4 feet deep, it must have access **/** egress ladders within 25 feet
- Sloped or shored if greater than 4 feet deep **/** inspected by competent persons
- If greater than 4 feet deep, an Excavation **/** Confined Space Entry Permit is needed

4._____SERIOUS INCIDENTS

- Any incident, injury or close call must be reported to supervision immediately.

Employee Signature: _____ Date: _____

Mentor / Coach Signature: _____ Date: _____

Short Service Worker Program

Section Five

1**. _____HAZARD COMMUNICATION**

- Medical records located in the safety office
- SDS located in the safety office **/** control rooms

2. **_____ALCOHOL / DRUG POLICY/CONTRABAND (REFRESHER**

3. **_____START AND QUITTING TIME**

4. **_____ABSENTEEISM**

- If absent for any reason - call 833-4715 or site # YOU MUST CALL EVERY DAY
  Failure to call for 3 consecutive days will be grounds for termination.

5. **_____ALWAYS ASK QUESTIONS IF YOU ARE NOT SURE**

6. **_____SCHEDULED AND UNSCHEDULED OVERTIME WILL BE WORKED**

7. **_____REVIEW SAFETY VIOLATIONS POLICY**

8. **_____REVIEW Elevators of Beaumont AND SITE PROCEDURES**

9. **_____LIFE SAVING RULES**
   - FAILURE TO FOLLOW FALL PROTECTION PROCEDURES
   - VIOLATING WORK PERMIT PROCEDURES
     - Entering a confined space without approval or a valid permit or standby present where required.
     - Issuing/receiving a work permit without a required gas test being conducted.
     - Working without a valid permit on jobs that require a permit.
     - Signing, issuing or accepting a permit without job-site verification, where required by site safety standards.
     - Walking under a suspended load by entering a barricaded or restricted work zone.
   - FAILURE TO FOLLOW HAZARDOUS ENERGY CONTROL PROCEDURES
     - Conducting maintenance on equipment without all hazardous energy isolated or controlled.
     - Unauthorized removal or tampering with Hazardous Energy Control Devices (lock-out/tag-out devices).
     - Opening process equipment without verifying the equipment is properly cleared, isolated and de-energized or without wearing proper PPE.
   - DEFEAT OF A SHE CRITICAL DEVICE WITHOUT THE PROPER AUTHORIZATION

10.**_____FOCUS HAZARDS**
   - Working at Heights
   - Energy Isolation
   - Line of Fire
   - Confined Space
   - Opening Process Equipment
   - Materials (Handling Hazardous)
   - Electrical Safe Work Practices

Employee Signature: _____ Date _____

Mentor / Coach Signature: _____ Date _____

Elevators of Beaumont

MENTOR INTERVIEW

LEADERSHIP SKILLS TESTING REQUIREMENTS

Questions pertaining to the following areas presented to a prospective Mentor/Coach to assess his/her qualifications as Mentor/Coach for the SSW Program. The areas reviewed pertain to, but are not limited to, the following:

1. Contractor Safety Responsibilities
2. Emergency Response
3. General LOTO (site specific requirements)
4. HRCA, JSA/JSSA, PJHA, LPSA
5. Fall Protection/Anchor points
6. Work Place Injury/Illness Notification
7. General Work Permission
8. Contractor Safety Responsibilities
9. Primary PPE

Questions will be posed by , Inc. Safety Dept Elevators of Beaumont. in a "how to" format on guiding the SSW candidate and to assess the Mentor/Coach's level of safety leadership and attitude.

Elevators of Beaumont

Appendix B

QUALIFIED MENTORS LOG

MENTOR NAME	TRAINING DATE	YEARS EXPERIENCE	TIME IN CLIENT SITE

_____ _____

ELEVATORS OF BEAUMONT Signature

SAFETY print

Elevators of Beaumont

Appendix C

SHORT SERVICE WORKERS
MENTOR / COACH ASSESSMENT

Date: _____

_____HAS BEEN ASSESSED BY AN ELEVATORS OF BEAUMONT SAFETY REPRESENTATIVE. HE/SHE IS COMPETENT TO SERVE AS A MENTOR/COACH IN THE SHORT SERVICE WORKER PROGRAM AT THE CLIENT FACILITIES.

_____ _____
MENTOR print Signature

_____ _____
ELEVATORS OF BEAUMONT SAFETY print Signature

Elevators of Beaumont

APPENDIX D

SHORT SERVICE WORKERS
MENTOR /COACH AGREEMENT

I,_____ have met with New-on-Site person,_____. We discussed my obligation to effectively mentor/coach them through the Safety Related Training for the Client facility. I will be responsible and accountable for _____‘s competency, safety behavior and safety performance. I will exhibit safety leadership skills and attitude. I will provide information to the SSW Coordinator in order to help update and validate the SSW Program, and assist in the graduation process.

Mentor/Coach
Signature _____
Print _____
Date _____

SSW
Signature _____
Print _____
Date _____

Elevators of Beaumont

APPENDIX E

SHORT SERVICE WORKER
TRAINING PROGRAM AGREEMENT

I _____, have met my SSW Mentor and understand my obligation in becoming a SSMP at the Client facility and understand that if not completed within 6 months I will be removed from site.

_____ _____
SSW print Date Signature

_____ _____
Mentor print Date Signature

Mentor/Coach Review Checklist

Appendix F

Employee Name: _____

Social Security Number: _____

Date of Hire: _____

Assigned Mentor: _____

Section	Date Completed	Short Service Worker	Initial Mentor / Coach (Print Full Name
1			
2			
3			
4			
5			

Comments and or Mentor / Coach Review

Dates

_____

_____

_____

Orange Hard Hat Removed _____

Employee Signature _____

Mentor Signature _____

Elevators of Beaumont

APPENDIX G

Short Service Worker Progression
to Site Safety Mature Person

_____has successfully demonstrated acceptable knowledge and skills to his/her assigned Mentor/Coach along with being evaluated in site hazards, hazard management and safe working practices and exhibits acceptable safety skills at the Client facility.

_____
Client Name

_____ _____
Graduate Print Signature Date

_____ _____
Mentor Print Signature Date

Elevators of Beaumont

Appendix H

Date: _____

_____ has not met the requirements to become a Site Safety Mature Person within the required time set forth by Client's SSW Program and has been terminated per the procedures set forth.

_____
Client Name

Mentor: _____ _____
Print Signature

Safety Dept. _____ _____
Print Signature

Appendix I

Elevators of Beaumont

The following signatures certify that permission has been granted to exceed ratios defined in the A-1 Sheet Metal & A/C, In. Short Service Worker Program. The following new ratios shall be maintained for (Project, T/A, Job #) _____or

Start Date:_____ End Date:_____

WORK CREW RATIOS

Mentor/Coach Maximum	_1_to_5_ (SSW-M/C)
Workers with verified 2+ years of experience in the industry or client facilities	No specific requirements
Workers with 1 through 2 years of industrial experience	____to____ (SSW-SSMP)
Workers with: *Limited or no industrial experience *Commercial experience *Apprentices *Permit holders	____to____ (SSW-SSMP)

Job task summary (High, Medium, Low Risk) / required training modules to be completed by short duration employees and or Subcontractors.

_____
_____
_____
_____
_____
_____
_____
_____
_____

Client Management Signature _____Date:_____

Client Contract Management Signature _____Date:_____

A-1 Sheet Metal & A/C, Inc. Signature _____Date:_____

Appendix J

Elevators of Beaumont

INDUSTRIAL EXPERIENCE FORM

I _____Have ____ Years and ____ Months of Industrial Experience.

I _____Have ____Years and ____ Months of A-1 Sheet Metal & A/C, Inc. Experience.

I _____Have ____ Years and ____ Months of Client facility Experience.

This form is used by supervisors or clients to verify the employee's professional experience related to facility activities.

Employee Signature _____ Date: _____

Management Signature _____Date: _____

Elevators of Beaumont

Appendix K

Approval Form

Graduate Short Service Worker to SSMP in less than 6 Weeks

Worker's Name: _____

Contract Company: _____

Position /Title of Worker: _____

Craft or Trade of Worker: _____

Journeyman? □ Yes □ No How Long? _____Years _____Months

Craft Certified? □ Yes □ No How Long? _____Years _____Months

Apprentice? □ Yes □ No How Long? _____Years _____Months

Previous Experience at _____? □ Yes □ No How Long? _____Years _____Months
Site Name

Previous Experience at _____? □ Yes □ No How Long? _____Years _____Months
Site Name

Previous Experience at _____? □ Yes □ No How Long? _____Years _____Months
Site Name

Has the worker successfully completed all required orientation and training required by the Contract Company's SSW Program? □ Yes □ No

Has the worker successfully demonstrated the knowledge and skills required for them to work safely at the Site?

□ Yes □ No

Submitted By: _____ Date: _____
Authorized Representative – Elevators Of Beaumont

Agreed To By: _____ Date: _____
Authorized Client SSW Program Representative

1571 – SAFE RETURN TO WORK

It is the goal of Elevators of Beaumont to return employees to meaningful, productive temporary employment following injury or illness until their health care provider releases them to full duty.

The return to work program provides opportunities for any employee who sustains a compensable injury during the course and scope of employment to safely return to work. If the employee is not capable of returning to full duty, the return to work program provides opportunities for the employee to perform a temporary assignment, either modified or alternative duty as defined below.

Scope

This procedure applies to Elevators of Beaumont projects and operations.

Key Responsibilities

Supervisors

- Shall ensure that all injuries are promptly reported and carefully supervise employees who are in a return to work classification.

Employees

- Shall report all injuries immediately.
- Shall follow all aspects of this program

Definitions

- Lost Time - Time spent away from work beyond the day of injury at the direction of the treating health care provider as a result of a compensable injury sustained in the course and scope of employment. The term does not include time worked in a temporary assignment.

- Full Duty - Performance of all duties and tasks of the position for which the employee is employed. Full duty entails performing all essential and non-essential functions of the employee's regular job.

- Temporary Assignment - Performance of a temporary job assignment intended to return an injured employee to work at less than his or her full duties when a serious injury or serious medical condition prevents the employee from working full duty. Temporary assignments are limited to six months at the same pay, beyond six months; the program will be reviewed in assistance of Elevators of Beaumont management to determine the next best course of action. Temporary assignments are modified duty and alternative duty.

- Modified Duty - Modified duty allows the employee to return to employment in his/her regular job and perform all of the essential functions of the position and those nonessential duties and tasks that are within the capabilities of the employee, given the restrictions imposed by the treating health care provider. Modified duty is a temporary arrangement until the injured employee can resume full duty. If during the course of the modified duty assignment or after six (6) months, whichever is sooner, it is determined that the employee

has permanent restrictions, the program will be reviewed in assistance of Elevators of Beaumont management to determine the next best course of action.

- Alternative Duty - Alternative duty allows the employee to temporarily perform the essential functions of a job and other nonessential duties and tasks, within the restrictions prescribed by the treating health care provider, other than the position for which the individual is employed (regular full-time position). Such alternative duty may be physically located in the same employing department or in a hosting department. Alternative duty is a temporary arrangement until the injured employee can resume full activities of his/her regular job or until an alternate duty position is no longer needed.

- Hosting Department – This is the department that has a temporary assignment position available but not necessarily the employee's department.

General Requirements

Elevators of Beaumont provides modified work opportunities to injured employees, whenever practicable. Modified work should be offered, wherever possible, to employees who are unable to return to their regular duties following a workplace injury or illness. The benefits of offering modified duty include, but are not limited to, reduced workers compensation costs, improved employee retention, enhanced employee morale, reduction in lost time days, and a strengthening of the Elevators of Beaumont's relationship with its employees. Modified work should be meaningful to the employee and Elevators of Beaumont, and consistent with work restrictions outlined by the treatment provider.

If the health care provider states that the employee cannot perform any temporary assignments/ modified duties, Elevators of Beaumont may challenge the decision depending on the injury and request independent medical information.

Employee Reporting Responsibilities

An employee who is a candidate or participant in a modified or alternative duty temporary job assignment under the Safe Return to Work program is responsible for reporting to the workers compensation carrier any employment or income earned while performing modified or alternative duty if required by the workers compensation carrier.

An employee participating in the safe Return to Work program must provide his/her supervisor with medical documentation accounting for all absences due to the injury/illness within one day of any absence from work, or face disciplinary action.

Non-Retaliation

Retaliation against an individual for in good faith filing a request or making a claim under this or related policies, for instituting or causing to be instituted any proceeding under local regulatory guidelines or federal anti-discrimination or anti-retaliation laws, for testifying in an investigation or proceeding, or for otherwise opposing discriminatory or retaliatory actions or practices will not be tolerated. Retaliation by any Elevators of Beaumont employee is a violation of this policy. Nothing in this procedure should be interpreted as not requiring an individual to report suspected acts of discrimination or retaliation to the individual he or she believes is engaging in discriminatory or retaliatory conduct.

Prohibited Actions
This return to work program shall not be applied to any situation or circumstance in a manner that retaliates or discriminates on the basis of race, color, sex, age, national origin, religion, or disability.

Return to Work Coordination
The Elevators of Beaumont Safety Manager or designated person will assist Site Managers/ supervisors with return to work activities/ plans for individuals who have sustained a compensable injury or illness during the course and scope of employment.

Medical Records for Injured Employees Must be Kept Confidential
Medical records should be kept by the employer strictly on a need-to-know basis. The records should be kept in a locked file.

All Documentation Related to an Incident is Maintained by Elevators of Beaumont
Elevators of Beaumont should maintain written records of incident details. This will help Elevators of Beaumont recall information about the circumstances of the incident at a later time, and will demonstrate due diligence. Incident investigation records should be maintained. Records should be kept of communications with the injured employee regarding modified work. Workers compensation and medical records, where applicable, should also be maintained.

How Local Health Care Providers Are Made Aware That Elevators of Beaumont Provides Modified Work to Employees Who Are Unable to Perform Their Regular Duties

- Local health care providers should be advised that Elevators of Beaumont provides modified work to injured employees, whenever practicable. This may be accomplished proactively making arrangements with clinics that specialize in occupational health, and recommending injured employees seek treatment there. If/when this is not practicable, a standard letter should be drafted that outlines the company's modified work opportunities. Injured employees should take this letter with them when they visit their health care provider.

- Elevators of Beaumont will provide a copy of the employee's regular job description to accompany a work status form (see form) to be completed by the health care provider following any initial report of injury. When the medical status form is returned, it will be determined whether the employee can perform the essential functions of his/her job.

- Modified work provided to injured employees must be consistent with restrictions provided by the health care provider. Elevators of Beaumont must ensure that modified work being offered is consistent with the medical restrictions listed by the health care provider. Workers must ensure that changes in the scope of the modified work must adhere to the medical restrictions. Modified work is temporary and should be managed with a goal to return the individual to full time work as soon as deemed medically fit.

- The employee's health care provider must review and certify that the employee can perform the essential functions defined in a modified (temporary assignment) job description. If the health care provider changes the temporary assignment position description, the

employing/hosting department must determine if the change is acceptable. The health care provider must approve any changes proposed by the hosting department.

- The physician's restrictions are provided to those required to ensure that the restrictions are followed. Supervisors must be made aware of the restrictions to ensure the modified work meets the physician's orders.
- If the medical provider states the employee can return to work with work restrictions Elevators of Beaumont will notify the employee via a temporary assignment offer of employment (see form). If the employee fails to report to work on the indicted start date the workers compensation company is to be immediately notified and the employee may be subject to discipline for failure to return to work.
- The employee must obtain the appropriate forms from the Safety Manager or Human Resources to be completed by his/her health care provider at each visit or every 30 days, whichever is sooner, for assessment of the employee's ability to perform the functions of the temporary assignment position. The employee is required to submit the work status form (or suitable replacement) to his/her supervisor within one working day following each visit to his/her health care provider.
- If the health care provider states that the employee cannot perform any temporary assignments/ modified duties, Elevators of Beaumont may challenge the decision depending on the injury and request independent medical information.

Temporary Assignment / Modified Work Procedures

Physical demands are assessed for modified duty jobs to ensure they can be performed safely by injured employees.

A list of jobs available to be performed for employees on modified duty should be maintained. All jobs should be assessed to determine which jobs can be performed by persons working under specific restrictions. It is recommended that a Physical Demands Analysis (PDA) be prepared for each of these jobs to ensure workers are placed accordingly.

Training

Employees are informed of the Elevators of Beaumont Safe Return to Work program.

Employees may be informed by communicating the Elevators of Beaumont. Safe Return to Work policy via a safety meeting or toolbox talk, reviewing the policy as part of the new employee orientation, and/or posting the policy in a conspicuous location, etc.

1574 – SEMS HAZARD ANALYSIS (JSA)

Purpose

The purpose of this program is to meet client requirements for Safety and Environmental Management Systems (SEMS) as related to Hazard Analysis.

Scope

Elevators of Beaumont does not own any facilities on the Outer Continental Shelf or any other area governed by the Bureau of Safety and Environmental Enforcement (BSEE) and this program is created to meet client requirements.

Hazard and Risk Identification & Job Safety Analysis

The hazard identification process is used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.

The Safety Manager shall conduct a baseline worksite hazard assessment which is a formal process in place to identify the various tasks that are to be performed and the accompanying identified potential hazards. The results are included in a report of the results of the hazard assessment and the methods used to control or eliminate the hazards identified. The hazard assessment report must be signed and have the date on it.

Inputs into the baseline hazard identification include, but are not limited to:

- Scope of work;
- Legal and other requirements;
- Previous incidents and non-conformances;
- Sources of energy, contaminants and other environmental conditions that can cause injury;
- Walk through of work environment;

Hazards identifications (as examples) are to include:

- Working Alone
- Thermal Exposure
- Isolation of Energy
- Hearing Protection
- Musculoskeletal Disorders
- Bloodborne Pathogens
- Confined Spaces
- Driving
- General Safety Precautions
- And any other established policy or procedure by Elevators of Beaumont
- Any other site specific work scope

Elevators of Beaumont has a formal process for identifying potential hazards. Processes are in place to identify potential hazards by the use of the JSA.

All identified hazards are assessed for risk and risk controls are assigned within the worksite hazard assessment for that specific hazard.

Employees are trained in the hazard identification process. Employees will be trained in the hazard identification process including the use and care of proper PPE.

Unsafe hazards must be reported immediately and addressed by the supervisor. The supervisor discusses the worksite hazard assessment with employees at the respective work location during the employee's documented orientation.

Job Safety Analysis (JSA)

Job Safety Analysis (JSA) (see form at the end of this document) are developed and implemented for each operation and task identified in the Elevators of Beaumont SEMS program. The program must address a JSA is developed and implemented for each identified operation and task in the organization's SEMS program.

A copy of each JSA is kept on site and accessible to employees. Operational JSA must be maintained at the job site and readily accessible to employees.

JSA's identify, analyze and record existing or potential safety and health hazards associated with each step. The program must address JSA's identify, analyze and record existing and/or potential safety and health hazards associated with each step.

JSA's identify, analyze and record the recommended actions to eliminate or reduce identified hazards. The program must address recommended actions are identified, analyzed and recorded to ensure appropriate countermeasures are effective in eliminating and reducing identified hazards.

JSA's are approved by a supervisor or person in charge (PIC) prior to work commencing. The program must address the person or position responsible for the approval of JSA's prior to commencing work. Elevators of Beaumont has designated its Safety Manager or designated person for each site project as the position responsible.

Completed JSAs are available from the Safety Manager.

1575 – INCIDENT INVESTIGATION

Purpose

The purpose of this program is to meet client requirements for Safety and Environmental Management Systems (SEMS) as related to Incident Investigation.

Scope

Elevators of Beaumont does not own any facilities on the Outer Continental Shelf or any other area governed by the Bureau of Safety and Environmental Enforcement (BSEE) and this program is created to meet client requirements.

Responsibilities

Responsibilities for incident investigation will be assigned prior to occurrence of an incident. Individual responsibilities for reporting and investigation must be pre-determined and assigned prior to incidents.

Elevators of Beaumont. Safety Manager

- Ensures investigations are conducted and assists in identifying corrective actions.

Site Manager and Supervisors

- Investigates (or assists in) incident investigations
- Corrects non-conformances
- Accompany injured employees to the medical provider for initial treatment.

Employees

- Immediately report any injury, job related illness, spill or damage to any property to their immediate supervisor. If their immediate supervisor is not available the employee is then to immediately notify the project manager. Employees who could be first responders will be trained and qualified in first aid techniques to control the degree of loss during the immediate post-incident phase.

Procedure

After immediate rescue or response, actions to prevent further loss will occur if the scene is safe. For example, maintenance personnel should be summoned to assess integrity of buildings and equipment, engineering personnel to evaluate the need for bracing of structures, and special equipment/response requirements such as safe rendering of hazardous materials or explosives employed.

Investigations of Incidents

All incidents with serious safety or environmental consequences shall be investigated in accordance with and as required by Elevators of Beaumont procedures.

Investigation is an important part of an effective safety program in that it determines the root cause and corrective actions necessary to prevent similar incidents or non-conformances. The following must be reported to the employee's supervisor immediately. If that person is not available then the Elevators of Beaumont Safety Manager shall be immediately notified for:

- Near miss incidents with the potential to harm people, the environment or assets
- Work related injuries or illnesses and/or property damage including vehicle incidents
- Hazardous chemical spillage, loss of containment and contamination
- Non-conformance to safety or environmental rules, policies or standards

The supervisor shall make the necessary notifications and begin the incident investigation process.

In the case of a major injury or incident the scene of the event should be closed off and kept "as is" at the time of the incident. This is vital for effective incident investigation.

Incident investigation occurs as soon as possible, while the facts are still fresh within the minds of those involved (i.e. witnesses).

Take the opportunity to talk to all of those involved before they become unavailable or memory fades.

An incident investigation must be thorough and concerned only with cause and prevention and must be separate from administrative disciplinary action.

Equipment
Proper equipment will be available to assist in conducting an investigation.

Equipment may include some or all of the following items; writing equipment such as pens/paper, measurement equipment such as tape measures and rulers, cameras, small tools, audio recorder, PPE, flags, equipment manuals, etc.

The Safety Manager shall have an incident investigation kit prepared in advance.

Incident Reporting Matrix
The Incident Reporting Matrix identifies, based on type of incident, who within corporate management shall be verbally notified and when.

It also specifies which type of report from the field shall be completed based on the type of incident.

Reporting of the incident must occur in a specified manner based on site specific requirements and the reporting sequence shall be posted.

EXTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Owner Client	24 hrs	Yes
Injury Above Minor First Aid	911 / Site Medical Response / Owner Client	ASAP	Yes
As Required Injury Reporting	Owner Client	Within 8 hrs	Yes
Fire / Explosion	911 / Site Fire Response / Owner Client	ASAP	Yes
Reportable Spill	Site Environmental / Owner Client	Within 24 hrs	Yes
Property/Vehicle Damage	Owner Client	Within 24 hrs	Yes

INTERNAL INCIDENT NOTIFICATION MATRIX

TYPE OF INCIDENT	WHO TO NOTIFY VERBALLY	WHEN	INCIDENT REPORT FORM
Minor First Aid	Safety Manager	ASAP	Yes
Injury Above Minor First Aid	Safety Manager	ASAP	Yes
As Required Injury Reporting	President then Safety Manager	ASAP	Yes
Fire / Explosion	Safety Manager	ASAP	Yes
Reportable Spill	Safety Manager	ASAP	Yes
Property/Vehicle Damage	Safety Manager	ASAP	ASAP

Time Elements for OSHA and Client Notification

Required incidents must be verbally reported to OSHA within 8 hours of their discovery. Incidents must also be reported to the owner client as soon as possible or in a timely manner (within 24 hours of incident).

Incident Investigation Personnel

Incident investigations shall be conducted by personnel knowledgeable in investigation techniques, processes involved and other relevant specialties to the operation. Incident investigations shall be conducted by personnel knowledgeable in investigation techniques and processes involved in the incident.

All incidents will be investigated by the Elevators of Beaumont Safety Manager and other designated competent personnel. They will form an Incident Review Team that participates in the determination of the final root cause investigative incident report.

Initial Identification/Assessment of Evidence

Initial identification of evidence immediately following the incident could include a listing of people, equipment, and materials involved and a recording of environmental factors such as weather, illumination, temperature, noise, ventilation, etc.

Collection/Preservation and Security of Evidence, Evidence such as people, positions of equipment, parts, and papers must be preserved, secured and collected through notes, photographs, witness statements, flagging, and impoundment of documents and equipment. All shall be dated.

Witness Interviews and Statements
Witness interviews and statements must be collected. Locating witnesses, ensuring unbiased testimony, obtaining appropriate interview locations, and use of trained interviewers should be detailed. The need for follow-up interviews should also be addressed. All items shall be dated.

The final incident investigation report consists of findings with critical factors, evidence, corrective actions, responsible parties, and timelines for corrective action completion.

Results of incident investigations are communicated to employees via the Incident Notice form.

Components of the Incident Investigation Program
Written incident reports will be prepared and include the Field Incident Report Form and a detailed narrative statement concerning the events. The format of the narrative report may include an introduction, methodology, summary of the incident, Incident Review Team member names, narrative of the event, findings and recommendations. Photographs, witness statements, drawings, etc. should be included.

At a minimum the incident investigation program shall address:

- The nature of the incident
- Human or other contributing factors leading to the incident
- Recommended changes identified as a result of the investigation

The supervisor completes the Elevators of Beaumont Field Incident Report and takes the below steps when beginning an incident investigation.

- Provide emergency assistance, as needed and qualified for
- Secure the area as quickly as possible to retain area in the same condition at the time of the incident
- Notify management by phone according to the Incident Notification Matrix
- Identify potential witnesses
- Use investigation tools, as needed (camera, drawings, video, etc.)
- Tag out for evidence any equipment that was involved
- Interview witnesses (including the effected employee) and obtain written, signed statements and fax to the Elevators of Beaumont Safety Manager
- Prepare Elevators of Beaumont Field Incident Report, sign the form, fax it to the Elevators of Beaumont Safety Manager
- Implement any immediate corrective actions needed

Incident Notice Form
Elevators of Beaumont shall provide documentation and communication of lessons learned and review of similar operations to prevent reoccurrence. Lessons learned are reviewed and communicated. Changes to processes must be placed into effect to prevent reoccurrence or similar events.

In order to communicate incident information and lessons learned from incidents the Elevators of Beaumont Safety Manager shall send the Incident Notice to all work sites. The form shall be posted on

employee bulletin boards and shall be discussed in weekly safety meetings until all employees at the job site have been informed of the incident.

Establishment of a Corrective Actions Plan for All Incident Investigations

The program must address corrective action programs must be established based on the findings of the incident investigation. The investigation should be expedited and findings and recommendations resolved in a timely manner. Corrective action programs must analyze incidents for root causes and must at a minimum:

- Retain incident investigation findings for future hazard analysis or two years; whichever is greater.
- Determine and document responses to findings to ensure corrective action plans are completed.
- Implement a system to distribute incident investigation findings to appropriate personnel and/or similar facilities throughout Elevators of Beaumont.

Incident investigations will result in corrective actions, individuals being assigned responsibilities relative to the corrective actions, and these actions tracked to closure.

Corrective actions for safety improvement input will be posted at each work site and tracked by the Elevators of Beaumont Safety Manager to ensure timely follow up and completion.

Corrective actions are also used as needed for revisions to the Elevators of Beaumont Safety and Health Management System.

Injury Classifications

Injuries shall be classified per the following:

- First Aid – Dressing on a minor cut, removal of a splinter, typically treatment for household type injuries.
- Lost Work Day Case (LWDC) – An injury that results in an employee being unfit to perform any work on any day after the occurrence of an occupational injury.
- Number of Lost or Restricted Work Days – The number of days, other than the day of occupational injury and the day of return, missed from scheduled work due to being unfit for work or medically restricted to the point that the essential functions of a position cannot be worked.
- Occupational Injury – An injury which results from a work related activity.
- Occupational Illness – Any abnormal condition or disorder caused by exposure to environmental factors while performing work that resulted in medical treatment by a physician for a skin disorder, respiratory condition, poisoning, hearing loss or other disease (frostbite, heatstroke, sunstroke, welding flash, diseases caused by parasites, etc.). Do not include minor treatments (first aid) for illnesses.
- Recordable Medical Case (RMC) – An occupational injury more severe than first aid that requires advanced treatment (such as fractures, more than one stitch, prescription medication of more than one dose, unconsciousness, removal of foreign body embedded in eye (not flushing), admission to a hospital for more than observation purposes) and yet results in no lost work time beyond the day of injury.

- Restricted Work Day Case (RWDC) – An occupational injury which results in a person being unfit for essential functions of the regular job on any day after the injury but where there is no time lost beyond the day of injury. An example would include an injured associate is kept at work but not performing within the essential functions of their regular job.

- Work or Work Related Activity – All incidents that occur in work related activities during work hours, field visits, etc. are reportable and are to be included if the occupational injury or illness is more serious than requiring simple first aid. Incidents occurring during off hours and incidents while in transit to or from locations that are not considered an employee's primary work are not reportable.

The following are examples of incidents that will not be considered as recordable:

- The injury or illness involves signs or symptoms that surface at work but result solely from a non-work-related event or exposure that occurs outside the work environment.

- The injury or illness results solely from voluntary participation in a wellness program or in flu shot, exercise class, racquetball, or baseball.

- The injury or illness is solely the result of an employee eating, drinking, or preparing food or drink for personal consumption (whether bought on the employer's premises or brought in). The injury or illness is solely the result of an employee doing personal tasks (unrelated to their employment) at the establishment outside of the employee's assigned working hours.

- The illness is the common cold or flu (Note: contagious diseases such as tuberculosis, brucellosis, hepatitis A, or plague are considered work-related if the employee is infected at work).

Training

Elevators of Beaumont shall train personnel in their responsibilities and incident investigation techniques. Personnel must be trained in their roles and responsibilities for incident response and incident investigation techniques. Training requirements relative to incident investigation and reporting are described below:

- Training frequency will be based on the specific are of responsibility but shall not exceed once every two years.

- Training requirements relative to incident investigation and reporting shall include:
  - Awareness
  - First Responder Responsibilities
  - The Initial Investigation at the Accident Scene
  - Managing the Accident Investigation
  - Collecting Data
  - Analyzing Data
  - Developing Conclusions and Judgments of Need
  - Reporting the Results

1576 Heat Illness Prevention

Purpose

This program is designed to reduce the risk of work-related heat illnesses.

Scope

This procedure applies to all work being performed in hot environments.

Definitions

"Acclimatization" means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for at least two hours per day in the heat.

"Heat Illness" means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat cramps, heat exhaustion, heat syncope and heat stroke.

"Preventative recovery period" means a period of time to recover from the heat in order to prevent heat illness.

"Shade" means blockage of direct sunlight. Canopies, umbrellas and other temporary structures or devices may be used to provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

Requirements

All Elevators Of Beaumont managers and supervisors are responsible for implementing and maintaining the Heat Illness Program in their work areas.

Provision of Water

Employees shall have access to potable drinking water. Employees shall have access to potable drinking water. Where it is not plumbed or otherwise continuously supplied, it shall be provided in sufficient quantity at the beginning of the work shift.

Access to Shade

Employees will be provided with access to shade. Employees suffering from heat illness or believing a preventative recovery period is needed shall be provided access to an area with shade that is either open to the air or provided with ventilation or cooling. Such access to shade shall be permitted at all times. See definition of “Shade”.

Control Measures

Each work location involved in working in hot environments shall implement measures that must be in place to control the effects of environmental factors that can contribute to heat related illnesses. The most common environmental factors are air temperature, humidity, radiant heat sources and air circulation.

Physical factors that can contribute to heat related illness shall be taken into consideration before performing a task. The most common physical factors that can contribute to heat related illness are type of work, level of physical activity and duration, and clothing color, weight and breathability.

Elevators Of Beaumont Supervisors must ensure personal factors that contribute to heat related illness are taken into consideration before assigning a task where there is the possibility of a heat-related illness occurring. The most common personal factors that can contribute to heat related illness are age, weight/fitness, drug/alcohol use, prior heat-related illness, etc.

Each work site shall develop site specific procedures but shall include the minimum:

- Bring at least 2 quarts per employee at the start of the shift and the supervisors/designated persons will monitor water containers every 30 minutes, and employees are encouraged to report to supervisor/designated person low levels or dirty water.
- Supervisors will provide frequent reminders to employees to drink frequently.
- Every morning there will be short tailgate meetings to remind workers about the importance of frequent consumption of water throughout the shift during hot weather.
- Place water containers as close as possible to the workers.
- When drinking water levels within a container drop below 50%, the water shall be replenished immediately or water levels should not fall below the point that will allow for adequate water during the time necessary to effect replenishment.
- Disposable/single use drinking cups will be provided to employees or provisions will be made to issue employees their own cups each day.
- Supervisors will set-up an adequate number of umbrellas, canopies or other portable devices at the start of the shift and will relocate them to be closer to the crew, as needed.
- Non-agricultural employers can use other cooling measures if they demonstrate that these methods are as effective as shade.
- Working hours will be modified to work during the cooler hours of the day, when possible.
- When a modified or shorter work-shift is not possible, more water and rest breaks will be provided.
- Supervisors will continuously check all employees and stay alert to the presence of heat related symptoms.
- Supervisors will carry cell phones or other means of communication, to ensure that emergency services can be called and check that these are functional at the worksite prior to each shift.
- Every morning, workers will be reminded about address and directions to the worksite to inform medical responders and emergency procedures.
- All newly hired workers will be assigned a buddy or experienced coworker to ensure that they understood the training and follow the company procedures.

Training

Training in the following topics shall be provided to all supervisory and non-supervisory employees:

- The environmental and personal risk factors for heat illness;
- The importance of frequent consumption of small quantities of water, up to 4 cups per hour, when the work environment is hot and employees are likely to be sweating more than usual in the performance of their duties;

- The importance of acclimatization;
- The different types of heat illness and the common signs and symptoms of heat illness;
- The importance to employees of immediately reporting to the employer, directly or through the employee's supervisor, symptoms or signs of heat illness in themselves, or in co-workers;
- Elevators Of Beaumont procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary;
- Elevators Of Beaumont procedures for contacting emergency medical services, and if necessary, for transporting employees to a point where they can be reached by an emergency medical service provider;
- Elevators Of Beaumont procedures for ensuring that, in the event of an emergency, clear and precise directions to the work site can and will be provided as needed to emergency responders.

Supervisors must receive training in the prevention of heat related illnesses prior to supervising employees working in heat. Supervisors will be trained in the Elevators Of Beaumont heat illness emergency response procedures to prevent heat illness and procedures to follow when an employee exhibits symptoms consistent with possible heat illness, including emergency response procedures.

Communication for employees shall be in a form readily understandable by all affected employees.

Elevators Of Beaumont shall ensure all contractors, subcontractors, staffing companies, etc. employees (including temporary) working outdoors have been trained in heat illness prevention

IX. Forms

SAFETY FORM UTILIZATION

These are the basic safety forms. The time frame for each completion of them is as follows;

1. PAPER FLOW INCIDENT & AUTOMOBILE ACCIDENT REPORTING
2. SUPERVISORS INCIDENT REPORT - within 24 hours of the accident/incident
3. NOTICE OF AUTOMOBILE ACCIDENT TRAINING REQUIREMENTS FREQUENCY
4. TRAINING RECORD - upon occurrence
5. TRAINING LOG
6. SAFE WORK CHECKLIST - done daily or on same time frame in conjunction with confined space permit from customer or as our confined space permit
7. CERTIFICATION OF HAZARD ASSESSMENT - done daily in conjunction with the SAFE WORK CHECKLIST
8. SAFETY/TAILGATE MEETING REPORT - done at least weekly, more often if required
9. CONFINED SPACE SIGN IN/SIGN OUT SHEET - done daily or on same time frame in conjunction with confined space permit.
10. CONFINED SPACE MONITOR LOG- done daily or on same time frame in conjunction with confined space permit.
11. CALIBRATION LOG - done daily or on same time frame in conjunction with confined space permit.
12. MONTHLY INSPECTION GUIDELINES SELF CONTAINED BREATHING APPARATUS
13. INSPECTION & MAINTENANCE CHECKLIST SELF CONTAINED BREATHING APPARATUS

14. FOREMAN'S SAFETY INSPECTION – done weekly. May be done more often if required.
15. EMERGENCY RESPONSE FORM - done at the start of each job and posted until the end of the job
16. ASSURED EQUIPMENT GROUNDING LOG - done on a quarterly basis and maintained on the job-site by the foreman
17. MOBILE CRANE WEEKLY INSPECTION - done daily when crane is used
18. AERIAL LIFT WEEKLY INSPECTION - done daily when lift is used
19. DAILY FORKLIFT INSPECTION - Completed when there is a forklift at job site.
20. SUGGESTION FORM
21. EMPLOYEE ACKNOWLEDGEMENT OF TRAINING - done upon occurrence

NOTE: All safety documentation should be maintained on the job site until the job is completed.

PAPER FLOW
INCIDENT & AUTOMOBILE ACCIDENT REPORTING

WORKERS' COMPENSATION INJURY			
FORM	**VERSION**	**COMPLETED BY**	**FORWARD TO**
Supervisor's Incident Report	Original Draft	Supervisor	Regional Safety Supervisor
	Final Draft Original	Regional Safety Supervisor	Safety Department
	Final Draft Copy	Regional Safety Supervisor	Local File
First Report of Injury	Original	Regional Office	Claims Management
	Copy	Regional Safety Supervisor	Local File

MOTOR VEHICLE ACCIDENTS			
FORM	**VERSION**	**COMPLETED BY**	**FORWARD TO**
Notice of Automobile Accident	Original	Driver	Claims Management

FIRST AID ACCIDENTS and NEAR MISS INCIDENTS			
FORM	**VERSION**	**COMPLETED BY**	**FORWARD TO**
Supervisor's Incident Report	Original Draft	Field Supervisor	Regional Safety Supervisor
	Final Draft	Regional Safety Supervisor	Safety Department
	Copy	Regional Safety Supervisor	Claims Mgmt. Local File

PROPERTY OR PRODUCT DAMAGE			
FORM	**VERSION**	**COMPLETED BY**	**FORWARD TO**
Supervisor's Incident Report	Original Draft	Supervisor	Regional Safety Supervisor
	Final Draft	Regional Safety Supervisor	Safety Department

SUPERVISORS INCIDENT REPORT

THIS FORM MUST BE COMPLETED BY THE FOREMAN AS SOON AFTER AN INCIDENT AS POSSIBLE

BASIC INFORMATION

1. NAME OF INJURED / ILL EMPLOYEE (First, middle and last)		2. SOCIAL SECURITY NUMBER	3. REPORT NUMBER
4. EMPLOYER	5. DEPARTMENT	6. JOB TITLE	7. PHONE NUMBER
8. JOB LOCATION		9. INCIDENT SITE	
10. DATE / TIME OF INCIDENT	11. DATE / TIME REPORTED	12. NAME OF FOREMAN	13. PHONE NUMBER
14. SCOPE OF WORK		15. TASK BEING DONE BY INJURED / TOOLS OR MACHINE USED	

INCIDENT REPORT

16. DESCRIBE INJURY / ILLNESS IN DETAIL & INDICATE PART OF BODY AFFECTED

17. NAME OBJECT OR SUBSTANCE WHICH DIRECTLY INJURED EMPLOYEE

18. DESCRIBE INCIDENT (Attach injured employee's statement, photographs, equipment record, etc.)

19. RECORD NAMES OF WITNESSES (Attach witness statements)

20. DESCRIBE IMMEDIATE ACTIONS (First aid, transportation of injured, action to prevent recurrence, etc.)

INCIDENT CAUSE (To Be Completed by Foreman)

21. CIRCLE CAUSE(S) THAT CONTRIBUTED TO INCIDENT

- ☐ A. Design of equipment or facility
- ☐ B. Job planning or instruction inadequate
- ☐ C. Rules or procedures not followed
- ☐ D. Incorrect body position in relation to work
- ☐ E. Incorrect or misuse of tools
- ☐ F. Guarding or protective device missing or ineffective
- ☐ G. Improper operation of equipment
- ☐ H. Housekeeping
- ☐ I. Lack of maintenance or inspection
- ☐ J. Incorrect or lack of personal protective equipment
- ☐ K. Inadequate training
- ☐ L. Chemical exposure
- ☐ M. Improper vehicle operation
- ☐ N. Environmental factors, weather
- ☐ O. Animal, reptile, or insect
- ☐ P. Inattention to detail
- ☐ Q. Actions of others
- ☐ R. Other

22. LIST ALL REQUIRED PERSONAL PROTECTIVE EQUIPMENT OR OTHER SAFETY EQUIPMENT. CHECK IF BEING USED PROPERLY.

Equipment _____ In Use ☐ Equipment _____ In Use ☐

Equipment _____ In Use ☐ Equipment _____ In Use ☐

Equipment _____ In Use ☐ Equipment _____ In Use ☐

Equipment _____ In Use ☐ Equipment _____ In Use ☐

22.

SUPERVISORS INCIDENT REPORT

CORRECTIVE ACTIONS (To Be Completed by Foreman)

23. DESCRIBE CORRECTIVE ACTIONS

24. DESCRIBE FOLLOW-UP ACTIONS

25. COMPLETION DATE FOR CORRECTIVE ACTIONS	26. RESPONSIBLE INDIVIDUAL / TITLE

TREATMENT REPORT

27. DESCRIBE TREATMENT GIVEN (Attach physician's report)

28. DESCRIBE MEDICATION GIVEN (Attach prescription if applicable)

29. TREATMENT ADMINISTERED BY	30. CLINIC / HOSPITAL / PHYSICIAN ADDRESS	31. DATE / TIME

32. OUTCOME OF INJURY OR ILLNESS 33. ☐ Return to Regular Work; ☐ Return to Work, Limited Duty; ☐ Unable to Work	33. DATE AND TIME RETURNING TO WORK

34. LIST ANY RESTRICTIONS

35. PREPARED BY / TITLE DATE	36. REVIEWED BY / TITLE DATE

OSHA Reporting (To Be Completed by Corporate Safety Department)

RECORDABLE

☐ Medical Treatment (other than first aid) ☐ Occupational Illness

☐ Lost Time (one or more days) ☐ Loss of Consciousness

☐ Restricted Work or Motion ☐ Fatality

NOT RECORDABLE

☐ First Aid Only ☐ Fitness for Duty ☐ Incident w/o injury ☐ Near Miss

Number of days away from work ____

Date of first day away ____

Number of restricted days ____

Date of first restricted day ____

NOTICE OF AUTOMOBILE ACCIDENT

Please fill out this form in detail. If injury is serious, telephone Claims Management Director, Corporate Office, Houston, immediately (1-800-394-4684, ext. 203). Do not delay submittals of report while awaiting official police report or auto damage estimates from body shop.

A-1 SHEET METAL, INC. Automobile and Operator
Make _____ Model _____ Serial No. _____
Operator's Name _____ Telephone (__) _____
Address _____ City _____ State _____ Zip _____
Employed by _____Social Security No. _____
Age ____ Date of Birth _____ Driver's License No. _____ State _____
For whom and for what purpose was the automobile being used at the time accident occurred?
_____

Damages to Elevators Of Beaumont **Car**
Description of parts damaged _____
Estimated cost of repairs $_____ Where can car be seen? _____ When? _____

Time and Place of Accident
Date of Accident _____ Time _____ am/pm
Location of Accident _____ City _____ State _____ Zip_____

Description of Accident
How did accident occur? _____
_____
_____
_____

Injured Person(s) (use separate sheet of paper if necessary)
Full Name _____ Apparent Age _____
Address _____ City _____ State _____ Zip _____
Full Name _____ Apparent Age _____
Address _____ City _____ State _____ Zip _____

Injuries
Nature and extent of injuries _____
Where was injured person taken? (If to hospital, give name) _____
Address _____

Damage to Property of Others
Name of owner _____ Telephone (__)_____
Address _____ City _____ State _____ Zip _____
Name of operator _____ Telephone (__)_____
Address _____ City _____ State _____ Zip _____
Kind of property _____ If car, make, model, license plate _____
Describe damage _____
Estimated cost of repairs $ _____ Where can car be seen? _____ When? _____
***Insurance Company _____ *Policy No. _____ *Agent Name/Phone _____**

Witnesses

Name	Address	Telephone

****Required in all accidents.***

Training Requirements
Frequency

This listing should provide guidance in training requirements that must be met and maintained.

Initial

Lockout/Tagout
Hazard Communications
Personal Protective Equipment
Welding/Burning and Cutting (for affected employees)
Fall Protection
Scaffold User
Scaffold Erector
Fire Watch
Electrical Safety (for non-electricians)
Hand and Portable Power Tools
Ladders
Benzene (for affected employees)

Annual

Respiratory Protection (for those employees who will use respirators)
Bloodborne Pathogens
Fire Extinguishers
Hearing Conservation (for employees in a hearing conservation program)
Confined Space Entry

Other

Mobile Cranes - Initial and every two years thereafter
Forklift - Initial and every three years thereafter
Aerial Lifts - Initial and every three years thereafter
Skid Steered Loaders - Initial and every three years thereafter
First Aid/CPR - depends on training provider
Hydrogen Sulfide

This list is by no means is designed to cover all potential training frequencies or training requirements. It is designed to define those which must be performed as a minimum.

TRAINING RECORD

COURSE TITLE: _____

DATE / TIME: _____

LOCATION: ☐ **In-house** ☐ **External**

_____

City, State **Company Name**

PURPOSE: ☐ **Initial** ☐ **Refresher** ☐ **Other (explain)**

_____

TRAINING METHOD(S) ☐ **Seminar** ☐ **On-the-Job** ☐ **Home Study** ☐ **Other (explain)**

_____

TRAINING AIDS, MATERIALS USED _____

_____

_____

INSTRUCTOR NAME, QUALIFICATIONS _____

_____

METHOD(S) OF EVALUATION ☐ **Written Test** ☐ **Performance** ☐ **Other (explain)**

_____

COURSE OBJECTIVES (attach additional sheet if necessary) _____

_____

_____

_____

_____

_____

Original - Corporate Office
Copy - Corporate Safety

TRAINING LOG

Course Title: _____ Date: _____/_____/_____

I acknowledge receipt of training in the above course and understand the information presented. Specifically, I understand that a condition of my employment requires me to actively participate in the company's training programs. I further understand that I may be required to repeat training annually or whenever requirements change, whenever new work practices are introduced, or whenever old work practices are modified.

	LAST NAME (Print)	FIRST NAME (Print)	MIDDLE INITIAL	SOCIAL SECURITY NUMBER	EMPLOYEE SIGNATURE
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

SAFE WORK CHECKLIST
INSTRUCTIONS

1. Single form to be used on permit-required, non-permit required, hot work permit jobs.
2. Satisfies PPE Hazard Assessment required on each job.
3. Serves as a form to record safety meetings.
4. Checklist is to be completed on all permit-required jobs (daily).
5. Complete on a weekly basis if working in non-permit required tank, write N/A for sections that are not applicable. PPE, Hot Work, Lockout and Emergency Sections must be completed.
6. If Elevators of Beaumont Checklist serves as a permit - the permit number must be assigned by the foreman. Example: Job # dash one for the first one, job # dash two for the second one used, etc. . . .
7. When customer issues permit, the checklist:

    a. Is a confirmation of safe entry.
    b. Does not need to be posted.
    c. Can use instrument readings listed on the permit.
    d. If Elevators of Beaumont does additional atmospheric testing, note those readings. If substantially different than permit issuer's readings, than contact Elevators Of Beaumont Project Manager. Substantial difference would be a reading outside of safe entry ranges.

8. The checklist should be forwarded to the office and placed in job files upon completion of job.
9. This checklist does not satisfy a foreman's weekly self-inspection requirement outlined in Safety Inspection System section of the HSE manual.

CERTIFICATION OF HAZARD ASSESSMENT
ELEVATORS OF BEAUMONT

Customer: _____Permit No.: _____ Date: _____ Job #:_____
Permit Issuer: _____ Permit Start: ____am ____ pm Permit End: ____am ___pm
Tank #: _____ Tank Status: In Service ☐ Out of Service ☐ New Construction ☐
Scope of Work: _____ Job Foreman: _____

PERSONAL PROTECTIVE EQUIPMENT

☐ Hard Hat
☐ Safety Glasses with Side Shields
☐ Goggles/Face Shield
☐ Gloves: Nitrite/Leather /Cloth/Other
☐ Protective Clothing
☐ Safety Shoes/Boots
☐ APR, SAR, SCBA
☐ Lifeline/Harness /Belt
☐ Hearing Protection
☐ Other: _____

HAZARD COMMUNICATION INFORMATION

☐ Customer Guidelines Reviewed ☐ Paint & Coatings ☐ SDS Located at: _____
☐ Product in Tank: _____ Lead Free: Yes/ No ☐ SDS Review & Understood

LOCKOUT / TAGOUT (PROCESS / ELECTRICAL / HYDRAULIC / ETC. ENERGIES

☐ Valves Closed/Locked/Tagged
☐ Lines Disconnected/Blinded
☐ System Depressured and Drained
☐ Who Handles These Tasks _____
☐ Bleeder Valve Open/Locked/Tagged
☐ Pump De-Energized/Locked/Tagged
☐ A-1 SHEET METAL, INC. Lock/Tag Applied
☐ Other: _____

HOT WORK (WELDING / GRINDING / CHIPPING / ETC.)

☐ Fire Extinguishers - Location
☐ Remove Combustibles from Area
☐ Check Welding Leads/Cables/Hoses
☐ Welding Machines Bonded to Work
☐ Check for Flammables: LEL%___ O_2% ___By:____
☐ Intrinsically Safe/Explosion Proof Equipment
☐ Sumps are Covered and Protected
☐ Check Area for Sources of Ignition/Sparks
☐ No Gas Cylinders Inside Vessel
☐ Compressors, Ventilation Equipment
☐ Compressors/Welding Machine Grounded
☐ Flash Arrestors
☐ Pressurized Fire Hose
☐ Welding Hood/Goggles
☐ Fire Watch - Name _____
☐ Other: _____

TANK / CONFINED SPACE ENTRY

Atmospheric Testing Results Readings
☐ % O_2 (Safe = 19.5 - 23.5%) _____
☐ % LEL (Safe = <10%) _____
☐ H_2S <10 PPM _____
☐ CO <50 PPM _____
☐ Other Toxics _____ PPM _____
☐ Instrument Readings By:_____
☐ Low-Voltage Electrical Equipment
☐ Ventilation: Type:_____
☐ Pneumatic Tools Air Driven
☐ Entry Supervisor: _____
☐ Attendant/Hole Watch: _____
☐ Entry Log Maintained
☐ Communication Type: _____
☐ Accidental Entry Prevented
☐ Rescue Equipment on site
☐ Rescue Service By: _____
☐ GFCI (Required if Using Extension Cords)

EMERGENCY INFORMATION

PHONE: _____PLANT FIRE/HAZMAT: _____ MEDICAL: _____
Stop Work Immediately if Instructed Location of Safety Shower/Eye Wash _____
Evacuation Routes/Muster Points Identified ☐
Elevators of Beaumont AUTHORIZED SIGNATURE_____

CERTIFICATION OF HAZARD ASSESSMENT
ELEVATORS OF BEAUMONT

Jobsite: _____Tank #: _____ Foreman:_____ Date:_____
Place a check mark next to every source that could pose a hazard to employees working on job.

HAZARD SOURCES					
Impact	☐Steel Plate	☐Seal Material	☐Slips/Trips/Falls	☐Grinding/Gauging/Drilling	
Penetration	☐Rebar	☐Steel Plate	☐Tools	☐Seal Material	☐Other:
Compression	☐Tools	☐Pipe/Fittings	☐Steel Plate	☐Appurtenances	☐Other:
Chemical	☐Motor Fuels	☐Compress Gas	☐ Welding Rods	☐Cut/Lube Fluids	☐Other:
Heat	☐Ambient	☐Flash Fire	☐Hot Metal	☐Welding/Cutting	☐Other:
Dust/Fumes	☐Grinding	☐Sweeping	☐Welding Fumes	☐Abrasive Blasting	☐Painting
Electrical	☐Power Tools	☐Generators	☐Weld Leads	☐Ext. Cords	☐Portable Light

Based on this hazard assessment, the equipment listed under Personal Protective Equipment shall Be required and utilized.

SAFETY/TAILGATE MEETING REPORT

Location: _____ Facilitator: _____ Date: _____

Topics Discussed: _____ Time Start: _____
_____ Time End: _____
_____

PRINTED NAME	SOCIAL SECURITY NO.	SIGNATURE

Comments and Action Items:

_____
_____
_____
_____
_____

ELEVATORS OF BEAUMONT								
PERMIT REQUIRED CONFINED SPACE SIGN IN/SIGN OUT SHEET								
COMPANY:					VESSEL NO.			
LOCATION:					JOB NO.			
DATE:	ATTENDANT:							
	TIME							
NAME	IN	OUT	IN	OUT	IN	OUT	IN	OUT

ELEVATORS OF BEAUMONT
CONFINED SPACE MONITOR LOG

COMPANY: _____ **LOCATION:** _____
VESSEL NO: _____ **JOB NO.** _____
MONITOR: _____ **CAL DATE:** _____

DATE	TIME	LEL	O2	H2S	C O	INITIAL

ELEVATORS OF BEAUMONT
CALIBRATION LOG

LOCATION: _____ **CALGAS CYL NO.** _____

MONITOR TYPE: _____ **GAS MFG.** _____

MONITOR MODEL _____ **EXPIRATION DATE:** _____

MONITOR ID NO. _____ **TYPE OF CALGAS:** _____

DATE	TIME	LEL	OXYGEN	H2S	CO	COMPANY	INITIAL

FOREMAN'S SAFETY INSPECTION

LOCATION _____ FOREMAN _____ DATE _____
JOB NO. _____ CUSTOMER _____
JOB DESCRIPTION _____

THIS FORM IS AN AID FOR MAKING INSPECTIONS, LOOK FOR, CORRECT AND REPORT OTHER UNSAFE ITEMS

Personal Protective Equipment (1527)	**Okay**	**Remarks**	**Papers & Warning Signs**	**Okay**	**Remarks**
Hard Hats			Inspection Forms		
Eye & Face Protection			Safety Manual		
Proper Clothing			Accident Reports		
Foot Protection			Permits Reviewed, Posted & Followed		
Hearing Protection			Hazard Warning Signs posted		
Respirators			**Welding & Cutting (1548)**		
Gloves			Working Bottles		
Welder Leathers			Hose & Gauges		
Safety Harness & Lines Insp. & OK			Welding Machine Grounded		
Fresh Air Equipment			Leads & Connectors		
Special Clothing			Ground Connection		
Fire Protection (1526)			Work Area-Fire Hazards		
Fire Extinguisher Accessible/Inspected			**Rigging (1540)**		
Fire Hoses			Rope Blocks		
Fire Blankets			Equipment Type & Size		
Meters-Explosion, 02, H2S, etc.			Line Size & Condition		
Equipment Grounded			Choker Slings		
Cold Tools Buster, Punches			Chain Hoist, Come Along, Tugger		
General			Snatch Blocks		
Fuel Storage			Tag Lines		
Bottled Gases stored ok			Plate Clamps		
Barricades, Signs			Jacks		
Air Movers & Ventilators			Winches, Cable & Poles		
Compressor & Pumps Location			Chains & Boomers		
Hand Tools (1538)			**Motor Vehicles (1532)**		
Extension Cords			Safety Sticker		
Temporary Lighting			Emergency Reflectors (3)		
Air Hose-Connection Pinned			Wheel Chock		
Guards and Protective Devices			Wipers, Lights & Tires		
Handles & Striking Faces			Brakes		
Ground Connections-Ground Fault			Welding Machine		
Grinding Disks, Wheels, Cups			Compressors		
Non-Sparking Tools			Fire Extinguisher		
Flashlights-Explosion Proof			Accident Report & Papers		
Exits Clear-Manway			Spare & Jack		
Scaffolding & Ladders (1545/1539)			**Housekeeping (1526)**		
Bracket Lug Welds			Work Areas		
Safety Lines or Rails			Dog House		
Ladders & Tower Base Width			Storage Area		
Access Ladder			Combustible Debris		
Toe Boards and/or canopies in place.			Scrap		
Loose Tool Containers			**Sanitation**		
Barricades & Signs			Toilet Facilities		
Inspected/Tagged			Drinking Water/Cups/Trash can		
Air Spiders			Wash Up Facilities		
Fall Protection (1520)			**First Aid (1518)**		
Safe anchorage denoted			First Aid Kit		
Floor/Roof holes			Emergency Names & Numbers		
Open sided working/walking surfaces			Emergency Transportation		
Roof/Wind Girder work			Qualified Personnel (First Aid)		

EMERGENCY RESPONSE FORM

Facility:

Location of Nearest Phone:

Ambulance Service Telephone:

Nearest Fire Department Telephone:

Information as to Your Location/Job Site:

Safe Haven:

Contact:

Location of Nearest Hospital:

Location of Clinic/Doctors Office for First Aid Treatment:

Elevators of Beaumont Telephone Number:

ASSURED EQUIPMENT GROUNDING LOG

Jobsite Location: _____

Job Number: _____

Description Or Identification Of Equipment Tested	Date Tested	*Reason For Test: A, B, C, D	Tested By: (Signature)

Color Code:

WHITE: **Jan - March**
BLUE: **April - Jun**
YELLOW: **July - Sept**
GREEN: **Oct - Dec**

RED: **To Be Repaired**

Reason for Test:

A. Before first use.
B. Before equipment is returned to service following repairs.
C. Before equipment is used after any incident that can be reasonably suspected to have caused damage.
D. At intervals not to exceed three months, except that cord sets and receptacles that are fixed and not exposed to damage shall be tested (not to exceed six months)

AERIAL LIFT INSPECITON

Equipment Identification No._____ Manufacturer _____ Load Rating _____

S= Satisfactory **X**= Unsatisfactory

	Mon	**Tue**	**Wed**	**Thur**	**Fri**	**Sat**	**Sun**	**Comments**
Date								
General Appearance								
Guards								
Basket in good condition								
Ground controls condition								
Basket controls condition								
Load rating chart								
Labels and warnings								
Battery condition								
Belts and hoses								
Hydraulic Fluid								
Engine oil								
Fuel level								
Radiator fluids								
Exterior damage								
Tires								
Engine condition and operation								
Hydraulic system condition and operation								
Back-up warning device								
Fire extinguisher condition								

Comments:_____

If any item is marked “X”, comment in space to right under proper date and notify field office of problem and procedure you will use to correct it.

DAILY FORKLIFT INSPECTION

TRUCK ID #: _____ MFG: _____**CAPACITY:** _____ **JOB #** _____
LOCATION: _____

(√) if ok (x) if defective **(if applicable)**

DATE								**Comments**
KEY OFF Procedures	**S**	**M**	**T**	**W**	**T**	**F**	**S**	
Overhead Guard								
Hydraulic Cylinders								
Mast Assembly								
Lift Chains and Rollers								
Forks								
Tires								
Fuel Gauge								
Engine Oil Level								
Battery								
Radiator Level								
Hydraulic Fluid Level								
LPG Tank Hose **(LP units only)**								
KEY ON Procedures								
Front, tail, brake lights								
ENGINE RUNNING Procedures								
Gauges								
Steering								
Park brake								
Truck brake								
Horn								
Transmission fluid								
INSPECTED BY								

Note: Check belts, chains for looseness and wear, shiny fluids indicating recent leakage; shiny metal indicating wear; cracked welds

SUGGESTION FORM

Submitted By (Optional): _____ Department: _____

Date: _____/_____/_____ Time: _____ am/pm

Could this suggestion prevent serious harm to you or a fellow employee? ☐ Yes ☐ No

NOTE: IF YES, IMMEDIATELY CONTACT YOUR SUPERVISOR

Location of Hazard: _____

Describe circumstances concerning this situation and possible corrective recommendations:

_____

_____

_____

_____

_____

_____

ACTION TAKEN

Date Suggestion Received: ___/___/___ Supervisor's Name: _____

Investigation and Recommendation: _____

_____

_____

_____

_____

Name of Person Responsible for Implementing Corrective Action: _____

Date of Implementation: ___/___/___

Original – Corporate President
Copy - Corporate Safety Director

Item No.	Description	Notes