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SAFETY & HEALTH POLICY STATEMENT

The goal of A3M Vacuum Services, LLC is the safe and productive operation of this facility. The safety and health of all employees and the general public has been and continues to be the primary consideration in our day-to-day operation.

It is the intent of the company to comply with all laws that govern the safety and health aspects of our operations. To accomplish this, we must constantly be aware of conditions in all work areas that can produce injuries and illnesses, and take effective corrective actions immediately.

No job will be performed in a way that jeopardizes or compromises the safety and health of any employee, despite the urgency. Management is committed to providing the resources and personnel necessary to ensure this standard of service is always met.

We shall maintain a safety and health program conforming to the best available practices in our industry. To be successful, this program requires cooperation, planning and a professional attitude from every employee. Our overall objective is to reduce the number of injuries and illnesses to zero, while performing a quality service to our customers.

Each employee is responsible for his/her own safety, as well as the safety of those working around him or her. Every employee is expected to conduct their business in a safe and efficient manner and to follow all safety policies and procedures. Our goal is to be the best vacuum truck service around. An effective safety program, teamwork, and employee commitment are keys to accomplishing this goal.

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Patrick Sellars
President, A3M Vacuum Services, LLC

SAFETY & HEALTH GOALS

The following goals have been established for A3M Vacuum Services, LLC:

1. Provide workers with a safe work environment.
2. Conduct routine workplace inspections.
3. Provide Personal Protective Equipment.
4. Develop and implement safe work procedures and rules.
5. Provide on-going safety training.
6. Enforce safety rules and appropriate discipline.
7. Provide on-going property conservation practices.

All new employees must attend our Safety Orientation Session prior to starting work within their assigned area. This session will be conducted under the direction of the Safety Director and in coordination with Human Resources.

Upon Completion of the Safety Orientation Session, each new employee will be required to acknowledge that they have received, understand, and will abide by A3M's Safety Program. All participants must sign a statement verifying that they have completed the session. This report will be filed in the employee's personnel file.

The following topics will be covered in the Safety Orientation Program:

- Company History
- Safety Program/Policy & Work Rules
- Responsibilities
- Safety Education/Training
- Safety Audit/Inspections
- Accident Reporting/Investigation Requirements
- First Aid & Bloodborne Pathogens
- Personal Protective Equipment
- Tool & Equipment Use
- Material Handling
- Lockout/Tagout
- Machine Guarding
- MVR Requirements
- Hazard Communication
- Emergency Action
- Return –to-work & Light Duty Assignments

All new hires will be provided an opportunity to ask any questions that pertain to their job duties and employment at A3M Vacuum Services.

EMPLOYEE RESPONSIBILITIES

A3M Vacuum Service is committed to maintaining a safe work environment that is free from all recognized health and safety hazards. Management is also committed to providing the resources and personnel necessary to ensure that the standard identified in the policies and procedures of this manual is not compromised. Successful implementation of these policies and procedures requires a team effort from hourly to top level management. Participation and responsibilities for the successful implementation of this safety and health manual are defined as follows:

Supervisors and/or Foreman shall:

1. Actively support and participate by leading by example;
2. Be accountable for the safety and health of each employee;
3. Ensure that employees comply with the safety policies and procedures of this refinery;
4. Ensure that employees receive all required safety and health training related to their job tasks;
5. Take immediate action to correct or determine the course of action necessary to correct recognized hazards in the work place;
6. Communicate to employees that performing job functions in a safe manner is a requirement of employment at this refinery and violators will be subject to disciplinary action;
7. Perform and communicate to all employees a “Safety Task Analysis” for each job task;
8. Conduct regular safety inspections;

Employees shall:

1. Follow safety policies and procedures specified by this manual as identified during orientation and by supervision, Safety, or other employees in reference to the proper and safe completion of job tasks;
2. Report workplace hazards and make suggestions for appropriate corrective actions;
3. Conduct business in such a way as to enhance the safety and health of themselves and fellow workers;
4. Not begin work that is believed to be unsafe;
5. Participate as directed in the review and revision of safety and health policies and procedures;
6. Participate in safety meetings;
7. Attend all required safety and health training;

PURPOSE

It is the policy of A3M Vacuum Service, Inc. to conduct its business in a socially responsible and ethical manner that protects the safety and health of all employees, and the public and customers. The goal is to be a leader within the industry and the surrounding community by emphasizing innovation and encouraging creative solutions, both of which will improve our competitive position. To that end, A3M Vacuum Service will:

1. Integrate safety and health protection into every aspect of its business activities.
2. Comply with all safety and health laws and/or regulations without regard to the degree of enforcement.
3. Encourage employees to initiate and maintain an open dialogue within the company and with the public or its agents regarding safety and health matters. This includes recognizing and responding appropriately to company and community concerns about such matters.
4. Follow relevant standards, good engineering practices and principles to ensure A3M's safety and health protection activities are conducted responsibly.
5. Exhibit socially conscious leadership and demonstrate exemplary safety and health performance.
6. Ensure conformity with this policy by comprehensive compliance programs with regard to safety and health.

SCOPE AND APPLICATION

The following policies and procedures apply to all employees.

RESPONSIBILITIES

Employees are responsible for compliance with all company policies and procedures, practices, and laws applicable to their assigned duties and responsibilities. Accordingly, employees who are unsure of the legal or regulatory implications of their actions will be responsible for seeking management or supervisory guidance.

Management has the primary responsibility for complying with these policies and procedures within their respective functions and authority limits. Management will communicate these policies and procedures to their respective employees and will establish programs as necessary to ensure implementation.

The A3M safety department will recommend policy changes on safety and health matters and will direct the development of programs and guidelines to ensure implementation. They will provide specialized services relating to employee health and they will be responsible for assessing the effectiveness of all safety and health policies and procedures to ensure compliance.

Substance Abuse

While on A3M premises or working for A3M whether on or off the yard, no employee and/or visitor may use, possess, transport, distribute, sell, or be under the influence of alcohol or illegal drugs or in possession of alcoholic beverages, drug paraphernalia, or inhalants. The legal use of prescribed medication is permitted only if it does not impair an employee's ability to perform his/her job in a safe manner and does not endanger other individuals. In all cases, prescribed medication must be reviewed by A3M personnel and approved for use by the employee while on the premises and/or on the job. Failure to obtain approval is cause for possible disciplinary action.

A3M Vacuum Service will conduct drug screening of its employees under the following conditions; as part of the pre-employment process, random testing, tests for reasonable suspicion and/or cause and post accident testing where an employee was injured or property damage occurred. All employees are expected to submit to lawfully permitted urinalysis and breath or blood tests in accordance with usual and customarily accepted procedures.

Violations of this procedure or refusal to submit to substance abuse screening as properly requested is cause for disciplinary action. Likewise, refusal to participate in a substance abuse rehabilitation or treatment program is also cause for disciplinary action.

Employees who have questions or concerns about substance dependency or abuse are encouraged to talk to their supervisor or A3M dispatcher to receive assistance or referrals to appropriate resources in the community.

Employees with substance abuse problems, that have not resulted in and are not the immediate subject of disciplinary action, may request, unpaid leave of absence to participate in a treatment program. Leave of absence may be granted if the employee agrees to abstain from use of the problem substance and abides by all company policies and procedures and if granting the leave is in accordance with a medically recognized treatment program. Some restrictions and conditions may apply.

Firearms/Weapons

The possession, use, sale, or transportation of firearms or other weapons on company premises, or in company vehicles, is strictly prohibited. Likewise, privately owned vehicles on company or customer premises will be subject to these same rules and regulations.

A3M Vacuum Service reserves the right to conduct reasonable searches of employees' and/or visitors' personal belongings and company owned equipment while working for A3M or on A3M owned premises. Personal belongings include, but are not limited to, personal vehicles, luggage, tools, toolboxes, food containers, lockers, etc. Searches by the company may be conducted without notice and at times and locations determined to be appropriate by Management. Employees found to be in possession of any firearm or weapon on A3M or Customer property will be subject to disciplinary action up to and including discharge.

The A3M Safety Department, management, and supervision have the responsibility to constantly monitor the methods by conducting periodic inspections to ensure compliance with safety rules and policies used by employees to prevent unsafe acts and conditions and to adhere to all safety policies and procedures. They have the authority to correct and instruct employees on proper technique concerning these policies and procedures and shall stop work in situations of imminent danger. In the event of a work stoppage due to imminent danger the safety representative or supervisor will immediately notify the affected supervisor and the safety manager. If a safety representative or a supervisor witnesses an unsafe work practice which requires the application of the plant disciplinary action program, they will inform the appropriate supervisor, and that supervisor will be responsible for taking the necessary corrective measures.

SAFETY ORIENTATIONS

Employees of A3M Vacuum Service are required to attend safety orientations before entering certain facilities. These safety orientations will enable personnel to better understand specific safety and health hazards associated with their work, emergency operations and response, and safe work practices required to perform work safely. Most of the orientations are given by the customer before you enter their plant facility.

ADDING AND REVISING SAFETY PROCEDURES

The A3M Vacuum Service Safety Department is responsible for the development and revisions to all safety policies and procedures in place. They will develop new policies and procedures as the need arises and will constantly monitor federal, local, and state requirements and regulations to assure that A3M stays in compliance. In most cases, the development of new policies and procedures and the revisions to existing policies and procedures will be accomplished by the assignment of a safety manager to develop and/or modify a safety policy or procedure to assure compliance. After the development of the policy or procedure is completed, the policy or procedure is presented to A3M Management for review and approval. Once the policy or procedure has been reviewed and necessary changes made, the policy or procedure will be issued. If the procedure will require employee training, the Safety Department will schedule and conduct the training as necessary.

Management personnel at all levels are responsible for taking action when a violation is observed. Not following verbal or written safety procedures, guidelines, rules, horse play, failure to wear selected PPE and abuse of selected PPE are all considered safety violations. If a violation is observed, they must take action immediately to correct the violation and enforce this disciplinary policy. Management personnel shall meet with employees to discuss the violation and inform the individual of the rule or procedure that was violated and the corrective action to be taken. Employees who fail to follow safety rules and regulations established to protect them and their fellow employees endanger themselves and others.

The following procedures will be followed when a violation is observed:

FIRST VIOLATION

Verbal Warning with written confirmation in personnel file.

SECOND VIOLATION

Written warning and ½ day suspension (written confirmation in personnel file).

THIRD VIOLATION

Written warning and one week suspension (written confirmation in personnel file).

FOURTH VIOLATION

Termination (written confirmation in file).

PURPOSE

These general emergency procedures provide information regarding basic emergency response procedures.

EMERGENCY TELEPHONE NUMBER

A3M's emergency telephone number is (985) 536-7448. This number is staffed twenty-four (24) hours per day.

FIRE EXTINGUISHERS

Fire extinguishers are equipped on all A3M vacuum trucks. Properly trained employees may use these extinguishers to combat incipient level fires. Employees who may use a fire extinguisher must satisfactorily complete incipient level fire training before using any fire extinguisher and annually thereafter. Immediately report the use of any fire extinguisher to dispatcher or safety manager, which will ensure that the used extinguisher is replaced or recharged.

All extinguishers are inspected annually and are subject to monthly visual inspections. Inspected extinguishers are tagged to indicate that they have been inspected annually.

FLAMMABLE AND COMBUSTIBLE MATERIALS

A. Storage

Flammable liquids and other hazardous materials, such as paints, flammable thinners and gasoline, will be stored in the metal cabinet in the A3M shop. The cabinet will be labeled "Flammable – Keep Fire Away".

Only approved, properly labeled containers shall be used for storage, handling and transporting of flammable and combustible liquids.

A fire extinguisher shall be hung no closer than 25 feet and no farther than 75 feet from any potential fire hazard.

B. Portable Containers

Hand carried or hand held containers shall:

- Not exceed five gallons in capacity;
- Be equipped with a flexible spout or a funnel for pouring operations;
- Be labeled as to contents.

C. Product Transfer

Smoking is prohibited wherever there is fueling of equipment or storage of flammable materials. The motors of all equipment being refueled shall be shut off during the fueling operation.

Adequate grounding and bonding is required during the transfer of flammable and combustible liquids to minimize the accumulation of hazardous static charges and the possibility of ignition.

E. Cleaning Solvents

Before using any solvent, review the label or the SDS for PPE and other safety and health information.

Use only approved solvents with a flash point of at least 140 degrees F., such as Varsol, kerosene, or mineral spirits.

Solvents shall be stored in approved containers and labeled as to contents.

PURPOSE

The purpose of this requirement is to ensure the safety of all personnel entering the job location and to maintain a condition of housekeeping that is consistent with the desired appearance of A3M Vacuum Service, Inc.

SCOPE AND APPLICATION

These housekeeping guidelines were developed to assist every individual in maintaining a high standard of housekeeping on the job location at all times as an integral part of the work.

RESPONSIBILITIES

1. It shall be the ultimate responsibility of each supervisor to see that his/her areas are maintained in a safe and orderly condition.
2. Satisfactory working conditions and the safety of the personnel in the job location are largely dependent upon housekeeping.

MINIMUM ACCEPTABLE REQUIREMENTS:

1. Daily clean up of work, fabrication, process, and personnel areas are required.
2. Stairways, walkways, ladder cages, and scaffolds shall be kept clear of all cords, cables, hoses, materials, and anything else that might hinder personnel access.
3. All hoses, cords, rope, cables, etc., shall be rolled up and placed neatly in storage area when not in use. When these items are being used, they need to be routed in a manner so that they do not to create a hazard of any sort.
4. All spills of oil, solvent, chemicals, and any regulated liquids shall be reported immediately and shall be properly cleaned up and disposed of.
5. All materials and waste shall be picked up and disposed of daily.
6. All equipment shall be stored in an orderly manner in storage areas as designated by the Dispatcher.
7. Lunch boxes, paper towels, cigarette packs, etc., should be placed in trashcans.
8. When inspections identify conditions, which are not in compliance with these requirements, the responsible party will be notified, and corrective action should be taken immediately.

OFFICE SAFETY

PURPOSE

To provide a set of general guidelines that will help minimize injury of personnel involved in office work.

SCOPE AND APPLICATION

The guidelines should be followed any time work is being done in an office area or when work involved is clerical in nature.

RESPONSIBILITIES

It is the responsibility of all personnel to adhere to the safety requirements listed below to minimize or eliminate incidents. Each employee is responsible for coaching unsafe acts and correcting unsafe conditions as they are observed.

GENERAL

A. Safety Concerns

1. Keep file drawers, desk drawers, and locker doors closed when not in use. Open only one file or desk drawer at a time.
2. Heavyweight files should be stored in the bottom drawers of the filing cabinets.
3. Never leave the knife blade on the paper cutter in the raised position. Lower and lock the blade before departing it.
4. Do not enter dark halls or rooms without adequate lighting. Poor visibility hides hazards.
5. Keep desks, tables, etc. neat, clean, and orderly.
6. Never try to replace fluorescent bulbs or make electrical repairs. Report and get qualified electrician to make the necessary replacements or repairs.
7. Walk; do not run, in corridors or on stairs. Use handrails.
8. Do not stand and talk in front of closed doors; they may open suddenly.
9. Do not store heavy or unstable objects at high levels, especially over desks and other working areas.
10. Use material handling equipment and proper lifting techniques when carrying heavy objects, solicit help when needed.
11. Only minor quantities of flammable or combustible liquids will be allowed in office areas when stored properly.
12. Good housekeeping practices are especially relevant to good safety performance in offices and stockrooms.
13. Adhere to safety posted signs in all office buildings.
14. Practice proper ergonomics (body positioning).
15. Only incipient fire trained employees will use a company fire extinguisher.
16. Report all first aids immediately.

B. Inspection

1. Inspect all office equipment for splinters, sharp edges, and malfunctions; and report all unsafe conditions.

C. Tools

1. Never use makeshift platforms for reaching overhead objects. Do not climb on stockroom racks. Use approved step-up stool or ladder.
2. Use sharp or pointed tools correctly and store them in a safe manner.
3. No one should attempt to clean or service office machines while they are running.
4. Immediately report to office manager any defects or damage to electrical equipment.
5. Do not attempt to repair office machinery unless you are specially trained. Always disconnect power supply to office machine before making repairs or adjustments.

D. Tripping

1. Immediately correct spillage, slipping and tripping hazards in your area.
2. Be particularly cautious immediately following the reconditioning of floors.
3. Maintain good housekeeping habits. Keep all foreign material such as paper, pencils, boxes, paper clips, rubber bands, glue, etc. off the floor.
4. All floor surfaces that are uneven, damaged, or in poor condition should be reported and repaired.
5. Watch for telephone cords, office machine wires, and other hazards under your feet which may cause tripping. They should be kept off the floor and walkways and fastened up under desks.
6. All wastebaskets, stools, footrests, cords, and other mobile office equipment should be kept out of the aisles and other areas where there is foot traffic.

PURPOSE

To provide a set of general guidelines that will help employees respond quickly to first aid events.

SCOPE AND APPLICATION

The guidelines should be followed any time work is being performed on A3M's premises.

RESPONSIBILITIES

It is the responsibility of all personnel to adhere to the safety requirements listed below to minimize or eliminate incidents. It is the responsibility of management personnel to ensure a person who has a valid certificate in first-aid shall be available at the worksite to render first aid in the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the worksite.

GENERAL

Occupational health concerns receive high priority. It is essential that employees be able to adequately respond to first-aid events and resolve all other occupational health problems quickly. The health and wellness of each employee is a key segment of the overall safety environment.

A. Personnel

1. Management

- Ensure there is a sufficient number of qualified first-aid providers
- Ensure that supervisor receive first aid training
- Offer first aid training for all employees

2. Safety Director

- Ensure first-aid and health programs are adequate
- Maintain all required records
- Ensure First-Aid supplies are always well stocked

B. Training/Certification

- Person who has a valid certificate in first-aid shall be available at the worksite to render first aid in the absence of an infirmary, clinic, hospital, or physician that is reasonably accessible in terms of time and distance to the worksite.
    - Valid certification must be obtained from the American Red Cross or equivalent training can be verified by documentary evidence.

C. Records

1. Treatment Records are permanent records and will be filled out for any of the following:

    - All accidents that result in any injury
    - All Occupational Illnesses
    - Prior to referral to any medical provider

2. Medical Appointment Log will be filled in when any appointment for medical treatment, evaluation, or other medical service is made for an employee.
3. Modified Duty Assignment forms shall be completed for any employee who has a condition that prevents them from conducting their normal duties. This form shall be used to notify management of the limitations of the employee. Management will assign tasks consistent with any limitations.
4. Confidentiality**:** Records of all first-aid and medical events shall be kept in each individual's medical file. All medical record information is confidential and shall not be released to third parties without written authorization by the employee involved or as authorized by law.

D. First Aid Kits

Well stocked First-Aid kit(s) for employee use will be maintained.

- The basic inventory of each first aid kit must be approved by the company consulting physician.
- Each first aid kit shall contain supplies adequate for the environment in which they are used.
- These kits will be located so as to allow easy and quick access. First-aid kits and required contents are to be maintained in a serviceable condition.
- All items used for construction operations shall be stored in weather proof containers.
- All items which must be kept sterile must be individually wrapped and sealed. Items such as scissors, tweezers, tubes of ointments with caps, or rolls of adhesive tape, need not be individually wrapped, sealed, or disposed of after a single use or application.
- Employer shall ensure the availability of adequate first aid supplies and periodically reassess the demand for supplies and adjust the inventory.
- For construction operations, first aid kits shall be checked before being sent out to each job and at least weekly.

E. Procedures for Getting Injured Person to Hospital or Physician
    - Employer shall ensure proper equipment for prompt transportation of the injured person to a physician or hospital; or
    - A communication system for contacting necessary ambulance service shall be provided.

F. Procedures and Facility for Flushing Eye and/or Body
    - Employer shall provide suitable facilities within the work area where the eyes or body of any person may be exposed to injurious corrosive materials.

- If person is exposed to such materials, they must go directly to provided facility and use proper flushing techniques to cleanse eyes or body of material.

G. Post Accident Substance Abuse Evaluations

For all accidents that result in injuries or property damage or that requires off-site medical attention and/or evaluation, a DOT Drug and Alcohol screening will be conducted in accordance with procedures provided by the Louisiana State Worker's Compensation Program. This screening is part of the company's Drug Free Workplace Program.

H. Minor Care

Comfort providing systems such as wraps, balms, hot-wax and other non-invasive, non-medical procedures may be employed to provide comfort to the employee experiencing minor work related physiological stresses.

I. Medical Referrals

A3M will arrange for employees to see appropriate medical care providers for other than minor work related complaints. A *Medical Referral and Work Release Form* shall be filled in by Safety Director all medical referrals. This record shall accompany the employee to the care provider and be returned for use in determining the need for any modified duty.

J. Modified Duty

When an employee has been identified by proper medical authority as having a condition that would limit them in their normal job function, A3M shall initiate a *Modified Duty Assignment Sheet.* This sheet will list the limitations and advise management of the need for assignment to duties that will not exceed the limitations. Management will assign limited duties in writing on the *Modified Duty Assignment Sheet*. The original shall remain in a Pending & Review file to prompt periodic monitoring of the employees condition. Copies shall be provided to the employee, the employee's supervisor and dispatcher.

K. Return to Duty

When conditions have changed, such that the Employee no longer has limitations, A3M shall initiate Return to Duty actions by filling out the reverse side of the *Modified Duty Assignment* sheet. The Safety Director shall consult with the employee's supervisor to provide guidance for any appropriate reconditioning program based on the Employee's normal job functions. Examples of elements that would be considered are normal job functions, length of time away from normal job, type of limitation, etc. The original form shall be filed in the employee's Medical Records and copies provided to the employee, supervisor, and dispatcher.

FIT FOR DUTY

PURPOSE

To establish procedures for assessing fitness for duty of A3M employees under certain specified circumstances or upon release to return work following a serious injury or illness.

SCOPE AND APPLICATION

If an individual is perceived to be mentally or physically unfit to perform one or more of the essential functions of their job, every A3M employee must follow all appropriate sections of this policy. Additionally, all personnel must follow the guidelines set forth in this policy in order to return to work from personal injury or a serious health condition, whether work-related or not.

RESPONSIBILITIES

It is the responsibility of each individual to follow all applicable procedures set forth in this guideline. Each individual is ultimately responsible to be fit for duty. Employees must take responsibility for their own safety as well as not reporting to work in condition as to endanger the safety of their fellow workers. Any A3M employee who becomes aware that an individual may be unfit for duty may rely on this policy to ensure that the person in questions is removed from their work assignment or prevented from returning to their work assignment until such time that the individual's fit for duty status can be verified under the terms of this policy. A3M will be responsible for managing compliance of personnel with all the terms of this policy.

DEFINITIONS

Physical or Mental Impairment: any physiological disorder or concern, cosmetic disfigurement, or anatomical loss affecting the individuals mind or body.

Impaired: having been diagnosed by a medical provider with a physical or mental impairment

Direct threat or direct threat of harm: a significant current risk of substantial specific harm, the risk of which harm is supported by facts, including objective current medical evidence and knowledge. The determination of direct threat must take into consideration the following criteria:

- The probability of the harm occurring;
- The severity of the potential harm;
- The imminence of the potential harm;
- The duration – how long the risk is likely to be present

Essential function(s): the fundamental duties of a position as identified by drivers, laborers, mechanics, supervisors and office personnel.

Serious health condition: an illness, injury, impairment, or physical or mental condition as further outlined in NFPA-1582, 2007 version

PROCEDURE:

FIT FOR DUTY

I. Fit for Duty

A. Pre-Employment: New applicants at A3M will receive a physical and drug and alcohol testing upon being hired, no matter what he/she is applying for. All CDL drivers must receive a DOT physical along with the drug and alcohol testing upon being hired. NO EXCEPTIONS! New applicants will receive training specific to their assigned task. All new employees must follow the safe work procedures that they will learn from the training that they will receive whether on-site or off.

B. Current Employees: Current employees will be subject to post-accident and random drug and alcohol testing. They will also be subject to the same testing if there is reasonable suspicion that an employee is not fit for duty. Current employees will receive training specified to their assigned task and also when changing into certain job functions and different environments.

C. Self-Report: For the safety and well-being of personnel and their co-workers, an individual is not to report to work if they are seriously ill or impaired, especially in cases of communicable disease. They must inform the office personnel or the dispatcher on call that the individual is not fit for duty. Not doing so will lead to disciplinary action.

D. Safe Work Procedures: All employees must follow all procedures defined by safe work practices. Examples might include confined space, LO/TO, PSM, Electrical Safety, Driver Safety, etc.

E. Personal Illness: Personnel are not to report for duty if they are seriously ill or impaired. They must inform the office personnel or the dispatcher on call that the individual is not fit for duty. Not doing so will lead to disciplinary action.

F. Medications: Personnel must report the use of any prescribed or over-the-counter medication that may potentially impair their mental or physical abilities to perform the functions of their job safely and effectively. Such notice must be provided to office personnel who will work with the individual to evaluate whether the medication affects the individual's ability to safely perform any essential job function.

G. Personnel who report for duty are on duty while knowingly impaired may face disciplinary charges up to and including termination.

II. On-the-Job and Off-the-Job Illness and Injury:

A. All Standards and definitions for fit for duty evaluations and assessments are the same regardless of whether the illness and injury is incurred on or off the job.

B. For all on-the-job injury/illness or exposures, personnel will follow A3M's *Incident Investigation and Reporting,* filling out all appropriate forms and making all appropriate notifications.

C. For all off-the-job injury or illnesses, personnel will make the appropriate notifications to office personnel or the on-call dispatcher and may require a note from the individual's health care provider.

D. Personnel with an on/off-the-job illness or injury may be subject to a fit for duty evaluation and fitness assessment as set forth below.

III. Observation and Reporting

A. All A3M employee's activities and behaviors will be monitored mainly by the dispatcher, and the supervisor. All employees should monitor each other so that every job can be performed as safe as possible. Monitoring will be done by everyone to determine if an individual should be removed from the workplace.

B. Any individual observed to be mentally or physically impaired and/or who may be unable to effectively and safely perform on or more essential functions of their job may be subject to a fit for duty evaluation or maybe subject to testing in accordance with the A3M's substance abuse policy. Signs of inability to perform may include apparent weakness, illness, disorientation, memory loss, erratic behavior or inability to successfully complete any individual performance standard associated with their position or a fitness assessment.

C. Reporting Process:

1. Personnel who observe or who have reason to believe that another individual may be unfit to perform the functions of the job effectively and/or safely, will report such observations to their immediate supervisor or dispatcher. If the individual is the supervisor, the dispatcher must be contacted immediately so that further actions can incur.

2. The immediate supervisor of the individual in question should contact the Dispatcher who will make the necessary arrangements to assess the individual's condition. If the supervisor believes that the condition could affect the safety of the individual or others, the supervisor will immediately take the individual off duty.

3. The Dispatcher is given the discretion to assess appropriate action to be taken with regard to the employee, which may result in removal of that individual from duty until such time and that a fit for duty medical evaluation can be conducted.

4. In cases where the individual is removed from duty, the immediate supervisor/co-worker will contact the dispatcher regarding the situation immediately or as soon as possible by phone, with written follow-up.

D. Medical Evaluation

1. The Dispatcher may determine the need for an individual's fit for duty medical evaluation of fitness assessment required under the following circumstances:
   a. When actual problems exist or are reported with the individual or their performance of any essential function of their job.

b. When legitimate concerns exist about whether the individual or their performance poses a direct threat to the safety and health of themselves and others.

c. To determine the necessity for, or existence of, a reasonable accommodation.

d. When medical evaluation, screening, and monitoring is required by federal, state, or local law.

2. Personnel are generally relieved from duty until such time an evaluation is made. If the evaluation indicated that the individual is not fit for duty, they will continue on workers compensation, or disability, until such time they are release to work in a full or modified capacity.

3. Minor Illnesses/Injury:
   a. In case of minor illness or injury, the A3M employee may require a not from the individual's healthcare provider that releases them to duty or otherwise indicates any recommendation regarding their ability to work.

IV. Return to Work

A. Medical Evaluation to Return to Work
   1. Any individual returning to work from a serious injury or illness, extend absence, or from any other health-related circumstance that may need call to question their ability to perform their duties in a safe and effective manner, must contact A3M and their health-care provider.
   2. In the event that an individual's healthcare provider and A3M come upon the receipt of the completed fit for duty evaluation, A3M will review and evaluate the individual's abilities to safely perform the essential functions of their job. In the event it is determined that the individual does not have the ability to perform each of the essential functions of their job or they pose a risk of harm to self or others in the performance of such functions. A3M will determine whether or not a reasonable accommodation exists that will remove the barrier of continued employment, and eliminate or minimize the potential risk of harm to the individual or others.

B. Fitness Assessment: A3M personnel who are off duty due to personal illness or injury may be subject to a fitness assessment once they have been released to full duty, but prior to assignment of active duty.

PURPOSE

The A3M Vacuum Service Personal Protective Equipment (PPE) program provides necessary guidance for the selection, use, and maintenance of PPE.

SCOPE AND APPLICATION

The PPE program includes requirements for the following equipment:

1. Clothing;
2. Eye and face protection;
3. Head protection;
4. Foot protection; and
5. Hand protection.

RESPONSIBILITIES

A. Employees

1. Inspect PPE prior to use;
2. Use appropriate PPE for the job;
3. Maintain issued PPE in good condition;
4. Notify supervision if the proper PPE is unavailable or in need of repair;
5. Understand the limitations of PPE;
6. Support the proper use of PPE among fellow employees.

B. Dispatch

1. Perform hazard assessments and recommend appropriate PPE upon request;
2. Hazard assessment must include certifier's name, signature, date(s), and identification of assessment documents.
3. Ensure that the available PPE is made of materials that will afford adequate protection.

C. Operators

1. Understand the PPE requirements for the area or job;
2. Document PPE requirements on JSA;
3. Observe all persons entering the area for proper PPE use.

D. Safety

1. Understand the PPE requirements for the area or job;
2. Document PPE requirements;
3. Observe employee for proper PPE use and take corrective actions as necessary;
4. Approval of PPE for use at customers' facilities;
5. Train employees regarding proper use of PPE as needed;

6. Certify competent persons to perform inspections of specialized PPE.

E. Supervisors

1. Understand the PPE requirements for the area or job;
2. Document PPE requirements by the customers;
3. Observe employees for proper PPE use and take corrective actions as necessary;
4. Train employees regarding proper use of PPE as needed;
5. Lead by example ... use proper PPE as needed.

GENERAL REQUIREMENTS

PPE selection shall be based on an evaluation of the performance characteristics of the PPE relative to the potential hazards, the requirements and limitations of the job site, and task specifics (i.e., duration, work tasks, weather conditions, etc.).

Before starting any job, the supervisor must assess the potential hazards involved, consulting with the dispatcher and safety manager as necessary. The supervisor must list these hazards and the necessary precautions on the properly completed JSA (Job Safety Analysis).

Protective equipment, including PPE for eyes, face, head and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation, or physical contact.

Only PPE approved for use by A3M Vacuum Service, Inc. will be permitted. Employees who would prefer to use their own PPE must present the PPE to safety for inspection and approval. When employee owned equipment is permitted, A3M is responsible for the assurances of its adequacy, maintenance, and sanitation.

Selected PPE must be fitted to each affected employee. Proper fitting shall include donning, doffing, cleaning, and maintenance.

Damaged and defective PPE shall not be used under any conditions.

TRAINING

Each employee who may need to wear PPE shall be properly trained. Training shall consist of:

- Type of PPE is necessary
- How to properly put on, take off, adjust, and wear PPE
- How to properly care for PPE
- Proper maintenance of PPE
- Useful life and disposal of PPE

Retraining is required for employees when:

- The workplace changes, causing the earlier training to become obsolete
- The type of PPE changes
- The employee demonstrates lack of use, improper use, or insufficient skill or understanding

All Personal Protective Equipment training shall be properly documented. Proper documentation of certification must consist of employee name, date of training, and the certification subject.

CLOTHING AND JEWELRY

Shirts must have sleeves (4-inch minimum). Shirttails must be tucked in whenever working around moving or rotating equipment and at any other time when they may pose a hazard if worn on the outside of trousers.

Other loose articles of clothing, neckties, or other neck ware are prohibited, except in office areas where they will pose no hazard.

All clothing must fit properly. Extremely baggy or loose-fitting clothing is not permitted, particularly around rotating equipment.

Long pants are required. They must be worn without cuffs and shall not drag on the ground.

Fire-retardant clothing (Nomex or similar) is required in certain plants. Nomex must be worn in accordance with the following guidelines:

1. Sleeves must be fully extended and fastened at the wrists;
2. Pants legs must be outside of boots;
3. Shirts, jackets, and/or coveralls must be fully fastened up to the neckline.

Other specialized protective clothing may be required for specific tasks.

Dangling jewelry is prohibited on job sites. The wearing of rings and other types of hand jewelry is permitted but discouraged. Employee's hair length must not exceed the neck line. Employees must be clean shaven upon arrival to work each day.

EYE AND FACE PROTECTION

The use of proper eye and face protection is required when personnel may be exposed to eye or face hazards from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. Eye protection shall provide side protection. All safety eye and face protection shall comply with ANSI Z87.1-1989. Clip-on or slide-on side shields satisfying these requirements are permitted. Any additional eye or face protection required for a specific job will be specified on the Call Out for each job.

A Safety Glasses

All employees are required to wear safety glasses with side shields or safety goggles at all times. Those who wear prescription glasses may choose to wear either ANSI-approved prescription

safety glasses with side shields or safety glasses or safety goggles over their regular prescription lenses. Employees may use non-Company-issue safety glasses only after having the glasses approved for use by safety manager.

B. Chemical Splash Goggles

Goggles are required to minimize the risk of injury due to liquid splash. Goggles used for this purpose must be designed specifically for protection from liquids (goggles designed for protection against particles or impact alone provides insufficient protection against liquid exposure).

C. Face Shields

Face shields provide additional protection for the entire face against impact and/or splash hazards. They are to be worn in addition to, not instead of, safety glasses or goggles.

D. Welding and Burning

All eye and face protection worn during welding and cutting will be used in conjunction with a hard hat. Electric (arc) welding requires the use of a complete welding hood.

HEAD PROTECTION

Plastic or fiberglass (non-metallic) hard hats satisfying the requirements of ANSI Z89-1986, shall be worn on all job sites in accordance with the following guidelines:

1. Hard hats must sit directly on the head or over a liner specifically made for hard hats;
2. Adjust the suspension so that the hat will not fall from the head as you bend over to touch your toes;
3. Periodically inspect the hard hat shell and suspension and replace if found to be damaged;
4. Hard hats shall be worn with the bill facing the front;
5. Do not paint or otherwise alter the integrity of the hard hat shell.

HAND PROTECTION

Protective gloves shall be worn whenever employees may be exposed to contact with products or other chemicals, sharp edges or tools, and temperature extremes. Generally, rubber construction gloves will provide adequate protection against cuts and thermal hazards. However, these gloves provide only minimal protection when new and may actually concentrate chemical exposure after prolonged repeated use. For this reason, leather gloves should not be used when handling chemicals. Various chemical resistant gloves are available. Selection of the most suitable glove material depends largely on the chemical to be handled.

FOOT PROTECTION

A. Field Requirements

Steel-toed work shoes in good condition with a minimum 5/8-inch heel and meeting the requirements of ANSI Z41-1991 are required on all job sites. Tennis shoes or other lightweight shoes are prohibited. Boots offering ankle support are recommended.

B. Office Requirements

A3M office areas are considered to be industrial office settings. As such, the following guidelines for appropriate office footwear shall be observed:

1. Leather or rigid rubber soles and heels;
2. Heels must not exceed two inches in height;(spiked heels prohibited)
3. Heels must be at least one inch wide;
4. Open-toed shoes are prohibited;
5. Heel areas of shoes must be closed or strapped.

PURPOSE

This respiratory protection program has been developed in compliance with 29 CFR 1910.134 to ensure the proper selection, care and use of respirators at A3M Vacuum Service.

SCOPE AND APPLICATION

This program establishes procedures for use of all respiratory protection, including negative pressure and positive pressure tight-fitting face pieces and positive pressure, loose-fitting face pieces, hoods, and helmets. This program shall govern respirator use for all A3M employees.

It is understood that in the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective will be to minimize atmospheric contamination. This shall be accomplished as far as feasible by accepted engineering control measures. Respirators shall be used only in those cases where the engineering controls are incapable of maintaining contaminant levels below permissible limits or while engineering controls are being implemented. **Respirators are not intended as a primary means of employee protection.**

RESPONSIBILITIES

A. Employees

1. Use only respiratory protection for which he/she has been trained and fit tested;
2. Properly care for an maintain respirator while in possession;
3. Return respirators to the A3M office;
4. Inspect respirators prior to use;
5. Shave any facial hair that may interfere with the face-to-face piece seal in accordance with the A3M Facial Hair Policy;
6. Properly use respiratory protection;
7. Return defective respirators to A3M for repair or disposal;
8. Inform supervision of any physical condition (i.e., cold, flu, asthma, etc.) that may impair the ability to safely use respiratory protection.

B. Safety Director

1. Administer the A3M Respiratory Protection Program;
2. Develop respirator training course material;
3. Develop respirator fit test procedures;
4. Develop procedures for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators;
5. Perform annual evaluation of program effectiveness;
6. Develop procedures to ensure adequate air quality, quantity, and flow of breathing air for atmosphere-supplying respirators;
7. Focus on proper surveillance, and ensure employees leave the area to wash, change

cartridges, or if they detect break-through or resistance.

8. Assess workplace exposures to determine operations requiring respiratory protection and to evaluate the adequacy of respiratory protection;
9. Conduct respirator fit testing as necessary.
10. Implement procedures for cleaning, disinfecting, storing, inspecting, repairing, discarding, and otherwise maintaining respirators, including those used for routine work as well as those to be used in the event of an emergency;
11. Develop and implement procedures for respirator distribution;
12. Perform quality and safety inspections to ensure that procedures developed for respirator distribution, maintenance, cleaning, and repair are implemented and remain satisfactory;
13. Perform respirator training;
14. Maintain an inventory of respirators, parts, and accessories;

C. Management

1. Approve the contents of the A3M Respiratory Protection Program;
2. Provide adequate resources (i.e., funds, staff, equipment, etc.) to ensure successful implementation;
3. Establish accountability with customers and within line management for the implementation of the Program.

D. Supervisors

1. Identify employees by job title that may require the use of respiratory protection;
2. Identify routine and non-routine tasks, which may require respirator use;
3. Ensure that employees are medically qualified, trained, and fit tested for the respirator to be used prior to use;
4. Coordinate with Safety to evaluate adequacy of respiratory protection;
5. Ensure that employees are using the correct respiratory protection;
6. Ensure that employees assigned to use respirators shave in accordance with A3M Facial Hair Policy prior to obtaining a respirator.

DEFINITIONS

Air-purifying respirator means a respirator with an air-purifying filter, cartridge, or canister that removes air contaminants by passing ambient air through the filter.

Atmosphere-supplying respirator means a respirator that supplies the user with breathing air independent of the ambient atmosphere and includes Supplied-Air Respirators (SAR) and Self-Contained Breathing Apparatus (SCBA).

Employee exposure means exposure to a concentration of an airborne contaminant that would occur if the employee were not wearing a respirator.

End-of-service-life-indicator (ESLI) means a system that warns the respirator user of the approach of the end of adequate respiratory protection.

Filtering face piece (dust mask) means a negative pressure particulate respirator with the filter as an integral part of the face piece or with the entire face piece made of the filtering medium.

Fit test means the use of a protocol to quantitatively or to qualitatively evaluate the fit of a respirator on an individual.

High efficiency particulate air (HEPA) means a filter that is at least 99.97% efficient in removing monodisperse particles of 0.3 micrometers in diameter. The equivalent NIOSH 42 CFR 84 particulate filters are the N100, R100, and P100 filters.

Immediately dangerous to life or health (IDLH) means an atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

Physician or other licensed health care provider (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide, or be delegated the responsibility to provide, some or all of the health care services required by paragraph (e) of 29 CFR 1910.134.

Qualitative fit test (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies upon the individual's response to the test agent.

Quantitative fit test (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Tight-fitting face piece means a respiratory inlet covering that forms a complete seal with the face.

User seal check means an action conducted by the user to determine if the respirator is properly seated on the face.

RESPIRATOR SELECTION

Respiratory protection requirements may vary widely depending on the work being performed and the conditions present at the work location. The protection is to be used when engineering control measures are not feasible or during emergency situations with high exposure. The respirators will be provided when they are applicable and suitable for their intended use. However, certain tasks generally involve a greater potential for overexposure to airborne contaminants. For these tasks, respiratory protection is needed:

1. Any work involving friable asbestos or lead dust;
2. Any work generating visible emissions of non-asbestos containing fibers (i.e., fiberglass, refractory, ceramic fibers, cal-sil, etc.);
3. Abrasive blasting;

4. Vacuuming material in confined or poorly ventilated spaces;
5. Hot work on painted or coated surfaces (unless it is determined that the paint or coating is lead-free);
6. Welding or thermal cutting of galvanized or stainless steel.

RESPIRATORS FOR IDLH ATMOSPHERES

A. A3M shall provide the following respirators for employee use in IDLH atmospheres:
   1. A full face piece pressure demand SCBA certified by NIOSH for a minimum service life of thirty minutes, or
   2. A combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply.
B. Respirators provided only for escape from IDLH atmospheres shall be NIOSH-certified for escape from the atmosphere in which they will be used.
C. All oxygen-deficient atmospheres shall be considered IDLH.

RESPIRATORS FOR ATMOSPHERES THAT ARE NOT IDLH

The Safety Department must identify hazards and NIOSH certified respirators must be selected and provided based on those hazards and factors affecting performance.

OBTAINING A RESPIRATOR

Some employees, such as Supervisors and Operators, may be required to use respiratory protection only rarely as part of their job.

A. Permanent Issue

Employees who may be required to use respiratory protection on a regular basis will be issued respirators free of charge for the duration of employment with A3M. These employees shall be responsible for maintaining the respirator in sanitary and working condition. Defective respirators may be repaired or exchanged at the A3M Office.

B. Temporary Issue

Prior to assigning employees to work requiring the use of a respirator, the supervisor/operator must ensure that the employees are qualified to use the required respirator by inspecting the employee's respirator qualification. (If an employee is not qualified, the supervisor may select a qualified employee or send the unqualified employee to the office to be qualified).

MEDICAL EVALUATION

No employee shall be assigned to tasks requiring the use of respirators unless it has been determined that the employee is physically able to perform the work while wearing a respirator.

FIT TESTING

The principle-limiting factor in the amount of protection offered by a respirator is not the efficiency of the filter, but rather the seal of the respirator face piece to the face.

Employees are required to be clean in accordance with the A3M Facial Hair Policy prior to fit testing. Fit tests shall be conducted with the employee wearing any additional protective equipment that would be worn while using the respirator which could impact the quality of the fit (i.e., welding shield, hard hat, welder's cap, etc.)

Employees are required to pass qualitative fit test (QLFT) or quantitative fit test (QNFT) for each type of respirator required to be worn prior to initial assignment and at least annually thereafter. Re-testing will be necessary should any of the following conditions occur:

1. Appreciable change in weight (gain or loss of 10 or more pounds)
2. Facial trauma
3. Dental changes
4. Other condition that may impact the face-to-face piece seal

CLEANING, DISINFECTING, MAINTENANCE AND STORAGE

Cleaning and Disinfecting

A. Permanent Issue

At a minimum, respirators should be at least wiped clean after each use. In addition, respirators should be disinfected periodically using the manufacturer's cleaning solution or a mixture of bleach and water in accordance with an accepted respirator cleaning protocol.

B. Temporary Issue

Where respirator face pieces are used by multiple individuals, cleaning and disinfecting becomes increasingly important in order to minimize the transmission of communicable diseases and to ensure user comfort.

Respirators shall be cleaned to remove gross contamination, and disinfected to control infectious agents, by a qualified individual after each use in accordance with an acceptable respirator cleaning and maintenance protocol. Respirators shall not be re-issued until they have been properly cleaned and disinfected.

NOTE

Respirator users may refuse to accept any respirator that is not distributed in a clean and sanitary condition.

Maintenance

A. Permanent Issue
Respirators shall be inspected prior to each use. Defective respirators may be repaired or exchanged at the Safety Office. Repairs should be performed by properly trained personnel only.

B. Temporary Issue
During the cleaning and disinfecting process, each respirator shall be inspected by a qualified to ensure that it is in proper working order. Respirators found to be defective shall be repaired or discarded.

NOTE

Respirator users must perform a user seal check prior to use to ensure that the respirator is functioning properly. Immediately return any respirator that fails the seal check. DO NOT USE ANY TIGHT-FITTING FACEPIECE RESPIRATOR WHERE A SOLID FACE-TO-FACEPIECE SEAL CANNOT BE ESTABLISHED AND MAINTAINED.

Storage

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the face piece and exhalation valve.

Emergency respirators shall be:
- Kept accessible to the work area
- Stored in compartments or in covers that are clearly marked as containing emergency respirators
- Stored in accordance with any applicable manufacturer instructions

TRAINING

Employees require to use respiratory protection are required to successfully complete A3M respiratory protection training. The training shall be provided prior to assignment work requiring respirator use and at least annually thereafter. The Safety Department during employee orientation will present training for those employees identified as respirator users, periodically throughout the year, and as needed. Upon completion of the training, the employee will be required to demonstrate knowledge of at least the following:

1. Why the respirator is necessary and how improper fit, usage, or maintenance can compromise the protective effect of the respirator;
2. The limitations and capabilities of the respirator;
3. How to use the respirator effectively in the event of emergencies, including situations where the respirator malfunctions;
4. How to inspect, put on and remove, use and check the seals of the respirator;
5. Proper procedures for maintenance and storage;
6. How to recognize medical signs or symptoms that may limit or prevent the effective use of respirators;
7. The general requirements of the A3M Respiratory Protection Program.

Employees electing to use respirators on a voluntary basis for protection against nuisance dusts shall be informed in writing of the limitations of the respirator.

PROCEDURES FOR IDLH ATMOSPHERES

The employer shall ensure that:

1. One employee, or when needed, more than one employee is located outside the IDLH atmosphere.
2. Visual, voice, or signal line communication is maintained between employees in the IDLH atmosphere and the employee(s) located outside the IDLH atmosphere.
3. The employees located outside the IDLH atmosphere are trained and equipped to provide effective emergency rescue.
4. The employer or designee is notified before the employee(s) located outside the IDLH atmosphere enter the IDLH atmosphere to provide emergency rescue.
5. The employer or designee authorized to do so by the employer, once notified, provides necessary assistance appropriate to the situation.
6. Employee(s) located outside the IDLH atmospheres are equipped with:
    - Pressure demand or other positive pressure SCBAs, or pressure demand or other positive pressure supplied-air respirator with auxiliary SBA; and either
    - Appropriate retrieval equipment for removing the employee(s) who enter(s) these hazardous atmospheres where retrieval equipment would contribute to the rescue of the employee(s) and would not increase the over all risk resulting from entry; or
    - Equivalent means for rescue where retrieval equipment is not required.

PROGRAM EVALUATION

Evaluations of the workplace shall be performed by the Safety Department to ensure that the A3M Respiratory Protection Program is being implemented and that it continues to be effective. During these evaluations, employees, including respirator users, supervisors, and program administrators, will be consulted and asked to provide their views regarding program effectiveness and to identify any problems. The evaluations will include:

1. Respirator fit (including the ability to use the respirator without interfering with effective workplace performance):
2. Respirator selection, distribution, use, and maintenance;
3. Medical qualification procedures;
4. Training content and administration.

RECORDKEEPING

Written materials associated with the implementation of the A3M Respiratory Protection Program shall be maintained according to the following schedule:

Record	**Retention Requirement**
Medical Evaluations	Term of employment + 30 years
Fit test records	Until next fit test is performed
A3M Respiratory Protection Program	Current
Training	1 year

PURPOSE

This personal fall protection program is to prevent personal resulting from a fall from elevated heights of six (6) feet or more. It has been developed in accordance with the applicable sections of the OSHA Standards for Personal Fall Arrest Systems of CFR 1910.60 and/or CFR 1926.502.

SCOPE AND APPLICATION

This program applies to all employees conducting such job tasks at customer job sites. When exposure to working from elevated heights can not be prevented through such measures as a permanent structural platform, personal fall protection must be used. This policy is mandatory for work being conducted six (6) feet in height from all permanent working surfaces. 100% tie off must be obtained except while ascending or descending a ladder.

RESPONSIBILITIES

A. Employees
   1. Inspect each part of the body harness, prior to each use.
   2. Wear safety harnesses properly; buckle up all straps, secure lanyard close to body, etc.

DEFINITIONS

Anchorage means a secure point of attachment for lifelines, lanyards, or deceleration devices, and which is independent of the means of supporting or suspending an employee.

Body Harness means a design of straps which may be secured about the employee in a manner to distribute the fall arrest forces over at least the thighs, pelvis, waist, chest, and shoulders with means for attaching it to other components of a personal fall arrest system.

Inspections means personal fall arrest systems shall be inspected prior to each use for mildew, wear, damage, and other deterioration, and defective components shall be removed from service if their strength or function may be adversely affected.

Lanyards means a flexible line of rope, wire rope or strap which is used to secure the body harness to a deceleration device, lifeline, or anchorage.

Life-Line means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (Vertical Life-Line), or for connection to anchorage's at both ends to stretch horizontally (Horizontal Life-Line), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Personal Fall Arrest System means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, and body harness and may include a lanyard, deceleration device, lifeline or suitable combinations of these.

Tie-Off means the act of an employee wearing personal fall protection equipment, connecting directly or indirectly to an anchorage. It also means the condition of an employee being connected to an anchorage. 100% tie-off means to be connected to an anchorage at all times when six (6) feet above acceptable surfaces. Except while ascending or descending a ladder.

GENERAL GUIDELINES

A. Full Body Harness

1. Parachute type safety harness with thigh straps, shock absorbing type lanyards with double locking snap hooks, no greater than six (6) feet in length shall be used as a minimal fall protection.
2. The use of safety body belts for fall protection is prohibited.
3. Fall protection equipment must be inspected prior to each use for wear damage and other deterioration.
4. Tying knots in lanyards to reduce their length is prohibited.
5. Attaching lanyards together to increase their length is prohibited.
6. 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.
7. Body harnesses and components shall be used only for employee protection.
8. Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and inspected by a competent person to be undamaged and suitable for reuse.
9. Anchorage used for attachment shall be capable of supporting at least 5,000 pounds.
10. Snap hooks shall be completed closed when attached to any anchorage point. Attachment of the snap hook directly to a beam, or over the edge of a plate, etc., is prohibited.

A rope lanyard shall never be tied-off to an "H" or "I" Beam unless protected from the cutting action of the beam edges. A softener or wire rope sling is suggested.

B. Lifelines

1. Horizontal lifelines shall be designed and installed, under the supervision of a qualified person.
2. Lanyards, vertical and horizontal lifelines and components, shall have a minimum breaking strength of 5,000 pounds.
3. Horizontal lifelines may, depending on the angle of sag, be subjected to greater loads that the impact load imposed by the attachment component. The reason for this is that the multiple tie-offs to a horizontal lifeline, if one employee falls, the movement of the falling employee hand the horizontal lifelines during arrest of fall may cause other employees to fall also. Horizontal lifelines and anchorage strength should be increased for each additional employee to be tied off. A qualified person shall design any such system.
4. Any means of attachment points shall never reduce the strength of the personal fall arrest system.
5. All fall arrest systems shall be inspected immediately when exposed to high

temperatures.

6. Process lines and equipment shall never be used for an anchorage point.
7. Lifelines shall be protected against being cut or abraded.
8. Lifelines shall be rigged such that an employee can neither free fall more than six (6) feet nor contact any lower level.
9. When vertical lifelines are used, each employee shall be attached to a separate lifeline.

FALL PROTECTION PLAN

It is the responsibility of A3M Management personnel to ensure that each fall protection plan is prepared by a qualified person specific to each worksite.

EQUIPMENT STANDARDS

A3M is responsible for ensuring that all fall protection equipment meets ANSI & ASTM requirements. When purchasing equipment and raw materials for use in fall protection systems, Management personnel must ensure that OSHA requirements are met.

RESCUE

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

ACCIDENT INVESTIGATION

An accident investigation must be performed in the event of a fall, near miss, or other serious incident. By conducting an accident investigation, management is able to evaluate the current fall protection program to determine if any changes or updates need to be made to the existing program. These potential updates to training, procedures, or practices are an effort to prevent any reoccurrences.

TRAINING

Training program shall be provided for each employee who may be exposed to fall hazards.

- The training program will enable each employee to recognize hazards of falling;
- Each employee will receive training in the procedures to follow to minimize these hazards.

Retraining is necessary in the event that:

- Management recognizes deficiencies in training program
- Any changes occur within the workplace
- The fall protection system or equipment changes that render any previous training obsolete

RECORD KEEPING

Management shall maintain written certification records of personal fall protection training for each

affected employee. All written certification records maintained by A3M shall consist of:

- The name of the employee whom received training
- Date(s) training was administered and completed
- Signature of person providing training
- Date employer determined training was deemed adequate

JOB SAFETY ANALYSIS (JSA)

PURPOSE

This procedure provides guidelines for all A3M Supervisors, Foreman, Dispatchers, and Vacuum Truck Operators who assign work to employees. Additionally, it takes into consideration all aspects of the task to be performed with emphasis on safety. It should assist in communicating with the work force most precautions in conducting a job task safely. This program shall be implemented for A3M personnel when conducting non routine job tasks.

SCOPE AND APPLICATION

Job Safety Analysis (JSA) is showing or explaining to each other the safety application that pertains to the job task at hand. To effectively use this tool to prevent Incidents/Accidents it must be conducted properly. The workers, along with the Supervisors and Vacuum Truck Operators should discuss any and all hazards associated with conducting a particular job task.

RESPONSIBILITIES

The Supervisor and/or Vacuum Truck Operator shall conduct the JSA at the job site. All employees involved with a particular job shall participate in the hazard assessment of the job task. All workers shall sign the JSA once the hazards have been discussed and corrective action has been taken when applicable. The Supervisor and/or Vacuum Truck Operator shall turn in JSA, along with a copy of all permits along with his/her paperwork when job is complete. This procedure shall adhere to by all employees conducting work considered to be essential in the day to day operation of this facility.

GENERAL

- All requirements of a permit shall be adhered to and utilized as the first line of defense.
- Properly filled out and well issued JSA form shall be utilized to reduce the chance for Incident/Accident.
- The JSA shall remain posted at the job site until the job is complete.
- A JSA is valid for the duration of job or the end of the shift, which ever comes first.
- All appropriate boxes must be checked and discussed prior to the start of a job.
- A review of the JSA must take place if conditions change prior to a job task being completed.
- Any hazards encountered while performing a job that was not discussed prior to the start of the job, must be added to the JSA and discussed with each worker involved in that particular job.
- The magnitude of the job will generally determine the extent of the JSA.
- All employees must sign the JSA, once they understand what is expected of them to safely perform their task.
- All hazards, which can be corrected prior to the start of the job, must be corrected.
- Each worker is responsible for his/her own safety and shall remain alert to the hazards.
- Any special training required should be listed in the “Comment” section of the JSA.

PURPOSE

To define the conditions, requirements, and guidelines for safe entry and performance of work in closed or confined spaces, including the testing for and issuance of the Entry Permit, and the responsibilities of entrants, attendants, entry supervisors and management representative.

SCOPE AND APPLICATION

This procedure covers all work in confined spaces. Included are inside of vessels and vessel skirts, tank cars, tank trucks, barges, towers, tunnels, and other similar containers. Also included are trenches, pits, dikes, and open top containers greater than four (4) feet deep and any other enclosed area where flammable or toxic gases may be present or accumulated, or the possibility of oxygen deficiency exists.

RESPONSIBILITIES

A. Duties of the Confined Space Permit Issuer (Usually customer)
1. Assuring that the vessel or tank has been emptied, flushed, and purged as necessary.
2. Assuring that all-electrical equipment has been locked out (pumps, agitators, etc.) per established lockout procedure.
3. Assuring that all lines leading to the vessel or tank are blinded or disconnected and tagged.
4. Obtain and comply with the Confined Space Entry Checklist.
5. The training required of authorized entrants and attendants.
6. Advising entrants of the last product in the vessel, tank, etc.
7. Securing a SDS (Safety Data Sheet) on last product in vessel, tank, etc.
8. Testing the confined space atmosphere prior to entry and periodically monitoring space entry for criteria, identifying new hazards, and monitoring the atmosphere.
9. Evaluating the potential hazards involved with the work JSA and addressing them.
10. Developing rescue provisions for the entry and assuring that all needed equipment is available.
11. Completion of the confined space entry checklist.

B. Duties of the Entry Supervisor
1. Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure and has reviewed these with the attendant and entrants;
2. Verifies, by checking that the appropriate entries have been made on the permit, that all test specified by the permit have been conducted and that all procedures and equipment are in place before endorsing the permit and allowing entry to begin;
3. Terminates the entry and cancels the permit whenever entry conditions are not met or when work covered by the permit is completed.
4. Verifies that rescue services and that the means for summoning them are operable;
5. Directs unauthorized individuals who enter or who attempt to enter the permit space during entry operations to remain away until he/she is authorized to enter the space;
6. Determine when responsibility for a confined space entry operation is transferred and

ensure that the operations remain consistent with the permit;

7. Ensure all entrants understand that the attendant is in charge of the operation and they must leave the space if so directed by the attendant;
8. Hold debriefing discussion with entrants to determine hazards encountered or created during the entry operation and document on the back of the confined space permit.

C. Duties of the Attendant

1. Know the hazards that may be encountered during entry, including the signs or symptoms and consequences of exposure.
2. Be aware of possible behavioral effects of hazard exposure to entrants.
3. Maintain accurate count of entrants and their identities by means of the confined space entry log.
4. Remain outside space during entry until relieved by another attendant.
5. Communicate with entrants to evacuate immediately if:
   a. The attendant detects behavioral effects of exposure;
   b. A prohibited condition;
   c. A situation outside the space that could endanger entrants;
   d. Or if the attendant cannot effectively perform all his assigned duties.
6. Prevent the fouling of airlines, extension cords and/or lifelines.
7. Summon rescue and emergency services by sounding an air-horn, radio, or phone etc.
8. Warn and advise unauthorized persons to stay away from the space or exit immediately from the confined space. Also, the attendant must inform the entry supervisor if unauthorized person enters the space.
9. Perform non-entry rescues.
10. Performs no other duties that might interfere with primary duty to monitor and protect entrants.
11. Return the completed carbon copy entry permit, work permit and any related documentation to the permit issuer upon completion of the entry for the shift.

D. Entrants

1. Know the hazards that may be encountered during entry, including the signs or symptoms and consequences of exposure. The confined space data sheet and work permit shall be reviewed prior to initial entry.
2. Properly use the following types of equipment where applicable: testing, monitoring, ventilation, communications, lighting, barriers and shields ingress/egress (ladders) equipment, and personal protective equipment.
3. Communicate with the attendant so that the attendant may monitor entrant's status.
4. Alert the attendant whenever the entrant recognizes any sign or symptom of exposure or danger and when a prohibited condition arises.
5. Exit the space as quickly and safely as possible when directed to do so by the attendant or entry supervisor, whenever recognizing any unacceptable condition and when an emergency alarm is activated.

DEFINITIONS

Acceptable Entry Conditions — Conditions that must exist in a permit space to allow safe entry and to ensure that individuals involved with a permit-required confined space entry can safely enter into and work within the confined space.

Attendant — an appropriately trained individual stationed outside a permit space who monitors the authorized entrants and performs all attendant's duties assigned.

Authorized Entrant — an appropriately trained individual who's authorized by supervision to enter a confined space.

Confined Space — an area which:
1. Is large enough and so configured that an employee can bodily enter and perform work and
2. Has limited means of access or egress,
3. Is not designed for continuous employee occupancy, and
4. Has or potentially has hazards associated with it.

Entry — the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry Supervisor — an appropriately trained person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry by accepting the work performed or when conditions gave been identified to warrant the stoppage of work to correct the changes.

Hazardous Atmosphere — an atmosphere that may expose individuals to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one of the following causes:

1. Flammable gas, vapor, or mist in excess of 10% percent of its lower flammable limit (LFL) (within the instrument manufacture's specified tolerance for the instrument);
2. Airborne combustibles dust at a concentration that meets or exceeds it LFL; (May be approximated as a condition in which dust obscures vision at a distance of five (5) feet or less.);
3. Atmospheric oxygen concentration below 19.5% percent or above 23.5% percent;
4. Atmospheric concentrations of any substance above that which is specified in the process unit's blinding and decontamination standard operating procedures for the vessel/confined space to be entered or that could result in exposure in excess of the established permissible exposure limit (PEL) based upon acceptable limits indicated on the SDS's located in the control rooms.
5. Any other atmospheric condition that is immediately dangerous to life or health.
6. Surface contaminates of a toxic material sufficient to exceed a toxic level upon contact or absorption or ingestion above that which is specified in the process unit's blinding and decontamination standard operating procedure.

Immediately dangerous to life and health (IDLH) — means any condition that poses an immediate or delayed threat of life or that would cause irreversible adverse health effects or that would interfere with

an individuals ability to escape unaided from confined space.

Permit Issuer — Representative trained and qualified to issue a confined space permit.

Permit-Required Confined Space — A confined space that has one or more of the following characteristics:

1. Contains or has the potential to contain a hazardous atmosphere;
2. Contains a material that has the potential for "engulfing" an entrant;
3. Has an internal configuration such that an entrant could be trapped or asphyxiated by inward covering walls or by a floor which slopes downward and tapers to a similar cross-section; or
4. Contains any other recognizable safety or health hazard.

Prohibited Conditions — any conditions in a permit space that is not allowed by the permit during the period when entry is authorized.

Rescue Service — personnel designated and trained to rescue entrants from a permitted space.

Retrieval System — equipment (retrieval line, harness, wrist-lets, lifting device or anchor, etc.) used for non-entry rescue of persons from permit spaces.

CONFINED SPACE PERMIT

A. Confined space permits will be requested through the permit issuer.

B. The confined space permit is an authorization and approval in writing that specifies the location and type of work to be done, and certifies that all existing hazards have been evaluated by the entry supervisor and necessary protective measures have been taken to ensure the safety of personnel. Permits will not be issued until all items listed on the permit are signed by the Entry Supervisor, Operations and Safety for initial entries and have been adequately implemented.

C. Confined space permits will be written in duplicate. Distribution is as follows:

   1. Original Copy — Top copy of the permit. After all Pre-entry information has been recorded on the permit, the top copy shall remain with the permit Issuer until the carbon copy is returned indicating the entry is canceled or completed for the shift. This copy shall be attached back to the carbon copy for filing.
   2. Carbon Copy — Bottom copy of the permit. Detach the bottom copy to be posted in a conspicuous place at the confined space entry point. The permit shall remain posted until the entry has been canceled, complete, or the end of the present shift then forwarded to the Permit Issuer/control room accompanying the work permit and any related documentation.

D. All initial entries shall require the signature of unit/area operator, entry supervisor, and safety representative. Operations will provide the SDS of last contents of the confined space to be

entered and attach it to the confined space permit.

E. The entry supervisor responsible for the personnel entering the confined space will sign the permits jointly with the permit issuer.

NOTE:

A work permit shall accompany the confined space permit identifying other specific precautions and additional PPE. The work permit ID number shall be recorded on the Confined Space Permit in the provided blank on the upper right hand side.

F. The names of all people entering a confined space must be listed on the permit prior to entering the confined space. The attendant shall sign the permit, and log each entrant into and out of the confined space on a sign in/out log.

NOTE:

All entrants shall sign the permit form, using the space provided on the back of the form as necessary. The signature logged on the permit will also serve as the in/out-monitoring roster to be maintained by the attendant. If additional signatures spaces are required, the back of a second permit form shall be used, with a note made on the original permit form that additional page(s) are attached.

G. In the event the entry supervisor, attendant(s), authorized entrant(s), or anyone else originally signing the permit is replaced, then their replacement shall also sign the permit.

H. Information resulting from debriefing of employees shall be noted on the back of the permit form by the entry supervisor.

I. Confined space permits shall be dated, signed, and are valid until any of the following occur:
1. The shift during which they were issued ends.
2. The termination time listed on the permit arrives.
3. The entry supervisor changes.
4. Work is interrupted and all involved personnel (entrants, attendant, and entry supervisor) have left the immediate vicinity of the space for more than thirty (30) minutes.
5. The job is completed, all entrants have exited the space, and the space is ready to be returned to normal service.
6. A facility or area emergency condition exists or when a unit and/or plant alarm sounds.

J. Additional personnel requesting to enter the confined space but not authorized on the initial confined space permit are required to consult with the entry supervisor before entering.

K. The confined space permit and all associated documentation shall be made available at the time the entry to all authorized entrant or their authorized representative, by posting them at the entry portal so that the entrants can confirm that the pre-entry preparations have been completed.

L. Any employee that enters the confined space, shall have the opportunity to observe the following on the permit:
1. Pre-entry atmospheric test results.

2. Periodic atmospheric test results.
3. Monitoring atmospheric test results.
4. Subsequent atmospheric test results.

M. Upon vessel closure, the confined space permit, work permit, and any related entry documents will be forward to customer.

GENERAL REQUIREMENTS

A. Operations shall evaluate any hazards associated with a confined space prior to the opening of such a space.

WARNING

No confined space will be entered under an "Immediately Dangerous to Life and Health" (IDLH) condition for routine work.

B. All confined space atmospheres shall be tested prior to entry. The permit issuer will conduct the testing and monitoring of the atmosphere as required.

C. All confined space entries require at least one attendant outside the space for the duration of the entry operations. Attendants must wear an orange vest.

D. Single attendant is not allowed to monitor more than one confined space at a time.

E. A system shall be in place for each confined space entry, which allows the attendant and entrant to maintain communications (i.e. voice, sight, radio).

F. The attendant shall be equipped with a horn to summon rescue services. A radio will be provided to the attendant when the permit issuer determines its necessity, such as an entry in a remote location.

G. Signs shall be posted at all open points of entry of a confined space to inform employees of appropriate warnings. Barriers shall be provided to protect entrants from external hazards.

H. Protective clothing will be worn when entering a confined space, which contains any skin contact or skin absorption hazards. In these cases, minimum protection shall consist of a slicker suit, rubber gloves, rubber boots, and goggles.

I. Retrieval systems must be in place and tested prior to entry, or other methods shall be used to facilitate non-entry rescue unless it would increase the risk of entry. A retrieval system shall be available prior to initiating the entry for vertical entries greater than five (5) feet.

J. Illumination must be sufficient to enable authorized entrants to see well enough to work safely and to quickly exit the space in an emergency.

K. The confined space program shall be reviewed annually.

PREPARATION FOR ENTRY

A. Under the facility permit-required confined space program, the entry supervisor will implement measures to prevent unauthorized entry for the duration of the job, such as:

1. Posting a sign indicating "Danger, Confined Space, Entry by Permit Only."
2. Barricades, fences, or railings.

NOTE

A permit required confined space with an unattended opening that could be used to gain entry, an (orange plastic-mesh) or (red - DANGER DO NOT OPERATE) barricade tape shall be used as a barrier across the opening. The entry supervisor of personnel performing the entry shall be responsible for maintenance of the barricade system.

B. The entry supervisor shall identify, evaluate, discuss, and determine adequate control measures for the permit space before entry.

C. The confined space must be clean, free of hazards material/chemicals and residue and, where necessary, inert, ventilated, purged/washed by water or other means to eliminate or control atmospheric hazards, unless it is not possible.

WARNING

If the space is inert to decontaminate the atmosphere, the inert gas must be purged with air before entry is allowed.

D. Completely protect against release of energy and material into the space by such means as blanking or blinding nearest to the vessel, locking out all energy sources, or blocking and disconnecting all mechanical linkages. All isolation locks and disconnects pertaining to the confined space must be tagged out by the entry supervisor or designee and remove only by him/her after the job is complete.

E. Follow the company's "Lock out, Tag out," and other related procedures as required for safe entry operations.

F. The following must be available, inspected, and/or tested before use or initiation of the entry:
1. Testing and monitoring equipment needed to comply with preparation of entry: "Testing of atmospheres within confined spaces."
2. Air moving devices — where needed to obtain acceptable entry conditions. These must be in place and operating before anyone can enter the space.
3. Communications means/equipment necessary to constantly monitor entrant status or communicate to entrants the need to evacuate.
4. An attendant must be on duty outside the confined space for the duration of entry

operations.

5. Personal protective equipment.
6. Barriers must be provided as necessary to protect entrants from external hazards.
7. Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry
8. An appropriate means of access and egress shall be kept in place, secured, and remain in place while personnel are occupying the confined space.
9. Retrieval systems must be in place and tested prior to entry, or other methods shall be used to facilitate non-entry rescue.
10. Rescue and emergency equipment.
11. Any other equipment necessary for safe entry into and rescue from permit spaces.

H. The entry supervisor must fill out, sign (authorize), and post and confined space and work permit at the confined space opening before work can begin within the confined space.

VENTILATING THE EQUIPMENT

A. Ventilation will be provided primarily by blowers discharging out the vessel/equipment and located in such a way to force ventilation through the entire confined space.

B. Continuous forced air ventilation shall be used, as follows:

1. An individual may not enter the space until force air ventilation eliminates any hazardous atmosphere.
2. The forced air ventilation shall be directed as to ventilate the immediate areas where an individual is or will be present within the space and shall continue until all individuals have left the space.
3. The air supply for the confined air ventilation shall be from clean air source and may not increase the hazards in the space.
4. Ventilation of a confined space should be started before entry into a confined space in sufficient time to provide adequate sweeping of the entire confined space with air before entrants are allowed to enter. Forced ventilation shall be continuous during the entry activity, which may produce toxic or flammable atmosphere, such as welding, painting, or where a toxic atmosphere may develop during the course of the entry work. In such situation, care should be taken to ensure that the ventilator is explosion proof and the location of the ventilation equipment does not impair the ability of the individuals to rapidly exit the space. There shall be no instance where the ventilation of a confined space is considered a substitute for testing of the confined environment.
5. Periodic testing of the confined space atmosphere shall be performed to ensure that the continuous forced air ventilator is preventing the accumulation of a hazardous atmosphere.

TESTING OF ATMOSPHERES WITHIN CONFINED SPACES

Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working;

A. Tests for oxygen deficiency and a flammable atmosphere will be made or conducted prior to entry into any confined space.

B. Atmospheric test readings shall be made in the following order:
   1. Oxygen concentration
   2. Flammability or gases/vapors
   3. Toxic materials

C. When the risk of oxygen deficiency or enrichment or a flammable atmosphere may exist, tests for oxygen content and flammable vapors must be taken continuously during the occupancy of the permit required confined space. Maximum frequency between test shall be at least once every two hours or more if conditions warrant.

D. Oxygen content must be between 19.5% and 23.5% before entry is allowed.

E. Entry into a confined space is not permitted if the combustible limit is or above 10% LEL.

F. Carbon Monoxide must be between 0% and 10% before entry is allowed.

G. An exposure assessment must be made to determine if toxic substances may be present at concentrations in excess of the permissible exposure level (PEL) or action level, as applicable. Toxic substances requiring measurement include those materials capable of causing death, incapacitation, impairment of ability to self-rescue, injury, acute illness, or chronic illness associated with acute exposure.

   1. An atmosphere meter check or other types of instruments proven accurate for low concentrations may be used to identify any exposures generated by toxic materials that may be taken into, released, or generated within the confined space. Periodic or continuous monitoring is required if such exposures are possible.
   2. Acceptable levels of exposure to toxic materials must be identified on the permit.

H. Sufficient atmospheric tests shall be taken through a cross-section of the confined space to accurately characterize the environment.

I. Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces.

J. Reevaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such reevaluation because the

entrant or representative has reason to believe that the evaluation of that space may not have been adequate;

K. Test results (both initial and periodic) and the tester's signature shall be recorded on the permit form.

L. The instrument used, instrument ID number, and calibration due date shall be recorded on the confined space permit.

M. Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted.

EQUIPMENT AVAILABLE AT THE ACCESS OPENING

A. The following emergency items shall be located at the access opening of confined spaces
   1. An air horn
   2. A battery powered light of explosion-proof design when additional lightning is required inside the confined space.
   3. Non-entry rescue equipment.
   4. Equipment identified by the safety department on the entry permits shall be available at the entrance in case of emergencies.

ELECTRICAL/LIGHTING REQUIREMENTS

A. Temporary lighting used in permit-required confined spaces will be of explosion-proof design with heavy-duty cords and fittings when entering a confined space.

B. All temporary lighting systems must have impact resistant lens or guard protected lens.

C. Illumination supplied from low voltage (12 volts or less) may be used in lieu of ground fault interrupter. The primary side of the low voltage lighting system must remain outside of the confined space.

D. An approved ground fault circuit interrupter (GFCI) must be used for all temporary lighting systems. All electrical wiring will be grounded through this equipment.

E. Fixtures with 200 watts bulbs or greater must be stand mounted or suspended.

F. Power should be brought into the vessel through an opening other than that used by personnel if possible; otherwise a non-conductive material shall be used to protect the wiring form physical damage and subsequent possible shock to personnel.

G. The following guidelines are to be strictly followed when installing temporary lighting inside equipment not yet declared gas free.

1. Only approved vapor proof lighting will be used.
2. Lighting will be low voltage (considered 32 volts or less) with impact resistance lens or guard protected lens will be used.
3. An approved GFCI must be used for all lighting services. All electrical wiring will be grounded through this system.

CONFINED SPACE RESCUE

A. Non-Entry Rescue

1. Retrieval system or other methods shall be used whenever an authorized entrant enters a confined space.

EXCEPTIONS

If the retrieval equipment increases the overall risk of the entry or would not contribute to the rescue of the entrant. (To be determined by permit issuer and the safety representative normally at the time of initial entry.)

2. If retrieval systems are used, each authorized entrant shall use a full body harness with a retrieval line attached at the center of the entrant's back at shoulder level. The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the confined space.
3. A mechanical device shall be available to retrieve entrants from confined space more than five (5) feet in vertical height.

B. Entry Rescue

NOTE

Only those personnel trained in confined space entry rescue shall perform such rescues. At no time shall an individual who has not fully trained in this function attempt a confined space rescue by entering the space.

1. The emergency rescue team will provide confined space entry rescue services for all confined space operations.
2. Rescue service must be on-site for immediately dangerous to life and health (IDLH) conditions while work is being performed.
3. Rescue services must be either:
   a. Provided by the host facility, or
   b. Provided by an outside service which is given an opportunity to examine the entry site, practice rescue, and decline as appropriate, or
   c. Provided by the employer by selecting a rescue team that is equipped and trained to perform the needed rescue services.
4. Prior to conducting a permit required space entry, rescue plans shall be developed and implemented for the following:
   a. Summoning rescue and emergency services.

b. Rescuing entrants from confined spaces.
c. Providing necessary emergency services.
d. Preventing unauthorized person from attempting rescue.

C. All confined space atmospheres entries shall have an emergency response person(s) on stand-by wearing respiratory protection ready for immediate rescue.

D. Emergency response shall be prepared and equipped to reach victim(s) within a time frame that is appropriate for the confined space permit hazard.

E. Inform rescue team of the hazard(s) they may confront when called to perform rescue.

F. The rescue team shall have access to all permit spaces from which rescue may be necessary so that the service they can develop appropriate rescue plans and practice rescue operations.

NON-PERMIT CONFINED SPACE RECLASSIFICATION

A. If there are no hazardous conditions in a confined space, nor is there any reasonable potential for the occurrence of a hazardous condition, a permit required confined space may possibly be reclassified as a non-permit confined space, provided all of the following criteria can be met and maintained.

1. The permit space poses no actual potential atmospheric hazard, and all hazards within the space have been eliminated without entry into the space. The space may be, and remains, reclassified as a non-permit confined space only for as long as the hazards remain eliminated.
2. When it is necessary to enter a permit required confined space to eliminate hazards, such an entry must be performed following all permit program requirements. If testing and inspection during that entry confirm that all hazards within the space have been eliminated, the permit required confined space may be reclassified as a non-permit confined space only for as long as the hazards remain eliminated.

NOTE

There is a significant difference between hazard elimination and hazard control. If there are no hazards in the space, an entrant is in no danger. If the hazards are controlled rather than removed, an entrant could be in danger upon failure of a control system. Simply controlling hazards does not meet the requirement for reclassification.

B. The A3M Safety Department must conduct a review of confined space conditions and provide written certification required in the reclassification form to qualify the space as a non-permit required space.

C. Confined Spaces that have been reclassified as non-permit confined space need not comply with the confined space entry requirements, but must follow the requirements of the reclassification request, “Non-Permit Confined Space Entry.” However, once the space has been returned to normal service, future entries into the space must follow all confined space entry requirements

until an approved reclassification occurs.

D. If hazards arise within a confined space that has been reclassified as a non-permit required space, the space must be re-evaluated and forward information to the A3M Safety Department. The space must be evaluated to determine if it must be reclassified as a permit-required confined space. Reclassification forms may be obtained by the customer's safety department.

TRAINING

A. All personnel who engage in confined space tasks shall receive structured training in the facility procedure prior to performing confined space duties, prior to change in assigned duties, or whenever there is a change in the permit space that presents a new hazard.

B. All confined space entry training documentation must include the signature of the trainee, the signature of the trainer, date(s) of training, and verification of each trainee's understanding. Certification must be made available to employees & their authorized representative.

C. Personnel shall be trained in the aspects of the confined space procedure that apply to their duties and responsibilities. In the case that a situation may arise where multiple employees of multiple employers are working within the same confined space, the employees will be trained in the proper procedures for coordinating entry operations for multi employers so that employees of one employer do not endanger the employees of any other employer.

D. Training of rescue personnel will be conducted at least annually including practical applications, to demonstrate proficiency in accordance with 29 CFR 1910.146.

ANNUAL REVIEW

Review the permit space program, using the canceled permits retained within 1 year after each entry and revise the program as necessary to ensure that employees participating in entry operations are protected from permit space hazards. Employers may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary.

PURPOSE

To establish procedures for isolating machinery, equipment, and process systems in order to protect employees from injury caused by the uncontrolled release of stored residual energy.

SCOPE AND APPLICATION

Any equipment or process which the unexpected energize or start-up of the machine or equipment could cause injury to those working on it must be locked/tagged out before any servicing or maintenance work begins and remain locked out until all work is finished.

RESPONSIBILITIES

Supervisor or Designee

- Verifies that all isolation devices have been locked out.
- Attach a completed Danger Do Not Operate tag to the local switch.
- Verify that all affected employees are locked and tagged out per this procedure.
- Verifies that equipment remains locked out until the end of their shift or unless the work is completed before the end of the shift.
- Inspects the job when complete.
- Ensures affected employees locks are removed and the end of their shift or unless the work is completed before the end of the shift.
- Inform operations that locks are removed and debriefs operations of present job status.

Affected Employee

- Verifies equipment will not start by observing on Operator activate the start button at the local switch ensuring that the equipment cannot be energized.
- Places their personal lock and tag at the energy source before work begins.
- Locks remain on equipment until the end of their shift or unless the work is completed before the end of the shift.
- Notifies operations when their locks are removed from the energy source.
- Inform operations that locks are removed and debriefs operations of present job status.

DEFINITIONS

Affected Employees - An employee whose job requires them to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout/tagout, or whose job requires an employee to work in an area in which such servicing or maintenance is being performed.

Authorized Employees - A person who locks out our tags out machines or equipment in order to perform the 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.

Hot tap - A procedure used in the repair, maintenance and services activities which involves welding on a piece of equipment (pipelines, vessels or tanks) under pressure, in order to install connections or appurtenances. it is commonly used to replace or add sections of pipeline without the interruption of service for air, gas, water, steam, and petrochemical distribution systems.

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 - A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

Normal production operations - The utilization of a machine or equipment to perform its intended production function.

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 unjamming 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.

Setting up - Any work performed to prepare a machine or equipment to perform its normal production operation.

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 - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to 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.

POTENTIAL ENERGY HAZARDS

Stored potential energy can be released during work causing injury or death.

1. Chemical Energy Hazards
   - Start fires
   - Cause skin burns
   - Generate harmful gases or fumes

   Before working, release, drain, or vent chemicals safely.
2. Thermal Energy Hazards
   - Energy of heat (and cold)
     - Quick release of compressed gases can freeze skin
     - Hot equipment and fluids can cause burns
     - Allow equipment to reach safe temperature before starting work
3. Hydraulic Energy Hazards
   - Liquids under pressure
     - Pressure can cause equipment to move
     - Rapid release can cause injury or ejection on system parts
     - Relieve pressure slowly into proper container
4. Pneumatic Energy Hazards
   - Energy of compresses gases
     - Uncontrolled release
     - Rapid de-pressurization create extreme low temperatures
     - Properly vent all systems before starting work

INSPECTIONS

Periodic inspections of the energy control procedure shall be conducted annually to ensure that the procedure is being followed. The Safety Director is responsible for performing the inspections. The inspection shall be documented by the Safety Director. The documentation shall consist of the date of inspection, equipment, employees, and the printed name and signature of the Safety Director.

PROCEDURES

A. Appropriate locks, keys and tags shall be used by all employees who may have occasion to work on electrical or other types of equipment that could have a sudden release of energy. Locks will

be issued as personal loaned equipment. There is to be only one key for each personal lock.

- The A3M Safety Department will maintain an inventory of lockout accessories as necessary.
- Contractors must be capable of applying personal locks and tags as required.

B. The following procedures must be used to insure the safety of all personnel who will be required to isolate an energy source:

1. An energy isolation list must be prepared by operations. The list must contain all points of isolation (i.e. breakers, valves, blinds, etc.).
2. The authorized or affected employee shall have knowledge of the type and magnitude of energy, the hazards of the energy to be controlled, and the methods or means to control the energy.
3. All lockout/tagout requirements must be stated on the appropriate work permit(s).
4. In the presence of the affected employee(s), the machine or equipment shall be shut down or tuned off using the procedures established for the machine or equipment. An orderly shut down must be utilized to avoid any additional or increased hazards to employees as a result of the equipment stoppage.
5. Operations de-energizes the equipment and places a Production Lock on the breaker(s) at the disconnect in the off position, not at a local switch. If the breaker is not capable of accepting a lock, a circuit breaker lockout is to be installed. If the breaker provides power to several pieces of equipment, and the breaker must remain energized, a tag shall be installed on the closed switch, then the power lines to the equipment shall be disconnected by a qualified electrician.
6. Operation ensures all valves used for isolating are chained and locked in the closed position. Normally, valves will remain closed during an operation; however, if a valve is to be reopened and a blind is used as the only isolation device, the blind shall be locked and tagged. All energy isolating devices that are needed to control the energy to the machine or equipment shall be physically located and operated in such a manner as to isolate the machine or equipment from the energy source

Note: Chain operated valves shall be locked out at the valve wheel in order to secure the valve properly, unless the chain of wheel can be locked in such a manner to prevent rotation of the wheel, i.e., (Wrapping valve chain around an existing structure then locking it out.)

7. When the equipment has been de-energized/isolated, the operation's supervisor or designee shall place a production lock on the handle of a switch gear, chained valve wheel or blind, etc. The locking device will be put on in such a manner that will prevent movement of the handle to the on or open position and/or to prevent closer to bleeders and vents.
8. Operations will attach a "DO NOT OPERATE" tag to the production isolation lock(s). The tag will clearly indicate who is it isolated by, department, date isolated, item isolated, and state of the reason for isolation.
9. Following the application of lockout or tagout devices to energy isolating devices, all potentially hazardous stored or residual energy shall be relieved, disconnected, restrained

and otherwise rendered safe. If there is a possibility of reaccumulation of stored energy level, verification isolation shall be continued until the servicing or maintenance is completed, or until the possibility of such accumulation no longer exists.

10. Production lock(s) will be the first lock off prior to putting the equipment back in service.
11. Prior to starting work on machines or equipment that have been locked or tagged out; the authorized employee shall verify that isolation and de-energization of the machine or equipment have been accomplished.
12. All affective employees shall have the opportunity to witness the start button depressed or by the other positive means, observe that equipment cannot be energized.
13. Operations will press the "Start" button or switch at the local switch in the presence of all affected employees to verify that the equipment will not start. All switches will be returned to the "Off" position.
14. The affected employee's supervisor or designee will attach a "DANGER DO NOT OPERATE" tag to the local switch and/or isolation points stating, name, dept., date, and reason for the lockout.
15. Authorized employees shall place their "Personal Lock" and tag prior to beginning work on the isolated equipment and remove it at the end of their shift or unless the work is completed before the end of the shift.

NOTE

A production lock on equipment does not constitute a personal lockout for anyone. A personal lock is required in addition to a production lock.

16. The authorized employee shall log each personal lock they used for isolation on the Personal Lockout Log. Operations will provide and maintain the Personal Lockout Log at a designate post.
17. The authorized employee(s) locks will remain on the isolated equipment until completion of the assigned job and notify operations when the job has been completed, and their lock and tag have been removed along with all other associated locking devices.
18. The completed job will be inspected by the craft supervisor or designee, verifying the job is completed and all associated isolating devices are removed.
19. The use of lockout devices shall not be used on personal lockers, cabinets, tool boxes, etc.

C. Incomplete Work, Shift, or Personnel Changes

- In the event a job is not completed due to shift change for any other reason and the authorized employees remove their locks, the last employee per craft removing their lock shall place a work incomplete tag on the lockout clamp and state the reason for the incomplete work. The fact that the job is not completed must be communicated to the appropriate operator or designee. The next shift or affected employee to complete the work will follow the lockout/tagout procedure from the beginning as if it was a new job.
- If an authorized employee is called to a job that has already been locked out and they did not witness original test of lockout, the operator or designee for the area should be

contacted to re-initiate a lockout test.

EMERGENCY LOCK REMOVAL

A. If an individual's lock is accidentally left on a lock out device or the key for the lock is lost, the Safety Manager or designee can assume the responsibility of removing the lock by using a master key.
B. The Safety Manager or designee is the only one who can assume this responsibility.
C. It is the Forman's/Supervisor's responsibility to determine that the employee is not working on the equipment and has left the jobsite.
D. The Foreman/Supervisor must make a reasonable effort to contact the employee and document on the "Lock Removal Form"
E. The Foreman/Supervisor will secure the appropriate Supervisor's and Manager's signatures before the lock can be removed.
F. The Foreman is responsible for notifying the employee that the lock has been removed before the employee returns to work.

TRAINING

Each new hire employee will be trained in this procedure during initial safety orientation. This training provides employee with instructions regarding the purpose and use of the energy control procedure. Re-training will be conducted and documented as needed to keep affected employees informed of any changes in the program.

NOTE - Should a situation arise that is not covered by this procedure, the supervisor/foreman must be guided by its intent, which is simply that all employees be given positive protection from injury before repairing, altering, inspecting, or performing any kind of non routine work on the equipment.

A. Employee Training will include:
    - Recognition of hazardous energy sources
    - Type and magnitude of energy available
    - Methods and means necessary for energy isolation and control
    - When tagging systems are used
    - Limitations of tags
        - Tags are warning devices
        - Tags do not provide physical restraint
    - Removal of Tag
        - Must have authorization to remove a tag
    - Tag shall NEVER be ignored or defeated in anyway

B. Retraining is required when:
    - An employee has a change in job assignment.
    - There is a change in machines, equipment, or procedures.
    - There is a change in energy control procedures.

- A new hazard is introduced.
- If an employee can not demonstrate proficiency in implementing these procedures.

The retraining shall reestablish employee proficiency and introduce new or revised control methods and procedures, as necessary.

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

ELECTRICAL SAFETY PROGRAM

PURPOSE

The Electrical Safety program is designed to prevent electrically related injuries and property damage. This program also provides for proper training of maintenance employees to ensure they have the requisite knowledge and understanding of electrical work practices and procedures. Only employees qualified in this program may conduct adjustment, repair or replacement of electrical components or equipment.

SCOPE AND APPLICATION

This program covers all employees working for A3M Vacuum Service, Inc.

DEFINITIONS

Deenergized Parts --- Live parts to which an employee may be exposed shall be deenergized before the employee works on or near them, unless the employer can demonstrate that deenergizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations. Live parts that operate at less than 50 volts to ground need not be deenergized if there will be no increased exposure to electrical burns or to explosion due to electric arcs.

Energized Parts --- If the exposed live parts are not deenergized (i.e., for reasons of increased or additional hazards or infeasibility), other safety-related work practices shall be used to protect employees who may be exposed to the electrical hazards involved. Such work practices shall protect employees against contact with energized circuit parts directly with any part of their body or indirectly through some other conductive object. The work practices that are used shall be suitable for the conditions under which the work is to be performed and for the voltage level of the exposed electric conductors or circuit parts.

Qualified Worker --- An employee trained and authorized to conduct electrical work.

Unqualified --- Employees who have not been trained or authorized by management to conduct electrical work.

GENERAL

Safety-related work practices shall be employed to prevent electric shock or other injuries resulting from either direct or indirect electrical contacts, when work is performed near or on equipment or circuits which are or may be energized. The specific safety-related work practices shall be consistent with the nature and extent of the associated electrical hazards.

RESPONSIBILITIES

Management

- Provide training for qualified and unqualified employees.
- Conduct inspections to identify electrical safety deficiencies.
- Guard and correct all electrical deficiencies promptly.
- Ensure all new electrical installations meet codes and regulations.

Employees

- Report electrical deficiencies immediately.
- Not work on electrical equipment unless authorized and trained.
- Properly inspect all electrical equipment prior to use.

HAZARD CONTROLS

Safe work practices shall be employed to prevent electric shock or ther injuries resulting fron either direct or

indirect elecetrical contact when work is performed near or on equipment or circuits which are or may be energized.

WORKING ON OR NEAR EXPOSED DEENERGIZED PARTS

Conductors and parts of electric equipment that have been deenergized but have not been locked out or tagged shall be treated as energized or live parts.

1. Lockout and Tagging

While any employee is exposed to contact with parts of fixed electric equipment or circuits which have been deenergized, the circuits energizing the parts shall be locked out or tagged or both.

2. Procedures

A. Deenergizing Equipment

- Safe procedures for deenergizing circuits and equipment shall be determined before circuits or equipment is deenergized.
- The circuits and equipment to be worked on shall be disconnected from all electric energy sources. Control circuit devices, such as push buttons, selector switches, and interlocks, may not be used as the sole means for deenergizing circuits or equipment. Interlocks for electric equipment may not be used as a substitute for lockout and tagging procedures.
- Stored electric energy which might endanger personnel shall be released. Capacitors shall be discharged and high capacitance elements shall be short-circuited and grounded, if the stored electric energy might endanger personnel.
- **Note**: *If the capacitors or associated equipment are handled in meeting this requirement, they shall be treated as energized.*
- Stored non-electrical energy in devices that could reenergize electric circuit parts shall be blocked or relieved to the extent that the circuit parts could not be accidentally energized by the device.

B. Application of Locks and Tags

- A lock and a tag shall be placed on each disconnecting means used to deenergize circuits and equipment on which work is to be performed. The lock shall be attached so as to prevent persons from operating the disconnecting means unless they resort to undue force or the use of tools.
- Each tag shall contain a statement prohibiting unauthorized operation of the disconnecting means and removal of the tag.
- If a lock cannot be applied, or if the employer can demonstrate that tagging procedures will provide a level of safety equivalent to that obtained by the use of a lock, a tag may be used without a lock.
- A tag used without a lock shall be supplemented by at least one additional safety measure that provides a level of safety equivalent to that obtained by use of a lock. Examples of additional safety measures include the removal of an isolating circuit element, blocking of a controlling switch, or opening of an extra disconnecting device.
- A lock may be placed without a tag only under the following conditions:
  - Only one circuit or piece of equipment is deenergized, and
  - The lockout period does not extend beyond the work shift, and
  - Employees exposed to the hazards associated with reenergizing the circuit or equipment is familiar with this procedure.

C. Verification of Deenergized Condition

- The requirements of this paragraph shall be met before any circuits or equipment can be considered and worked as deenergized.
- A qualified person shall operate the equipment operating controls or otherwise verify that the equipment cannot be restarted.
- A qualified person shall use test equipment to test the circuit elements and electrical parts of equipment to which employees will be exposed and shall verify that the circuit elements and equipment parts are deenergized. The test shall also determine if any energized condition exists as a result of inadvertently induced voltage or unrelated voltage back feed even though specific parts of the circuit have been deenergized and presumed to be safe. If the circuit to be tested is over 600 volts, nominal, the test equipment shall be checked for proper operation immediately after this test.

D. Reenergizing Equipment

- These requirements shall be met, in the order given, before circuits or equipment is reenergized, even temporarily.
  - A qualified person shall conduct tests and visual inspections, as necessary, to verify that all tools, electrical jumpers, shorts, grounds, and other such devices have been removed, so that the circuits and equipment can be safely energized.
  - Employees exposed to the hazards associated with reenergizing the circuit or equipment shall be warned to stay clear of circuits and equipment.
  - Each lock and tag shall be removed by the employee who applied it or under his or her direct supervision. However, if this employee is absent from the workplace, then the lock or tag may be removed by a qualified person designated to perform this task provided that:
    - The employer ensures that the employee who applied the lock or tag is not available at the workplace, and
    - The employer ensures that the employee is aware that the lock or tag has been removed before he or she resumes work at that workplace.
    - There shall be a visual determination that all employees are clear of the circuits and equipment.

ENERGIZED EQUIPMENT

Work shall not be performed on exposed energized parts of equipment or systems until the following conditions are met:

1. Responsible supervision has determined that the work is to be performed while the equipment or systems are energized.
2. Involved personnel have received instructions on the work techniques and hazards involved in working on energized equipment.
3. Suitable personal protective equipment and safeguards (i.e., approved insulated gloves or insulated tools) are provided and used.

Only qualified persons may work on electric circuit parts or equipment that has not been deenergized. Such persons shall be made familiar with the use of special precautionary techniques, PPE, insulating & shielding materials and insulated tools.

TRAINING

Employees shall be trained in and familiar with the safety-related work practices required by that pertain to their respective job assignments.

Unqualified Employees

Training for Unqualified Employees is general electrical safety precautions to provide an awareness and

understanding of electrical hazards.

1. Employees who face a risk of electric shock but who are not qualified persons shall be trained & familiar with electrically related safety practices.
2. Employees shall be trained in safety related work practices that pertain to their respective job assignments.
3. Clearance distances. Unqualified employees must maintain clearance distances of 10' for 50kV plus 4" for every additional 10kV.

Qualified Employees

Qualified persons (i.e. those permitted to work on or near exposed energized parts) shall, at a minimum, be trained in and familiar with the following:

1. The skills and techniques necessary to distinguish exposed live parts from other parts of electric equipment.
2. The skills and techniques necessary to determine the nominal voltage of exposed live parts, and
3. The clearance distances specified in Tables 1 & 2 and the corresponding voltages to which the qualified person will be exposed.

TABLE 1
General Clearances Required from Energized Overhead High-Voltage Conductors

Nominal Voltage (Phase to Phase)	Minimum Required Clearance (Feet)
600…….50,000	6
Over 50,000…….345,000	10
Over 345,000…..750,000	16
Over 750,000…..1,000,000	20

TABLE 2
Alternating Current--Minimum Approach Distance

Voltage Range (Phase to Phase)	Minimum Approach Distance (Feet)
300V and less	Avoid Contact
Over 300V, not over 750V	1 ft 0 in (30.5 cm)
Over 750V, not over 2kV	I ft 6 in (46 cm)
Over 2kV, not over 15kV	2 ft 0 in (61 cm)
Over 15kV, not over 37kV	3 ft 0 in (91 cm)
Over 37kV, not over 87.5 kV	3 ft 6 in (107 cm)
Over 87.5kV, not over 121kV	4 ft 0 in (122 cm)
Over 121kV, not over 140 kV	4 ft 6 in (137 cm)

WORKING AT ELEVATED LOCATIONS

Any person working on electrical equipment on a crane or other elevated must take necessary precautions to prevent a fall from reaction to electrical shock or other causes. A second person, knowledgeable as a safety watch, must assume the best possible position to assist the worker in case of an accident. Portable ladders shall have non-conductive side rails if they are used where the employee or the ladder could contact exposed energized parts.

VEHICULAR AND MECHANICAL EQUIPMENT

Any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines shall be operated so that a clearance of 10 ft. (305 cm) is maintained. If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10kV over that voltage.
However, under any of the following conditions, the clearance may be reduced:

1. If the vehicle is in transit with its structure lowered, the clearance may be reduced to 4 ft. (122 cm). If the voltage is higher than 50kV, the clearance shall be increased 4 in. (10 cm) for every 10 kV over that voltage.
2. If insulating barriers are installed to prevent contact with the lines, and if the barriers are rated for the voltage of the line being guarded and are not a 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.

3. If the equipment is an aerial lift insulated for the voltage involved, and if the work is performed by a qualified person, the clearance (between the uninsulated portion of the aerial lift and the power line) may be reduced to the distance given in Table 2.

Employees standing on the ground may not contact the vehicle or mechanical equipment or any of its attachments, unless:

1. The employee is using protective equipment rated for the voltage; or
2. The equipment is located so that no uninsulated part of its structure (that portion of the structure that provides a conductive path to employees on the ground) can come closer to the line than permitted in Vehicular and Mechanical Equipment section of this program.

If any vehicle or mechanical equipment capable of having parts of its structure elevated near energized overhead lines is intentionally grounded, employees working on the ground near the point of grounding may not stand at the grounding location whenever there is a possibility of overhead line contact. Additional precautions, such as the use of barricades or insulation, shall be taken to protect employees from hazardous ground potentials, depending on earth resistivity and fault currents, which can develop within the first few feet or more outward from the grounding point.

ILLUMINATION

- Employees may not enter spaces containing exposed energized parts, unless illumination is provided that enables the employees to perform the work safely.
- Where lack of illumination or an obstruction precludes observation of the work to be performed, employees may not perform tasks near exposed energized parts. Employees may not reach blindly into areas which may contain energized parts.

CONFINED OR ENCLOSED WORK SPACES

When an employee works in a confined or enclosed space (such as a manhole or vault) that contains exposed energized parts, the employer shall provide, and the employee shall use, protective shields, protective barriers, or insulating materials as necessary to avoid inadvertent contact with these parts. Doors, hinged panels, and the like shall be secured to prevent their swinging into an employee and causing the employee to contact exposed energized parts.

CONDUCTIVE MATERIALS AND EQUIPMENT

Conductive materials and equipment that are in contact with any part of an employee's body shall be handled in a manner that will prevent them from contacting exposed energized conductors or circuit parts. If an employee must handle long dimensional conductive objects (such as ducts and pipes) in areas with exposed live parts, the employer shall institute work practices (such as the use of insulation, guarding, and material handling techniques) which will minimize the hazard.

CONDUCTIVE APPAREL

Conductive articles of jewelry and clothing (such a watch bands, bracelets, rings, key chains, necklaces, metalized aprons, cloth with conductive thread, or metal headgear) may not be worn if they might contact exposed energized parts. However, such articles may be worn if they are rendered nonconductive by covering, wrapping, or other insulating means.

PURPOSE

To protect all employees from fall exposure and injury, on walking and working surfaces, with the use of guardrails or covers. Each floor or wall opening, which creates a fall exposure shall be guarded or covered in accordance with OSHA Regulations 29 CFR 1910.23. This includes temporary openings.

SCOPE AND APPLICATION

To provide a working area free of fall exposure for employees to perform daily job tasks safely.

RESPONSIBILITY

It is the intent of this policy to establish that anyone who creates a hole is responsible for seeing that it is covered or barricaded before there is an exposure to other workers. This includes the employee who removes a temporary hole cover to perform work in that hole. When the work is completed, and before that employee leaves the immediate area of the hole, he or she is responsible for seeing that the hole is once again covered or hard barricaded.

DEFINITIONS

Floor Opening means an open space created by the removal of a portion of an upper level floor, at least 4 feet in height.

Wall Opening means an opening crated by the removal of a portion of a wall from a distance of 4 feet or greater from a working surface. Also, from the removal or from an unguarded portion of a handrail or fixed ladder.

GENERAL GUIDELINES

A. Protection For Floor Openings

- Every floor opening shall be guarded by a standard railing constructed with a top rail,
- Each rail shall have a vertical height of 42 inches nominal from upper surface to top rail to floor, platform, runway, or ramp level.
- The intermediate rail shall be approximately halfway between the top rail and the surface.
- The ends of the rail shall not overhang the terminal posts except where such overhang does not constitute a projection hazard.
- Every ladder way floor opening or platform shall be guarded by a standard railing with standard toe board on all exposed sides (except at entrance to opening), with the passage through the railing either provided with a swinging gate or so offset that a person cannot walk directly into the opening.
- A removable railing with toe board on not more than two sides of the opening and fixed standard railings with toe boards on all other exposed sides. The removable railings shall be kept in place when the opening is not in use.
- Where operating conditions necessitate the feeding of material into any opening,

protection shall be provided to prevent a person from falling through the opening.

- Every manhole floor opening shall be guarded by a standard manhole cover which needs to be hinged in place. While the cover is not in place, the manhole opening shall be constantly attended by someone or shall be protected by removable standard railings.
- Every temporary floor opening shall have standard railings, or shall be constantly attended by someone.
- Every floor hole into which persons can accidentally walk shall be guarded by either:
  - A standard railing with standard toe board on all exposed sides, or
  - A floor hole cover of standard strength and construction. While the cover is not in place, the floor hole shall be constantly attended by someone or shall be protected by a removable standard railing.
- Every floor hole into which persons cannot accidentally walk (on account of fixed machinery, equipment, or walls) shall be protected by a cover that leaves no openings more that 1 inch wide. The cover shall be securely held in place to prevent tools or materials from falling through.
- Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall be securely held in place to prevent tools or materials from falling through.
- Where doors or gates open directly on a stairway, a platform shall be provided, and the swing of the door shall not reduce the effective width to less than 20 inches.

B. Protection For Wall Openings

- Every wall opening from which there is a drop of more than 4 feet shall be guarded by one of the following:
  - Rail, half door, or equivalent barrier. Where there is exposure below to falling materials, a removable toe board or the equivalent shall also be provided. When the opening is not in use for handling materials, the guard shall be kept in position regardless of a door on the opening. In addition, the grab handle shall be provided on each side of the opening with its center approximately 4 feet above floor level and of standard strength and mounting.
  - Extension, platform onto which materials can be hoisted for handling, and which shall have side rails or equivalent guards of standard specifications.
  - Every temporary wall opening shall have adequate guards but these need not be of standard construction.
  - Where there is a hazard of material falling through a wall hole, and the lower edge of the near side of the hole is less than 4 inches above the floor, and the far side of the hole more than 5 feet above the next lower level, the hole shall be protected by a standard toe board, or an enclosing screen.
- Every open-sided floor or platform 4 feet or more above adjacent floor or ground level shall be guarded by a standard railing on all sides except where there is entrance to a ramp, stairway, or fixed ladder. The railing shall be provided with a toe board beneath the open sides, wherever:
  - Persons can pass
  - There is moving machinery, or

- There is equipment with which falling materials could create a hazard.

- Regardless of height, open-sided floors, walkways, platforms, or runways above or adjacent to dangerous equipment, tanks, units and similar hazards shall be guarded with a standard railing and toe board.

C. Stairway, Railings, and Guards

- Every flight of stairs having four or more risers shall be equipped with standard stair railings or standard handrails, the width of the stair to be measured
  - On stairway less than 44 inches wide having both sides enclosed, at least one handrail, preferably on the right side descending.
  - On stairway more than 44 inches wide but less than 88 inches wide, one handrail on each enclosed side and one stair railing on each open side.
- A stair railing shall be constructed similar to a standard railing but the vertical height shall not be more than 34 inches nor less than 30 inches form upper surface of top rail to surface.
- All handrails and railings shall be provided with a clearance of not less than 3 inches between the handrail or railings and any other object.

D. Material

- For pipe railings, posts, and top and intermediate railings shall be at least 1 ½ inches nominal diameter with posts spaced not more than 8 feet on centers.
- For structural steel railings, posts, and top and intermediate rails shall on of 2 inch by 2 inch by 3/8 inch angles or other metal shapes of equivalent bending strength with posts spaced not more than 8 feet on centers.
- The anchoring of posts and framing of members for railings of all types shall be of such construction that the completed structure shall be capable of withstanding a load of at least 200 pounds applied in any directions at any point on the top rail.
- Other types, sizes, and arrangements of railing construction are acceptable provided they withstand at least the minimum requirement of 200 pounds top rail pressure.
- A standard toe board shall be 4 inches nominal in vertical height from its top edge to the level of the floor, platform, runway, or ramp. It shall be securely fastened in place and with not more than 1/4-inch clearance above floor level. It may be made of any substantial material either solid or with openings not over 1 inch in greatest dimension.
- When material is piled to such height that a standard toe board does not provide protection, paneling from floor to intermediate rail, or to top rail shall be provided.
- Floor opening covers may be of any material that meets strength requirements of OSHA CFR 1910.23(e).
- Wall opening barriers shall be of such construction and mounting that, when in place at the opening, the barrier is capable of withstanding a load of at least 200 pounds applied in any direction (except upward) at any point on the top rail or corresponding member.
- Wall opening screens shall be of such construction and mounting that they are capable of withstanding a load of at least 200 pounds applied horizontally at any point on the near side of the screen.

PURPOSE

This program was developed to create some guidelines to reduce the chance for incidents / accident injury in our use of ladders / stairways. These essential means of reaching elevations can be safe and easy when the application is conducted properly. There are several different styles or types that this program will address.

SCOPE AND APPLICATION

Compliance of these guidelines should enable all employees at A3M Vacuum Service to safely ascend and descend ladders and stairways in a safe manner.

RESPONSIBILITIES

It is the responsibility of all employees to comply and practice the guidelines set forth in this program to ascend and descend stairs and ladders safely.

LADDER GENERAL SAFETY

- Ladders shall not be loaded beyond the maximum intended load for which they were built, or beyond the manufacturer's rated capacity.
- Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement.
- Ladders shall not be moved, shifted or extended while occupied.
- Ladders with structural defects or other faulty or defective components shall be immediately withdrawn from service until repaired.
- Don not work less than three (3) rungs from the top of a straight extension ladder.
- Step ladders are not to be used as straight ladders.
- Ladders shall be placed out of passageways.
- The side rails shall extend not less than 36 inches above the upper landing surface. When this is not practical, the ladder shall be secured at its top to a rigid support that will not move and grab rails may be installed.
- All ladders shall be rigid and shall not be spliced.
- Safe practices for ascending and descending ladders:
    1. Always face the ladder, use hands; if material must be handled, use a rope or bucket hoist to lift material. Grab rails instead of rungs when ascending or descending ladders.
    2. Be sure your shoes, hands, or gloves are free from mud, grease, or other slippery material.
    3. Only one person on a ladder at all times.
    4. All ladders should be inspected by user prior to each use.

PORTABLE LADDERS

A. General Requirements

- Workers must face the ladder when ascending or descending and shall use both hands.
- Only one worker at a time is allowed to use a ladder.
- Independent ladders are not to be tied or fastened together.
- Rungs / steps of portable and fixed ladders must be corrugated, dimpled or treated with a skid resistant material.
- Ladder rungs, cleats, and steps of portable and fixed ladders shall be parallel, level and uniformly spaced to meet OHSA/ANSI specifications when the ladder is in use.
- Ladders shall be kept clean and must not be painted, other than manufacturer design and shall not be scribed for identification.
- Do not reach further than arms length from a ladder.
- All ladders (Straight and Step) must be equipped with a 6 foot tie off rope.
- The tie off rope must be used to secure the ladder against tipping or a second worker must hold

the ladder securely while in use.
- Ladders shall not be placed in a horizontal position and used as a runway, platform, or scaffold.
- Ladder shall be used only for the purpose for which they are designed.
- Do not place ladders on top of boxes, barrels, crates, etc.
- Fall protection is required for employees who engage in work from a ladder when a potential fall of six (6) feet or more are required to comply with the A3M Fall Protection Policy.

When Using Fixed Ladders, Employees shall:
- be prohibited from carrying equipment or materials which prevent the safe use of ladders;
- be required to face the ladder when ascending and descending;
- always use both hands when climbing up or down the ladder; and
- be prohibited from using single-rail ladders.

Ladders shall be capable of supporting the following loads without failure:
- Each self-supporting portable ladder: At least four times the maximum intended load, except that each extra-heavy-duty type 1A metal or plastic ladder shall sustain at least 3.3 times the maximum intended load. The ability of a ladder to sustain the loads indicated in this paragraph shall be determined by applying or transmitting the requisite load to the ladder in a downward vertical direction. Ladders built and tested in conformance with the applicable provisions of appendix A of this subpart will be deemed to meet this requirement.
- Each portable ladder that is not self-supporting: At least four times the maximum intended load, except that each extra-heavy-duty type 1A metal or plastic ladders shall sustain at least 3.3 times the maximum intended load. The ability of a ladder to sustain the loads indicated in this paragraph shall be determined by applying or transmitting the requisite load to the ladder in a downward vertical direction when the ladder is placed at an angle of 75 1/2 degrees from the horizontal. Ladders built and tested in conformance with the applicable provisions of appendix A will be deemed to meet this requirement.
- Each Fixed ladder: At least two loads of 250 pounds (114 kg) each, concentrated between any two consecutive attachments (the number and position of additional concentrated loads of 250 pounds (114 kg) each, determined from anticipated usage of the ladder, shall also be included), plus anticipated loads caused by ice buildup, winds, rigging, and impact loads resulting from the use of ladder safety devices. Each step or rung shall be capable of supporting a single concentrated load of least 250 pounds (114 kg) applied in the middle of the step or rung. Ladders built in conformance with the applicable provisions of appendix A will be deemed to meet this requirement.
- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced when the ladder is in position for use.

STEPLADDERS

General Requirements
- Employees must not use the top or top step of a stepladder.
- Stepladders must not be used as straight ladders.
- Stepladders shall be fully spread, placed on a level surface and locked open when in use.
- Workers on a stepladder with a potential fall of six (6) feet or more are required to comply with the A3M Fall Protection Policy.

Types

Wood Stepladders — OSHA has strict guidelines for construction of wood stepladders. Do not attempt to construct a wood stepladder unless you have been trained in these guidelines. Wood stepladders must be inspected regularly for damage such as cracks, splits, splinters, and broken metal supports. Do not use any wood stepladder that has been damaged.

Fiberglass Stepladders — Fiberglass stepladders are easily damaged by excessive heat and corrosives, resulting in cracks. It is important to take this into consideration when performing an inspection.

STRAIGHT LADDERS

A. Straight ladders are used primarily as temporary access to different level heights. Types of straight ladders that are available:

◆ Wood ◆ Metal ◆ Fiberglass ◆ Job-Made

B. General Requirements (Straight Ladders)

- Employees shall not work higher than the third rung from the top on straight or extension ladders.
- Straight ladders shall not be used unless equipped with non-slip base / feet.
- Each straight ladder must be able to support four (4) times the maximum intended load.
- Straight ladders must be tied off at the top to prevent tipping.
- Straight ladders are required to extend at least 3 feet (36", or 3 rungs) above the landing.
- Ladders shall be placed at such a pitch that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter (4:1 ratio) of the working length of the ladder.
- The length of a single straight ladder can not exceed 30 feet.
- Fall protection is required for all employees working from a ladder when a potential fall of 6 feet or more exists.

WOOD AND JOB-MADE LADDERS

A. General Requirements

OSHA regulations currently states that job-made ladders must comply with ANSI Standard A14.4-1979. Check these requirements prior to constructing a ladder.

- Single cleat ladders shall not exceed 30 feet in length.
- Double cleat ladders shall not exceed 24 feet in length.
- The width of single cleat ladders shall be at least 15 inches, but not more than 20 inches.
- Side rails shall be parallel or flared top to bottom by not more than one-quarter of an inch for each two feet of length.
- Cleats shall be uniformly spaced, 12" apart.
- Cleats shall be inset into the edges of the side rails one-half inch, or filler blocks shall be used.
- Cleats shall be secured to each rail with three 10D common wire nails or equivalent.
- Job-Made ladders may be used in excavations only and will be observed for compliance during daily excavation inspections.

FIXED STAIRWAYS

A. Fixed stairways include interior and exterior stairs around machinery, tanks, and other equipment. They also include stairs leading to or from floors, platforms, or pits. Fixed stairs are required where operations result in regular travel between levels, or where access is required routinely (daily, each shift).

- Spiral stairways are not permitted.
- Fixed stairs must be able to sustain a load 5 times the expected load, but no less than 1,000 pounds.
- Fixed stairs must have a minimum width of 22".
- All treads must be protected with a slip-resistant finish or coating.
- Vertical clearance above any stair tread must be at least 7 feet.

B. Stairway Handrails

All stairways with four or more risers are required to have handrails. Other handrail requirements are:

- The handrail height must be between 30-37 inches.
- Stairways less than 44 inches wide with both sides enclosed require at least one handrail.
- A stairway less than 44 inches wide, with one side open and other side enclosed requires a handrail on the open side.
- A stairway less than 44 inches wide and open on both sides requires a handrail on each side.
- Stairways more than 44 inches wide, but less than 88 inches wide, require a handrail on each side.
- Stairways 88 inches wide or greater require handrails on each side and in the center.
- Handrails must be able to sustain at least a 200 pound load applied in any direction.
- Midrails must be located at a height midway between the top edge of the stairway system and the step.

INSPECTIONS

OSHA and A3M requirements state that a documented ladder inspection be performed by a competent person for visible deflects on a periodic basis and after any occurrence that could affect their safe use. Additionally, ladders must be inspected prior to each use. All documented inspections must be submitted to the Safety Department.

A. Items to Inspect

- ◆ Cleats
- ◆ Rails
- ◆ Rungs
- ◆ Hooks, Hinges (Hardware)
- ◆ Tie-Off Rope (6 Feet)
- ◆ Rivets (Shear)

If a ladder falls, tips over, or is subjected to other damage, it is required to be inspected immediately.
Portable and fixed ladders with structural defects, such as, but not limited to, broken and missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components. They shall be immediately marked in a manner that readily identifies it as defective, or be tagged “DO NOT USE,” and shall be removed from service until repaired or discarded.

MAINTENANCE AND STORAGE

A. General Requirements

- Straight ladders should be hung horizontally and supported every 6 feet.
- Ladders should be stored in a well ventilated area away from extreme heat or cold.
- Do not store items on top of ladders.
- Clean and lubricate the ladder’s moving parts.
- Keep rungs and steps free from oil and dirt.
- When transporting, make sure both ends are secure to prevent road shock.

PURPOSE

The development of these guidelines in the proper use of hand and power tools is to assist all employees conducting job tasks to comply with CFR 1926.300 “Tools — Hand and Power”.

SCOPE AND RESPONSIEILITIIES

The proper use of power and hand tools will enable all employees to conduct job tasks properly and safely. These actions will allow A3M to remain in a productive mode in its day to day operations.

RESPONSIBILITIES

It is the responsibility of all employees to verify the tools they work with is in acceptable working condition. This includes personal tools as well as company owned tools. All electrical hand tools must be inspected by a competent qualified person to comply with the A3M Assured Grounding. All employees shall verify this inspection and the condition of all tools prior to each use.

DEFINITIONS

Hand Tool is an object of various shape and size used to repair, replace, adjust, modify, etc., equipment machinery to remain in an operational mode.

Power Tool is an object that is energized by a source of power to repair, replace, adjust, modify, etc., equipment I machinery, etc., to remain in an operational mode.

****Pneumatic Tool*** is an air powered tool driven by compressed air.

GENERAL

All hand and power tools and similar equipment, whether furnished by the employer or the employee, shall be used only for the purpose for which they are designed and be maintained in a safe condition. Employees using hand and power tools and are exposed to the hazards of falling, flying, abrasive, and splashing objects, or exposed to harmful dusts, fumes, mists, vapors, or gases, shall be provided with the particular personal protective equipment necessary to protect them from the hazard.

Any tool found not to be in proper working order, or any tool that develops a defect during use, will be immediately removed from service, and tagged indicating the defect, and will not be used until properly repaired. The fluid used in hydraulic powered tools will be fire-resistant fluids, approved under schedule 20 of the Bureau Of Mines, U.S. Department of the Interior, and will retain its’ operating characteristics at the most extreme temperatures to which it will be exposed. The manufacturer’s safe operating pressures for hoses, valves, pipes, filters, and other fittings will not be exceeded.

Guarding

When power operated tools are designed to accommodate guards, they shall be equipped with such guards when in Belts, gears, shafts, pulleys, sprockets, spindles, drums, fly wheels, chains, or other

reciprocating, rotating or moving parts of equipment shall be guarded if such parts are exposed to contact by employees or otherwise create a hazard. *All pneumatic power tools shall be secured to the hose by some positive means to prevent the tool from becoming disconnected. Compressed air shall nor be sued to cleaning purposes. No A3M employee shall exceed the manufacturers' safe operating pressure.

Personal Protective Equipment
Protective equipment, including personal protective equipment for eyes, face, head, ears and extremities, protective clothing, respiratory devices, and protective shields and barriers, shall be provided, used, and maintained in a sanitary and reliable condition wherever it is necessary by reason of hazards of processes or environment, chemical hazards, radiological hazards, or mechanical irritants encountered in a manner capable of causing injury or impairment in the function of any part of the body through absorption, inhalation or physical contact.

Training

The employer shall provide training to each employee who is required by this section to use PPE. Each such employee shall be trained to know at least the following:

- When PPE is necessary;
- What PPE is necessary;
- How to properly don, doff, adjust, and wear PPE;
- The limitations of the PPE; and,
- The proper care, maintenance, useful life and disposal of the PPE.

TOOL REQUIREMENTS

Hand Tools

Wood handles that are loose, cracked or splintered will be replaced. Taping or lashing them with wire will not be permitted. Wrenches, including adjustable pipe, end, and socket wrenches, shall not be used when jaws are sprung to the point that slippage occurs. The wooden handles of tools shall be kept free of splinters or cracks and shall be kept tight in the tool. Impact tools, such as drift pins, wedges, hammers, and chisels, shall be kept free of mushroomed heads. The use of cheaters is forbidden.

Electrical Tools

- The insulation on hand tools will not be depended upon to prevent users from shock. All electrical hand tools will be equipped with a good case ground and 3-wire cords, or is double insulated.
- All electric tools and cord sets will be inspected in accordance with the assured equipment grounding procedure included in this manual.
- All electrical tools and cord sets will be inspected in accordance with the Assured Equipment Grounding Procedure included in this manual.

- Electric power tools shall be of the approved double-insulated type or be equipped with a good case ground and 3-wire cords. The use of electric cords or hoses for hoisting or lowering tools shall not be permitted.

Abrasive Tools, Wheels and Wire Brushes

- All grinding wheels and machines should be under the supervision of a competent person why will see to their proper mounting, care, and inspection. Grinding wheels should be removed from service when excessive wear or defects occur.
- Eye and face protection must be used whenever working with or near grinding machines.
- Only the proper rpm wheel will be mounted on a grinder. Check the plate on the grinder for RPMs to see if it matches RPMs on the wheel. All abrasive wheels will be closely inspected and ring-tested before mounting to ensure that they are free from cracks or defects. Grinding wheels will fit freely on the spindle and will not be forced on. The spindle nut will be tightened only enough to hold the wheel in place.

Portable Grinders or Disc Sanders

- A suitable shield will be maintained to cover approximately 75 percent of the outer edge of the wheel or bar.
- Flange type guards will be provided when portable abrasive wheels are used for internal grinding.
- Cup type wheels used for external grinding will be protected by either a revolving cup guard or a band type guard.
- Guards may be removed for specific tasks, provided that:
  1. The guard may be temporarily attached to the cord during use to prevent loss.
  2. The guard is replaced immediately upon completion of the specific task.

Bench or Pedestal Grinders

- If belt driven, will have a belt guard.
- The guard will completely enclose the wheel except for 125 degrees maximum exposure at the tool rest.
- The tool rest will be maintained at 1/8-inch clearance to the wheel.
- The tongue guard will be maintained at ¼-inch to the wheel.
- All hand held grinders shall have side handles.

FUEL POWERED TOOLS

All fuel powered tools must be shut down while being refueled. Other nearby sources of ignition such as burning and welding, also must be halted during refueling operation. When fuel powered tools are used in enclosed spaces, the applicable requirements for concentrations of toxic gases and use of personal protective equipment shall apply.

PURPOSE

This program has been developed in compliance with the requirements set forth in 29 CFR 1910.1200 Hazard Communication to ensure that the hazards of all materials handled by A3M are evaluated and that information concerning these hazards is transmitted to employees.

SCOPE AND APPLICATION

This program describes how A3M will assess the hazards associated with hazardous materials. It details the methods used to perform the hazard analysis and for communicating the results to employees, contractors, and customers.

The program applies to any hazardous material, which is known to be in the workplace in such a manner that employees may be exposed under normal work conditions.

This program does not apply to:

- food;
- medications or medical devices;
- hazardous wastes as defined by RCRA;
- tobacco or tobacco products
- biologic hazards;
- cosmetics;
- consumer products;
- hazardous substances as defined by CERCLA;
- ionizing and nonionizing radiation;
- articles

RESPONSIBILITIES

Employees

- Become familiar with the hazards of the materials used in the workplace;
- Become familiar with the indicators of exposure to hazardous materials;
- Adhere to the work practice and PPE requirements specified by the label or SDS (Safety Data Sheet) for the safe handling of hazardous materials;
- Use only properly labeled containers for transforming and dispensing hazardous materials;
- Inform his/her supervisor immediately when exposure is suspected to have occurred.
- Management
- Ensure the implementation of the A3M Hazard Communication Program;
- Ensure the availability of resources (funding, equipment, personnel, etc.) necessary to successfully implement the Hazard Communication Program.

Safety

- Present initial Hazard Communication Training;
- Perform periodic workplace inspections to verify compliance.

Supervisors/Operators

- Identify hazardous materials used by employees;
- Communicate hazard information to employees whenever materials that represent a new hazard are introduced into the work area;
- Ensure that SDS for hazardous materials used by employees are readily available to the employees while in the work area;
- Ensure that hazardous materials used by employees are labeled in accordance with this program.

DEFINITIONS

Article - means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a

hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.

Chemical - means any element, chemical compound or mixture of elements and/or compounds.

Chemical manufacturer - means an employer with a workplace where chemical(s) are produced for use or distribution.

Chemical name - means the scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) rules of nomenclature, or a name which will clearly identify the chemical for the purpose of conducting a hazard evaluation.

Combustible liquid - means any liquid having a flashpoint at or above 100 deg. F (37.8 deg. C), but below 200 deg. F (93.3 deg. C), except any mixture having components with flashpoints of 200 deg. F (93.3 deg. C), or higher, the total volume of which make up 99 percent or more of the total volume of the mixture.

Common name - means any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Container - means any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical. For purposes of this section, pipes or piping systems, and engines, fuel tanks, or other operating systems in a vehicle, are not considered to be containers.

Designated representative - means any individual or organization to which an employee gives written authorization to exercise such employee's rights under this section. A recognized or certified collective bargaining agent shall be treated automatically as a designated representative without regard to written employee authorization.

Employee - means a worker who may be exposed to hazardous chemicals under normal operating conditions or in foreseeable emergencies. Workers such as office workers or bank tellers who encounter hazardous chemicals only in non-routine, isolated instances are not covered.

Employer - means a person engaged in a business where chemicals are either used, distributed, or are produced for use or distribution, including a contractor or subcontractor.

Explosive - means a chemical that causes a sudden, almost instantaneous release of pressure, gas, and heat when subjected to sudden shock, pressure, or high temperature.

Exposure or exposed - means that an employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

Flammable - means a chemical that falls into one of the following categories:

1. Aerosol, flammable - means an aerosol that yields a flame projection exceeding 18 inches at full valve opening, or a flashback (a flame extending back to the valve) at any degree of valve opening;
2. Gas, flammable - means:
   A. A gas that, at ambient temperature and pressure, forms a flammable mixture with air at a concentration of thirteen (13) percent by volume or less; or
   B. A gas that, at ambient temperature and pressure, forms a range of flammable mixtures with air wider than twelve (12) percent by volume, regardless of the lower limit;
3. Liquid, flammable - means any liquid having a flashpoint below 100 deg. F (37.8 deg. C), except any mixture having components with flashpoints of 100 deg. F (37.8 deg. C) or higher, the total of which make up 99 percent or more of the total volume of the mixture.
4. Solid, flammable - means a solid, other than a blasting agent or explosive that is liable to cause fire through friction, absorption of moisture, spontaneous chemical change, or retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious hazard. A chemical shall be considered to be a flammable solid if it ignites and burns with a self-sustained flame at a rate greater than one-tenth of an inch per second.

Foreseeable emergency - means any potential occurrence such as, but not limited to, equipment failure, rupture of containers, or failure of control equipment which could result in an uncontrolled release of a hazardous chemical into the workplace.

Hazardous chemical - means any chemical which is a physical hazard or a health hazard.

Hazard warning - means any words, pictures, symbols, or combination thereof appearing on a label or other appropriate form of warning which convey the specific physical and health hazard(s), including target organ effects, of the chemical(s) in the container(s). (See the definitions for "physical hazard" and "health hazard" to determine the hazards which must be covered.)

Health hazard - means a chemical for which there is statistically significant evidence based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens, toxic or highly toxic agents, reproductive toxins, irritants, corrosives, sensitizers, hepatotoxins, nephrotoxins, neurotoxins, agents which act on the hematopoietic system and agents which damage the lungs, skin, eyes, or mucous membranes.
Label **-** means any written, printed, or graphic material displayed on or affixed to containers of hazardous chemicals.
Physical hazard - means a chemical for which there is scientifically valid evidence that it is a combustible liquid, a compressed gas, explosive, flammable, an organic peroxide, an oxidizer, pyrophoric, unstable (reactive) or water-reactive.
****Safety Data Sheet*** **–** means a document that lists the properties of each chemical:, the physical, health and environmental health hazards: protective measures and safety precautions.
Trade secret - means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.
Work area - means a room or defined space in a workplace where hazardous chemicals are produced or used, and where employees are present.
Workplace - means an establishment, job site, or project, at one geographical location containing one or more work areas.

HAZARD DETERMINATION

Incoming Hazardous Materials

A3M shall rely upon the SDS information provided by the customer, chemical manufacturer, or distributor when evaluating the hazards associated with materials handled by A3M.

WRITTEN HAZARD COMMUNICATION PROGRAM

1. Employers shall develop, implement, and maintain at the workplace a written hazard communication program for their employees for labels and other forms of warning, safety data sheets, and employee information and training will be met, and which also includes the following:
   A. A list of the hazardous substances known to be present using an identity that is referenced on the appropriate safety data sheet (the list may be compiled for the workplace as a whole or for individual work areas);
   B. The methods the employer will use to inform employees of the hazards of non-routine tasks (for example, the cleaning of reactor vessels), and the hazards associated with substances contained in unlabeled pipes in their work areas.
2. In multi-employer workplaces, the written hazard communication program shall include the methods employers will use to inform any employers sharing the same work area of the hazardous substances to which their employees may be exposed while performing their work, and any suggestions for appropriate protective measures, including the following:
   A. The methods the employer will use to provide the other employer(s) with access to the SDS, or to make it available at a central location in the workplace, for each hazardous substance the other employer(s)' employees may be exposed to while working;
   B. The methods the employer will use to inform the other employer(s) of any precautionary measures that need to be taken to protect employees during the workplace's normal operating conditions and in foreseeable emergencies; and,
   C. The methods the employer will use to inform the other employer(s) of the labeling system used in the workplace.
3. The employer shall make the written hazard communication program available, upon request, to employees.

LABELS AND OTHER FORMS OF WARNING

Container labels should contain the following information:

- Identity of hazardous chemicals
- appropriate hazard warnings

- name & address of the chemical manufacturer, importer or other responsible party

NON-ROUTINE TASKS

A non-routine task is any task that is performed by the employee on an infrequent basis such that the employee may not be readily familiar with the hazards associated with performing the work. For such operations, a review of the potential hazards and associated protective measures is a necessary job step.

For all work identified as a non-routine task, the supervisor shall conduct a pre-job briefing. All employees anticipated to perform work in association with the non-routine task must attend a pre-job briefing before beginning work.

The supervisor will review the following information during the pre-job briefing:

- work scope;
- location of the job;
- anticipated duration of the job;
- hazards associated with each phase of work;
- necessary precautions (i.e., buddy system, PPE, air monitoring, etc.);
- emergency procedures and contacts.

Job Safety Analysis (JSA) shall be prepared by the supervisor/operator. The completed JSA shall be displayed at the job site for the duration of the job.

SAFETY DATA SHEETS (SDS)

SDS provide critical information regarding indentifying the chemical, the hazards associated with a material, the compositions of the chemical, the first aid measures of the chemical, the precautions necessary to minimize exposure of the chemical, and procedures for responding to emergency situations, and the handling and storage of the chemical. All A3M Customers should maintain a SSDS for all hazardous materials used or produced at their facility. SSDSs shall be maintained and readily accessible in each work area. SDSs can be maintained at the primary work site. However, they should be available in case of an emergency. SDS must be made available, upon request, to employees, their designated representatives, the Assistant Secretary & the Director.

INFORMATION AND TRAINING

A3M shall provide employees with training on hazardous materials in their work area. General information pertaining to the A3M Hazardous Communications Program including the following will be presented by the Safety Department during new employee orientation:

- Operations performed where hazardous materials may be present;
- SDS and labeling requirements;
- The location and availability of the A3M Hazard Communication Program.

More specific training will be provided by the supervisor in each work area where exposure to hazardous materials is anticipated and will include at least:

- Methods and observations to be used to detect the presence or release of hazardous materials in the work area;
- Physical and health hazards;
- Necessary protective measures including engineering controls, work practices, and PPE;
- Details of the A3M Hazard Communication Program, including information on how to properly obtain information from labels and SDS.

This training will be provided at the time of initial assignment and whenever a new physical or chemical hazard is introduced into the work area.

PURPOSE

This Benzene Exposure Control Program delineates the policies and procedures in place to minimize occupational benzene exposures while working in plants or areas that contain benzene. It has been developed in accordance with the OSHA Benzene Standard (29CFR 1910.1028).

SCOPE AND APPLICATION

This program applies to all A3M occupational exposures to benzene.

RESPONSIBILITIES

A. Employees (with occupational exposure)
- Understand the effects of benzene exposure;
- Adhere to program requirements;
- Immediately report any unsafe conditions or suspected exposures to supervision;
- Successfully complete mandatory initial and annual benzene training.

B. Safety
- Train employees;

C. Supervisors
- Determine if work may expose employees to benzene;
- Identify employees who may have occupational exposure to benzene;
- Enroll affected employees in Medical Surveillance Program;
- Implement engineering control, work practices and PPE requirement of this program;
- Ensure employee compliance with requirements of this program with particular attention to respiratory protection, protective clothing, and hygiene practices;.

DEFINITIONS

Action level means an airborne concentration of benzene of 0.5 ppm calculated as an 8-hour time-weighted average indicating the need to implement measures to minimize exposures.

Authorized person means any person specifically authorized by the employer whose duties require the person to enter a regulated area.

Benzene (C6H6) (CAS Registry No. 7 1-43-2) means liquefied or gaseous benzene and includes benzene in liquid mixtures and the benzene vapors released by these liquids.

Container means any barrel, bottle, can, cylinder, drum, reaction vessel, storage tank, or the like, but does not include piping systems.

Emergency means any occurrence such as, but not limited to, equipment failure, ruptures of containers,

or failure of control equipment that may or does result in the unexpected significant release of benzene.

Employee exposure means exposure to airborne benzene that would occur if the employee were not using respiratory protection.

Occupational exposure means reasonably anticipated employee exposure in excess of the Action Level while performing work.

Permissible exposure limits (PELs) means an airborne concentration of either the 8-hour time-weighted average (TWA) limit of 1 part benzene per million parts of air (ppm) or the 15-miniute short-term exposure limit (STEL) of 5 ppm.

Regulated area means any area where airborne concentrations of benzene exceed or can be reasonably expected to exceed the permissible exposure limits of 1 ppm 8-hour TWA or 15- minute 5 ppm STEL.

Vapor control system means any equipment used for containing the total vapors displaced during the loading of gasoline, motor fuel or other fuel tank trucks and the displacing of these vapors through a vapor processing system or balancing the vapor with the storage tank. This equipment also includes systems containing the vapors displaced from the storage tank during the unloading of the tank truck which balance the vapors back to the tank truck.

APPEARANCE AND ODOR

Benzene is a clear, colorless liquid with a pleasant, sweet odor. The odor of benzene does not provide adequate warning of its hazard.

HEALTH HAZARD DATA

A. Ways in which benzene affects your health.

2. Benzene can affect your health if you inhale it, or if it comes in contact with your skin or eyes.
3. Benzene is also harmful if you happen to swallow it.

B. Effects of Overexposure.

1. Short-term (acute) Overexposure: If you are overexposed to high concentrations of benzene, well above the levels where its odor is first recognizable, you may feel breathless, irritable, euphoric, or giddy; you may experience irritation in your eyes, nose, and respiratory tract. You may develop a headache, feel dizzy, nauseated, or intoxicated. Severe exposures may lead to convulsions and loss of consciousness.

2. Long-term (chronic) Exposure: Repeated or prolonged exposure to benzene, even at relatively low concentrations, may result in various blood disorders, ranging from anemia to

leukemia, an irreversible, fatal disease. Many blood disorders associated with benzene exposure may occur without symptoms.

REGULATED AREAS

Regulated areas shall be established wherever the airborne concentration of benzene exceeds or can reasonably be expected to exceed either the 1 ppm PEL or the 5 ppm STEL. Industrial Hygiene shall establish the perimeter of each regulated area based on the results of either TWA or STEL air monitoring. Entrances to regulated areas shall be barricaded and posted with signs containing the language specified by this program.

Access to regulated areas is restricted to authorized persons. No one shall enter a regulated area without the required respiratory protection.

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.

Some examples may include, but not limited to:
1. Petroleum refining sites
2. Tank gauging (tanks at producing, pipeline & refining operations)
3. Field maintenance

EXPOSURE MONITORING

A. Medical Requirements

If you are exposed to benzene at a concentration at or above 0.5 ppm as an 8-hour time weighted average, or have been exposed above 10 ppm in the past while employed by your current employer, your employer is required to provide an initial medical examination and history and laboratory tests and annually thereafter. These tests shall be provided without cost to you. In addition, if you are accidentally exposed to benzene (either by ingestion, inhalation, or skin/eye contact) under emergency conditions known or suspected to constitute toxic exposure to benzene, your employer is required to make special laboratory tests available to you.

B. Observation of Monitoring

Your employer is required to perform measurements that are representative of your exposure to benzene and you or your designated representative is entitled to observe the monitoring procedure. You are entitled to observe the steps taken in the measurement procedure and to record the results obtained. When the monitoring procedure is taking place in an area where respirators or personal protective clothing and equipment are required to be worn, you or your representative must also be provided with, and must wear the protective clothing and equipment.

C. Full-shift Monitoring

Work areas where exposure is likely will be identified. A representative number of full- shift breathing zone samples will be collected for each job title with occupational exposure in each area. The results of the analyses will be compared with the 8-hour TWA PEL. Specific tasks involving potential benzene exposure shall be identified during full- shift monitoring for follow-up short duration monitoring.

1. Initial Monitoring

Initial monitoring will be performed within 30 days of the introduction of benzene into each work area where occupational exposure is anticipated. Industrial Hygiene shall coordinate the sampling schedule with supervision in the affected areas.

2. Periodic Monitoring

If the results of the initial monitoring indicate exposures at or above the action level but below the TWA PEL, Industrial Hygiene will resample affected personnel annually. If initial monitoring results indicated exposures in excess of the TWA PEL, Industrial Hygiene shall resample affected personnel every six months. Sampling frequency will be reduced from six months to annually for those personnel where two consecutive samples taken at least seven days apart indicate that exposures have decreased to below the TWA PEL yet are still above the action level.

3. Termination of Monitoring

Monitoring will be stopped when:

- Initial monitoring results are below the action level; or,
- Periodic monitoring results of at least two consecutive samples taken at least seven days apart are below the action level.

4. Additional Monitoring

Industrial Hygiene shall perform additional monitoring:

- When there is any reason to suspect that benzene exposure levels have increased;
- If there has been a change in production, process, control equipment or work practices that may result in new or additional benzene exposure;
- Following the cleanup of a spill or release to ensure that levels have returned to levels that existed before the incident.

5. Short-duration Monitoring

Short-duration monitoring shall be performed for tasks or portions of tasks with potential benzene exposure. 15-minute breathing zone samples shall be collected for comparison with

the STEL.

D. Access to Records

You or your representatives are entitled to see the records of measurements of your exposure to benzene upon written request to your employer. Your medical examination records can be furnished to yourself, your physician or designated representative upon request by you to your employer.

METHODS OF COMPLIAINCE

Under normal circumstances, occupational benzene exposure can be maintained below the PELs through the implementation of engineering controls and work practices.

For example, Operators' exposure can be minimized by designing product sampling stations as "closed-loop" systems so that samples may be collected without exposing the product to the air. Exposure to Maintenance Department personnel can be minimized by thoroughly flushing systems prior to line entry.

A. Engineering Controls

Industrial Hygiene will work with the affected Operations and Maintenance Department supervision to identify opportunities for the implementation of engineering controls. Management for each unit shall coordinate with the Engineering Department to ensure that the appropriate controls are designed and installed. Industrial Hygiene will perform follow-up exposure monitoring following installation to ensure that the controls continue to be effective.

B. Work Practices

Industrial Hygiene will work with each affected work group to develop work practices to minimize exposure for those tasks where exposure to benzene is anticipated. These work practices will be incorporated into the Standard Operating Procedures (SOPs) for each group.

RESPIRATORY PROTECTION

RESPIRATORS SHALL NOT BE USED AS THE PRIMARY
MEANS OF BENZENE EXPOSURE CONTROL.

Respirators are required for those operations in which engineering controls or work practice controls are not feasible to reduce exposure to the permissible level. However, where employers can document that benzene is present in the workplace less than 30 days a year, respirators may be used in lieu of engineering controls. If respirators are worn, they must have joint Mine Safety and Health Administration and the National Institute for Occupational Safety and Health (NIOSH) seal of approval, and cartridges or canisters must be replaced before the end of their service life, or the end of the shift, whichever occurs first. If you experience difficulty breathing while wearing a respirator, you may

request a positive pressure respirator from your employer. You must be thoroughly trained to use the assigned respirator, and the training will be provided by your employer.

Respiratory protection shall be selected in accordance with Table 1 and used in accordance with the A3M Respiratory Protection Program to supplement engineering and work practice controls:

- When the feasible engineering controls and work practices are not sufficient to maintain exposures to below the PELs; or,
- If implementation of engineering and work practice controls is not possible (i.e., emergency situations); or,
- While engineering and/or work practice controls are being developed for implementation.

PERSONAL PROTECTIVE EQUIPMENT

Because benzene may be absorbed through the skin to cause systemic health effects (cancer), it is essential that dermal contact be limited. As with respiratory protection, engineering controls and work practices shall be implemented as the primary means of minimizing skin contact. Personal protective equipment (PPE) such as chemical resistant gloves, splash goggles, and coveralls shall be used as supplementary controls. PPE requirements for each task where benzene exposure is anticipated will be specified in the task-specific standard operating procedures and indicated on the work permit.

Protective Clothing: You must wear appropriate protective clothing (such as boots, gloves, sleeves, aprons, etc.) over any parts of your body that could be exposed to liquid benzene.

Eye and Face Protection: You must wear splash-proof safety goggles if it is possible that benzene may get into your eyes. In addition, you must wear a face shield if your face could be splashed with benzene liquid.

NOTE: Protective clothing (coveralls, aprons, boots, gloves, etc) for protection against benzene must be composed of polyvinyl alcohol (PYA) or other material rated to provide at least 8-hours of protection before breakthrough.

EMERGENCY AND FIRST-AID PROCEDURES

A. Eye and Face Exposure. If benzene is splashed in your eyes, wash it out immediately with large amounts of water. If irritation persists or vision appears to be affected see a doctor as soon as possible.

B. Skin Exposure. If benzene is spilled on your clothing or skin, remove the contaminated clothing and wash the exposed skin with large amounts of water and soap immediately. Wash contaminated clothing before you wear it again.

C. Breathing. If you or any other person breathes in large amounts of benzene, get the exposed person to fresh air at once. Apply artificial respiration if breathing has stopped. Call for medical assistance or a doctor as soon as possible. Never enter any vessel or confined space where the benzene concentration

might be high without proper safety equipment and at least one other person present who will stay outside. A life line should be used.

D. Swallowing. If benzene has been swallowed and the patient is conscious, do not induce vomiting. Call for medical assistance or a doctor immediately.

TABLE 1: RESPIRATORY PROTECTION FOR BENZENE.

Airborne Concentration of Benzene or Condition of Use	Minimum Respirator Required
Less than or equal to 10 ppm	Half-face piece air-purifying respirator (APR) with organic vapor cartridges
Less than or equal to 50 ppm	Full-face piece APR with organic vapor cartridges
Less than or equal to 1,000 ppm	Full face piece positive pressure supplied air respirator (SAR)
Greater than 1,000 ppm or unknown Concentration	Self-contained breathing apparatus (SCBA) or Full face piece positive pressure SAR with escape SCBA
Escape	Any organic vapor respirator
Firefighting	SCBA

MEDICAL SURVEILLANCE

Benzene medical surveillance is available for all employees who are or maybe exposed to benzene:
- At or above the action level for 30 days or more per year; or,
- At or above the PELs for 10 or more days per year.

Employees with certain job titles within these groups (i.e., Board Operator) may be removed from the Medical Surveillance Program if exposure monitoring indicates that exposures are below the inclusion threshold concentrations for that specific job title.

All medical procedures or examinations are performed by or under the supervision of a licensed physician. All lab tests are performed by an accredited laboratory.

COMMUNICATION OF BENZENE HAZARDS

A. Signs and Labels

Signs containing the following language shall be posted at all entrances to benzene regulated areas:

DANGER
BENZENE
CANCER HAZARD
FLAMMABLE - NO SMOKING
AUTHORIZED PERSONNEL ONLY
RESPIRATOR REQUIRED

All containers of benzene are to be labeled in accordance with the Hazard Communication Program and will include the following text:

DANGER
CONTAINS BENZENE
CANCER HAZARD

B. Safety Data Sheets (SDS)

Benzene information pertaining to these end products may be obtained from these SDS. For those intermediates without SDS, benzene hazard information, as well as other health and safety considerations, is presented in the SOPs for those tasks with potential occupational exposure to benzene.

C. Information and Training

Employees with occupational exposure to benzene shall successfully complete mandatory benzene training:

- prior to assignment to areas where benzene is present; and
- annually thereafter for employees exposed to above the action level.

Employees should be aware of owners' contingency plans and provisions. Employees must be informed where benzene is used in the host facility and aware of additional plant safety rules.

Industrial Hygiene shall prepare the training and review the information periodically to ensure that it remains current. In addition to the information required by the Hazard Communication Program, the training will include:
An explanation of the contents of the OSHA benzene standard, including Appendices A and B, and an indication as to where the standard is available; and A description of the Medical Surveillance Pro2ram, including information contained in Appendix C of the OSHA standard.

Training shall be documented on a Training Report Form.

PURPOSE

The A3M Lead Exposure Control Program has been developed in compliance with the OSHA Standard for Lead in Construction (29 CFR 1926.62) to provide the guidance necessary to minimize employee exposure to metallic lead, inorganic lead compounds, and organic lead soaps.

SCOPE AND APPLICATION

The A3M Lead Exposure Control Program applies to all operations where an employee may be occupationally exposed to metallic lead, inorganic lead compounds, and organic lead soaps. Operations for which this program is intended to include but are not limited to, where lead is present:

- Demolition or salvage;
- Removal or encapsulation;
- New construction;
  - Alteration, repair, renovation;
  - Installation;
  - Emergency cleanup;
  - Transportation, storage, disposal or containment;
  - Maintenance.

This program shall govern all work at Bayou Steel performed by employees of A3M for all such operations performed for Bayou Steel regardless of location.
It is the responsibility of the employer to monitor and control its employees' exposure to lead in the workplace.

Sources of lead at Bayou Steel include but are not limited to:

- Lead-based paints and primers, especially green, white, yellow, orange, and red colors;
- Soils in the area immediately beneath lead-based paints;
- Storage batteries;
- Electrical wire and cable coverings;
- Solder;
- Lead dust.

RESPONSIBILITIES

<u>Employees</u>

- Understand the effects of overexposure to lead;
- Adhere to applicable program requirements for all lead work;
- Immediately report any unsafe conditions to supervision.

<u>Management</u>

- Endorse the A3M Lead Program;
- Implement an accountability program that will facilitate compliance;
- Ensure the availability of adequate resources necessary for program implementation (funding, personnel, equipment, facilities, etc.)

Personnel Department
- Administer the medical removal protection benefits provisions of the program.

Safety Section
- Perform the required training;
- Ensure availability of respiratory protection, protective work clothing, signs and postings;
- Issue required permits in accordance with the requirements of this program;
- Perform periodic inspections to ensure compliance;
- Maintain the decontamination trailer;

Supervisors
- Determine if work may expose employees to lead;
- Identify employees who may be exposed to lead;
- Implement engineering control, work practices, and PPE requirement of this program;
- Ensure employee compliance with requirements of this program with particular attention to respiratory protection, protective clothing, decontamination, and hygiene practices;
- Coordinate with safety for exposure monitoring.

DEFINITIONS

Action level means employee exposure to an airborne concentration of lead of 30 micrograms lead per cubic meter air (30 ug/m3) averaged over an eight-hour period, without regard to the use of respirators.

Competent person means one who is capable of recognizing existing and potential lead hazards and has the authority to take prompt corrective action.

Lead means metallic lead, all inorganic lead compounds and organic lead soaps. Excluded are all other organic lead compounds (tetraethyl lead).

Lead work or lead job means any task where employees perform work on surfaces or materials with lead concentrations of 0.01 percent (100 mg/kg) by weight.

Permissible exposure limit (PEL) means the legal limit established by OSHA above which no worker may be exposed without regard to the use of respirators of fifty micrograms lead per cubic meter air (40 ug/m3) averaged over an eight-hour period. If employees may be exposed for periods in excess of eight hours, the PEL is calculated as 400 divided by the hours worked in the day.

Example: PEL for 10-hour shift = 400/10 hours = 40 ug/m3

NOTE

The longer the exposure period, the lower the PEL.

HEALTH EFFECTS OF LEAD EXPOSURE

There are two principle ways for lead to enter the body, inhalation and ingestion. Lead and inorganic lead compounds cannot be absorbed through the skin. Some organic lead compounds, such as tetraethyl lead, may be absorbed through the skin.

Inhalation — Only very small particles of lead can get into the lungs. Once in the lungs, the particles are absorbed into the blood stream. Larger particles are cleared from the upper respiratory system, swallowed, and absorbed into the gastrointestinal system. In average adults, 30-50% of inhaled lead is retained. The amount of lead that is absorbed is dependent upon particle size. Very small particles, such as welding fume, enter into the deep lung and are almost completely absorbed. This is the major reason that applying heat to lead-containing materials is not recommended.

Ingestion — When lead is swallowed and digested, some of that lead is absorbed into the blood. Average adults retain about 5-15% of ingested lead. As with inhaled particles, the smaller the particle size, the more readily absorbed. For properly protected employees, ingestion is more frequently the dominant exposure pathway. It is very important not to leave lead-containing dust in the work area. Clean dust and debris immediately using a HEPA vacuum or wet mopping. It is also very important that lead dust not be carried home on employees' clothes or shoes where family members may be exposed.

Symptoms of Lead Exposure — Repeated prolonged exposure to lead may result in damage to the blood, the nervous system, kidneys, bones, heart, and the reproductive system. It also contributes to high blood pressure.

The symptoms of lead poisoning include:

- headache
- poor appetite
- dizziness
- irritability/anxiety
- constipation
- "lead line" on gums
- muscle/joint pain
- sleepiness
- weakness
- reproductive difficulties
- nausea
- fine tremors
- pallor
- excessive tiredness
- numbness
- metallic taste in mouth
- hyperactivity
- "wrist drop"

EXPOSURE ASSESSMENT

Lead work may expose company personnel to concentrations of lead in excess of the OSHA PEL. Exposure monitoring is performed to ascertain actual employee exposure levels. It is the responsibility of the employer to monitor and control its employees' exposure to lead in the workplace.

In order to ensure that employees are adequately protected against lead exposure, A3M shall perform an Employee Exposure Assessment for each job where A3M employees are performing tasks or are required to have prolonged proximity to tasks where exposure to lead by occur.

To this end, all jobs where employees may be exposed to lead must be reviewed by A3M before the work begins. Work groups planning lead work to accommodate this review and to schedule the required exposure monitoring must allot sufficient time.

Exposure Monitoring

A3M Vacuum Service, Inc. protects its employees by medical surveillance called lead rotation. Whenever an employee of A3M works in a lead environment, we log the amount of time the employee is in this environment and if the time exceeds thirty (30) hours within a thirty (30) day period, the employee is taken off the lead jobs and placed in other areas not containing lead exposure. The employees that often work in lead areas are periodically given a blood lead level test. These employees are informed of the results as soon as possible. If the results show high levels of lead, the employee is then worked in areas that do not contain lead exposure until the employee's blood lead level is lowered.

In accordance with our present lead rotation system for employees working at Bayou Steel, A3M provides, at their own expense, semi annual physical and lead serum tests. Each employee is tested for possible lead exposure. As set forth by OSHA lead standard 1910.1025 the safe lead exposure is 0-40 PEL. Our employees will be monitored and will not be allowed to reach an exposure level over 30 PEL. If an employee does reach a level of 30 PEL the employee will be worked in a non-restricted exposure area for the next sixty (60) days to reduce the employee's exposure level.

A3M also monitors the exposure areas that each employee works in lead areas and does not allow any employee to work in a restricted area for more than thirty (30) hours in any thirty (30) day period to reduce the chance of reaching the level of thirty (30) PEL.

Collection and analysis of personal air samples shall be performed in accordance with NIOSH Method 7300 and shall represent full-shift exposure for each operation. Monitoring results will be reported by A3M to the employee and his/her supervisor in writing within five (5) days of receiving the written laboratory report. Employees or their designated representative shall be allowed to observe the required monitoring and be provided with an explanation of the monitoring procedures being implemented.

METHODS OF COMPLIANCE (PERMITS)

Lead-containing paint has been used for years as a rust inhibitor. Although is popularity has declined in recent years, many surfaces encountered in the refinery will be painted with lead-based paint. It is not possible to visually determine if paint contains lead. OSHA approves only laboratory chemical analysis as a means of determining the lead content of paint. Therefore, until paint can be sampled and analyzed or there is documentation that indicates that the paint is lead-free, all painted surfaces must be assumed to contain lead at levels which may expose employees to above the Action Level.

RESPIRATORY PROTECTION

Respirators may not be used as a primary means to control employee exposure to lead. Respirators will be issued for lead work in accordance with the A3M Respiratory Protection Program.

NOTE

Only those employees who have been qualified to use a respirator in accordance with the A3M Respiratory Protection Program are eligible to used respirators.

PROTECTIVE WORK CLOTHING

Protective work clothing shall be used in conjunction with engineering and work practice controls to minimize employee exposure to lead. The work clothing must be designed as an alternative to employee street clothing, provided to the employee free of charge, and maintained in a clean change area. Protective work clothing for lead work at A3M may consist of:

- disposable full-body coverall tyvek
- reusable rubber boots with steel toes
- disposable gloves
- eye, and/or face protection
- hard hat

HOUSEKEEPING

Housekeeping is particularly important in work areas where lead dust generating activities are being performed. Lead is an extremely dense metal and will therefore tend to accumulate on horizontal surfaces near where it is being generated. All feasible measures to control lead dust generation and to prevent its accumulation shall be implemented. Lead dust shall be cleaned by wet mopping.

HYGIENE FACILITIES AND PRACTICES

Where employees may be exposed to airborne lead in excess of the PEL, the supervisor shall ensure that the following are made available:

- Remote eating/break areas; and
- Hand and face washing facilities

Employees must wash hands and face before each brake.

Eating and Break Areas — Eating and break areas shall be established in areas removed from the lead dust generating work areas. These areas shall be maintained as free as possible from lead dust contamination. Employees are prohibited from entering eating/break areas while wearing protective clothing and prior to washing hands and face.

Hand and Face Washing Facilities — Facilities for washing hands and face shall be provided. Employees must wash before breaks and at the end of the shift. Hand and face washing supplies such as soap and disposable towels shall be provided. Only potable water, in accordance with 29 CFR 1926.51 may be used for washing.

MEDICAL SURVEILLANCE

Medical surveillance for lead exposure consists of biologic monitoring and medical examinations.

Biologic Monitoring — Biologic monitoring consisting of blood lead analysis and zinc protoporphyrin levels is required for employees who may be exposed to airborne lead in excess of the action level of 30 micrograms per cubic meter.

Medical Examination — Medical examinations shall be provided for all employees exposed to above the action level for more than thirty (30) days in any twelve (12) month period. The examinations shall be provided before this initial assignment to lead work, annually, whenever the employee reports experiencing signs and symptoms of lead poisoning, and at the discretion of the physician. Employees may designate a second physician to review and findings and to conduct any examinations, consultations, and laboratory tests, as the second physician deems necessary to facilitate the review.

A3M shall obtain the physician's written medical opinion resulting from the examination or consultation and furnish a copy to the employee. The written opinion shall include:

- Detected health problems related to or that may be exacerbated by exposure to lead;
- Protective measures or limitations;
- Limitations of the employee's ability to use a respirator; and
- The results of blood analysis.

MEDICAL REMOVAL PROTECTION

Employees who exhibit signs or symptoms of overexposure to lead must be removed from all work involving lead exposure in order to minimize injury.

Medical Removal — A3M shall remove any employee from work where exposure to lead may occur whenever:

- A periodic and follow-up blood sampling test indicates blood levels at or above 50 micrograms lead per deciliter blood (ug/dl), or;
- A medical examination or written physician's opinion indicates that the employee has a detected physical condition, which places the employee at increased health risk from exposure to lead.

Where a medical examination or written physician's opinion recommends special protective measures, or limitations on an employee, A3M shall implement appropriate additional engineering controls, work practices, or PPE that meets the intent of the recommendation.

Return to Work — Where the employee was removed from work due to elevated blood lead levels, the employee may return to his/her former job status when a blood sampling test indicates that the employee's blood level is below 40 ug/dl.

Where the employee was removed from work for a detected physical condition, the employee may return to his/her former job status when a subsequent medical examination or physician's written opinion indicates that the employee is no longer at risk due to exposure to lead.

Additional engineering and work practice controls and PPE required for an employee who was determined by medical examination or physician's written opinion to be at increased risk of health impairment due to lead exposure may be discontinued after a subsequent examination or written opinion finds that the special precautions are no longer necessary.

INFORMATION AND TRAINING

A3M shall communicate information pertaining to the hazards of lead exposure in accordance with the A3M Hazard Communication Program.

In addition, employees who are required to perform work that will expose them to airborne lead concentrations in excess of the action level are required o receive specialized training.

HEARING CONSERVATION PROGRAM

PURPOSE

This Hearing Conservation Program delineates the policies and procedures in place to minimize occupational hearing loss. It has been developed in accordance with the OSHA Standard of occupational noise exposure (29CFR 1910.95).

SCOPE AND APPLICATION

This program applies to all A3M occupational noise exposures.

RESPONSIBILITIES

A. Employee

- Wear issued hearing protection when needed and must ensure that they will be worn.
- Hearing protection and conservation will be given and received at no cost to the employee.

B. Safety Director

- Administer the program;
- Assess exposures of noise environments in which the protector will be used;
- Develop methods of compliance;
- Develop and present proper training in the use, care, and fitting of hearing protectors;
- Periodically evaluate the program to ensure continued effectiveness;
- Ensure availability of a variety of hearing protectors;
- Maintain exposure assessment records as they are required by OSHA regulation;
- Conduct annual refresher training.

DEFINITIONS

Action level means an eight-hour time-weighted average of 85 decibels, or a dose of fifty percent, exposure to which requires the use of hearing protection, implementation of feasible engineering and work practice controls, and enrollment in the audiometric testing program.
Employee exposure means noise exposure that would occur if the employee were not using hearing protection.
Occupational exposure means reasonably anticipated employee exposure in excess of the action level while performing work.
Permissible exposure limits (PELs,) means an eight-hour time-weighted average of 90 decibels.

HEARING PROTECTORS

Hearing protection, in the form of earplugs and earmuffs, is available to all employees with occupational noise exposure.

NOTE

Employees are required to use hearing protection when working within the vicinity of a vacuum truck, power tools or other high noise equipment.

TRAINING

This Training is provided for all employees who are exposed to action level noise, which are the sound levels greater than 85dbA on an 8 hour time-weighted average basis. All employees with occupational noise exposure will receive annual hearing conservation training. The training shall be updated if there are any changes in PPE and work processes. A3M will make available to the affected employees copies of the noise exposure procedures and will also post a copy of them in the workplace.

MONITORING PROCEDURES

When information indicates that A3M employee exposure may equal/exceed the 8 hour time-weighted

average of 85 decibels, a monitoring program shall be implemented to identify employees to be included in the A3M hearing conservation program.

Steps for Monitoring

A. Once indicated that an A3M employee will be exposed to action level noise, he/she will be included in the hearing conservation program.
B. Audiometric testing will be made available to that employee within the first 6 months of the employee's first exposure at or above action level noise thus allowing A3M and that employee to obtain a valid baseline audiogram. This will allow for future audiograms to be compared with one another. The baseline shall be established within 1 year if a mobile van is to be used. Achieving a baseline for an audiogram can only be done is the employee has been without action level noise exposure of the workplace for at least 14 hours.
C. The audiometric baseline must be documented and filed.
D. Depending on the amount of noise exposure an employee is exposed to will decipher whether or not he/she will receive another audiogram within 6 months or a year. Each employee's audiogram will be compared to the baseline to determine if the audiogram is valid and if a standard threshold shift has occurred.
E. If a comparison is done and indicates that a standard threshold shift has occurred, then that employee will be informed of this shift in writing within 21 days. The use of hearing protection will be re-evaluated and/or refitted. This in turn will determine if a medical evaluation will be required.

Hearing Protector Attenuation

A. The employer shall evaluate hearing protector attenuation for the specific noise environments in which the protector will be used.
B. Hearing protectors must attenuate employee exposure at least to an 8-hour time-weighted average of 90 decibels.
C. For employees who have experienced a standard threshold shift, hearing protectors must attenuate employee exposures to an 8-hour time-weighted average of 85 decibels or below.
D. The adequacy of hearing protector attenuation shall be reevaluated whenever employee noise exposures increase to the extent that the hearing protectors provided may no longer provide adequate attenuation. The employer shall provide more effective hearing protectors where necessary.

Recordkeeping

The employer shall maintain an accurate record of all employee exposure measurements.

This record shall include:

a. Name and job classification of the employee.
b. Date of the audiogram.
c. The examiner's name.
d. Date of the last acoustic or exhaustive calibration of the audiometer.
e. Employee's most recent noise exposure assessment.

The employer shall retain records required in this section for at least the following periods:

1. Noise exposure measurement records shall be retained for 2 years.
2. Audiometric test records shall be retained for the duration of the affected employee's employment.

All records required by this section shall be provided upon request to employees, former employees, representatives designated by the individual employee and any authorized representatives.

PURPOSE

To prevent the transmittal of blood borne pathogens to employees.

SCOPE AND APPLICATION

All A3M employees involved in job duties that have the potential for occupational exposure to blood or bodily fluids.

RESPONSIBILITIES

A3M will minimize to the fullest extent possible, the risk of exposure to blood borne pathogens for all employees by providing appropriate personal protective equipment (PPE).

OSHA requires that all employers that can "reasonably anticipate exposure" of employees to infectious material to prepare and implement a written exposure control plan.

Occupational Health Department personnel and onsite medical care providers will adhere to universal precautions mandated by the Centers for Disease Control (CDC) which states all human blood and other bodily fluids (including urine) are considered infectious and precautions must be taken whenever there is a potential of exposure.

Is it the responsibility of A3M to ensure that employees have access to a copy of the exposure control plan in a reasonable time, place, and manner.

All employees are responsible for reporting any exposures to the Occupational Health Department immediately.

Employees with occupational exposure are responsible for selecting and using the appropriate PPE.

Initial and annual training is provided through Occupational Health Department Medical Education programs.

DEFINITIONS

Bodily Fluids - Blood, saliva, urine, semen, vaginal secretions, cerebrospinal fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid.

Blood - Human blood, blood components and products made from human blood.

Bloodborne Pathogen - Microorganisms that are present in human blood that can cause disease. Includes, but not limited to, Hepatitis B virus (HIBV), Hepatitis C virus (HCV) and Human Immunodeficiency virus (HIV).

Contaminated sharps - Any object soiled with blood or body fluids that could penetrate the skin

including, needles, broken glass, medical instruments, tools, dental wires, etc.

Decontamination - The use of physical or chemical means to remove, inactivate or destroy pathogens on a surface or object rendering it safe for use, handling or disposal.

Engineering Controls - The use of equipment or procedures that isolate or remove pathogen hazards from the workplace (e.g., personal protective equipment, shams containers, red disposal bags).

Exposure Incident - Any contact by eye. Mucous membranes or non-intact skin with blood or bodily fluids.

Occupational Exposure - Reasonable anticipated skin, eye, mucous membranes or parenteral contact with blood or other potentially infectious materials that occur in the performance of job duties.

Other Potentially Infectious Material - Any object, equipment, linens, etc. that may be contaminated.

Parenteral - Piercing of mucous membranes or skin barrier through needle stick, human bites, cuts, abrasions, etc.

Personal Protective Equipment (PPE) - Clothing or equipment worn to protect against a hazard.

Source Individual - An individual who may be a source of occupational exposure to an employee.

Sterilize - The use of physical or chemical procedures to destroy all microbial life.

Universal Precautions - An approach in which all blood and body fluids are treated as if they are known to be infectious.

Work Practices - Procedures that reduce the risk of exposure.

BACKGROUND

Anyone exposed to blood or other bodily fluids has an increased risk of contracting communicable Bloodborne and other diseases, including Hepatitis B virus (HBV), Hepatitis C virus (HCV) and Human Immunodeficiency Virus (HIV) infections.

The Federal Occupational Safety and Health Administration (OSHA) Standard 29 CFR 1910.1030 addresses health care facilities, healthcare workers and emergency response workers even in the industrial setting. It is designed to reduce occupational exposures to human blood and certain body fluids or tissue that are potentially infectious for HBV, HCV, HIV, and other Bloodborne pathogens.

EXPOSURE DETERMINATION

Category I

Employees who have designated occupational health care responsibilities are considered being at greater risk of exposure. Employees in this category include:

•Occupational Health Nurse • Paramedic • Emergency Response Technicians

Category II
Job classifications in which some employees may have occupational exposure:

- Administrative Secretary
- Housekeeping
- Lab Technician
- Maintenance
- Operators
- Purchasing Agent
- Safety Technician
- Security Officer

Employees who do not typically have occupational exposure may in emergency situations respond to first aid incidents in which there may be the potential for exposure.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

When the possibility of occupational exposure is present, A3M Vacuum Service will provide PPE at no cost to the employee such as gloves, gowns, etc. PPE shall be used unless employees temporarily declined to use under rare circumstances. PPE shall be repaired & replaced as needed to maintain its effectiveness.

When there is a potential for exposure to blood or bodily fluids the employee is expected to select and use the appropriate protection provided. Masks and eye protection must be worn whenever splashes, spray, droplet or aerosol of blood or body fluid may be generated.

Disposable gloves must be worn when the potential exist for employee's hands to have direct skin contact with blood, other bodily fluids or when handling soiled items or surfaces. Gloves should be replaced when visibly soiled, torn, punctured or if their ability to function as a barrier is compromised. Disposable gloves should never be washed or disinfected for reuse.

Utility gloves may be disinfected for reuse if the integrity of the glove is not compromised. However, they should be discarded if they become cracked, discolored, torn, punctured, or exhibit signs of deterioration.

Procedures that *could* result in exposure include:

- Administration of parental medications or vaccines
- Emergency treatment of injuries/illnesses
- Urine sample collection
- Other procedures involving exposure to blood or other bodily fluids.
- Cleaning equipment
- Housekeeping

Places of potential exposure include:

- Medical treatment areas
- Any job-site injury site
- Urine drug testing collection sites

EDUCATION AND TRAINING

Training shall be provided at the time of initial assignment & within 1 year of their previous training.

Annual interactive training will be provided for all affected employees concerning the prevention of communicable diseases with emphasis on Bloodborne pathogens. Included in this training is clinical and epidemiological information about infectious disease, specific measures to reduce the risk of exposures, the OSHA Standard on Bloodborne Pathogens, the A3M Exposure Control Plan and universal precautions.

Training records shall be maintained for 3 years from the date of training.

HEPATITIS B SCREENING / VACCINATIONS

Once employees have received initial training and within ten (10) working days of that assignment, HBV vaccination will be offered at no cost to employees unless they have had previous vaccination, test reveals immunity or the vaccine is contraindicated for medical reasons.

The employees electing to receive the HBV vaccine will be offered company provided Hepatitis B immunization series of three (3) injections over a six- (6) month period. Employees considered at risk of occupational exposure will be offered the screening test for antibodies to HBV surface antigen (HBsAG) by an accredited laboratory.

If the employee initially declines HBV vaccination then reconsiders or should a booster dose(s) be recommended, in the future, the vaccine will be provided, at no cost to the employee. At risk employees not to receive the vaccine will be required to sign the ***Hepatitis B Vaccine Program Consent / Refusal Form*** which can be found in Attachment C at the end of this section.

INCIDENT INVESTIGATION

Any exposure incidents MUST be reported immediately to the employee's supervisor and the home office and be accompanied by an Incident Investigation Report form containing the following information:

- Date, time, circumstance of the exposure
- Likely route of entry
- Engineering controls in place at the time of the incident
- Personal protective equipment (PPE) or clothing in use at the time of the incident
- Identification of the source individual
- Exposed employee's training and vaccination records

POST EXPOSURE EVALUATION

An employee who is exposed to blood by piercing of skin or mucous membrane through needle sticks, human bite, cuts, abrasions, etc. or other type of exposure to bodily fluids will be given a confidential post-exposure medical evaluation.

With the employee's consent, a sample of the exposed employee's blood will be collected and tested for HIV, HBV, & HCV. The source individual's blood will also be tested and the results shared with the involved employees by the physician conducting the medical evaluations.

The employee will be provided with a copy of the written opinion of the physician conducting the post-exposure evaluation within fifteen (15) working days of the completion of the evaluation.

Repeat testing will be performed as ordered by the company physician. Hepatitis B Immune Globulin may be give within one (1) week of the exposure on recommendation of the examining physician. Hepatitis B immunization series will be provided if the exposed employee has not previously been vaccinated or acquired immunity.

Accurate records for each employee with occupational exposure must be maintained for at least the duration of employment plus 30 years.

WORK PRACTICES

Employees must wash their hands as soon as possible after removal of gloves or other personal protective equipment and after contact with blood or other potentially infectious materials. All procedures will be performed in a manner as to minimize splashing, spraying or aerosolization of blood or other body fluids. If provisions of hand washing facilities are not feasible, then an appropriate antiseptic hand cleanser in conjunction with cloth/paper towels or antiseptic towelettes must be provided by the company.

Eating, drinking, smoking, applying cosmetics or lip balm and handling contact lenses are prohibited in any work area where there is a potential for occupational exposure to Bloodborne pathogens. Food, drink or personal items must not be stored in refrigerators, freezers, or cabinets where blood or other potentially infectious materials are stored.

ENVIRONMENTAL CONTROL AND HOUSEEPING PRACTICES

Medical facilities will be cleaned and surfaces disinfected daily. In order to limit the number of employees at risk of occupational exposure, the Occupational Health Department personnel will be responsible for disinfecting procedures and handling of medical waste.

An appropriate product along with a 10% bleach solution in water will be used to disinfect any environments or working surface that has been contaminated with blood or bodily fluids.

EDUCATION PROGRAM
(ATTACHMENT A)

The training program must contain at least the following information:

1. Access to the OSHA Bloodborne Pathogens Standards and it's contents explained.

2. Symptomatology, and modes of transmission.

3. Explanation of the Orion Exposure Control Plan, including:

    - Methods of recognizing activities that involve a potential for exposure;

    - Engineering and work-practice controls (including PPE & BIOHIAZARD labels/red bags) designed to prevent and reduce the risk of exposure;

    - The proper selection, use, handling, decontamination and disposal of PPE;

4. Appropriate actions to be taken, method of reporting and follow-up should exposures occur.

5. Information of post-exposure medical evaluation.

6. Question and answer session.

INFORMATION ABOUT HEPATITIS B INFECTION
AND HEPATITIS B VACCINE
(ATTACHMENT B)

THE DISEASE

Hepatitis B is a virus that is transmitted by blood and body fluids. People most often become infected with hepatitis B (HBV) through unprotected sexual intercourse with an infected partner, or by sharing needles with an infected person during injection drug use. Healthcare workers, including Medical Response Team members, who may have direct contact with blood and body fluids, are also at risk for exposure to HBV.

Most people who become infected with HIBV recover completely and have natural immunity to further infection from HBV. Approximately 5-10% of people, however, develops chronic infection, and even though they may have no symptoms, they can continue to transmit the disease to others. Eventually, 1-2% of chronically infected people will die from complications of their infection.

THE VACCINE

Several safe and effective vaccines against HIBV have been available for over 10 years. Immunization with those vaccines can prevent acute hepatitis infection, and can also reduce sickness and chance of death from the long-term complications of HBV infection.

The modem hepatitis B vaccine uses the non-infectious portion of the virus and is produced in the laboratory from common baker's yeast cells. Persons allergic to yeast should NOT take the vaccine. It is not made from blood or blood products. The vaccine cannot transmit HBV or HIV.

A full course of immunization usually requires 3 doses of vaccine given at specific intervals over a six-month period. A fourth dose is sometimes required. Over 90% of healthy people who receive the full course of immunization will develop protective immunity against HBV. The duration of this immunity is unknown but a check for immunity is advised 7 years after vaccination. A boost dose may be indicated at that time if immunity is low. People who are immune from natural infection do not require the vaccination.

Side effects from the vaccine are uncommon. Redness or tenderness at the injection site may occur. A few people may experience a low-grade fever, chills, nausea, joint pain, headache, or mild fatigue. These reactions are mild and usually subside within 48 hours. No serious side effects have been reported with the vaccine and there is no evidence that the vaccine has ever caused hepatitis B or any other disease. However, with any vaccine, the possibility exists that more serious side effects may be identified with more extensive use. The vaccine will be administered during pregnancy or lactation ONLY with written approval of the employee's private physician.

Hepatitis B Vaccine Program Consent / Refusal Form
(ATTACHMENT C)

Please Check One.

	YES, I WA1NT TO RECEIVE HEPATITIS B VACCINE.
	I have read the statement about hepatitis B vaccine. I have had the opportunity to ask questions and I understand the benefits and risk of the vaccine. I wish to participate in the vaccination program. I understand this includes 3 injections at prescribed intervals over a six-month period. I further understand that, as with all treatment, there is no guarantee that I will become immune to hepatitis B or that I will not experience an adverse side effect as a result the vaccination.
	NO, I DO NOT NEED TO RECEIVE THE HEPATITIS B VACCINE.
	Because of (circle one) prior infection or previous vaccination, I do not need to participate in the hepatitis B vaccination program. Date(s) of previous vaccination _____ ____ I wish to check my immunity through a blood test. (Documentation of previous immunization or positive antibody response is required). ____ IF VACCINE IS CONTRAINDICATED FOR MEDICAL REASONS, PLEASE CHECK AND EXPLAIN._____ _____
	NO, I DO NOT WANT TO RECEIVE THE HEPATITIS B VACCINE.
	I understand that due to my possible exposure to blood and other potentially infectious materials, I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated at no charge to myself. However, I decline the B vaccine at this time. I understand that I continue to be at risk of acquiring hepatitis B, and if in the future while still an employee of TRC/SLC, I can receive the vaccine series at no charge.

_____ _____
Signature of Employee Date

_____ _____
Printed Name of Employee Social Security Number

_____
Street Address City State Zip

_____ _____ _____
Phone Number Department Job Title

Signature Occupational Health Nurse: _____ Date: _____

PURPOSE

This Heat Stress Prevention program has been developed to provide employees with guidelines for preventing heat-related injuries and illnesses. It is important to note that these are guidelines and are not intended to be followed to the letter, as employees will have varying tolerances for hot weather. Perhaps no other safety and health issue requires employees to self-monitor like heat stress. Employees must know their limitations and take the necessary precautions. Supervisors shall allow employees to take the precautions necessary to prevent heat-induced illness.

SCOPE AND APPLICATION

This program applies to all A3M occupational exposures to elevated temperatures.

DEFLNITIONS

Acclimatization means the becoming accustomed to working in elevated temperature environments.

Heat-induced illness means a physical manifestation of overexposure to heat typically characterized as heat cramps, heat exhaustion, or heat stroke.

Heavy work means work involving heavy lifting, digging, climbing, etc.

Light work means work involving walking, sitting or standing to control machines, performing light hand or arm work, etc.

Moderate work means walking about with moderate lifting or pushing, hammering, torque adjusting, etc.

WBGT means the Wet Bulb Globe Temperature index and is the standard unit of measurement for occupational temperature evaluations. In addition to ambient air temperature, WBGT factors the contributions of radiant heat and humidity into the temperature equation.

RESPONSLBILITLES

A. Employees

- Avoid overuse of alcohol during hot weather as alcohol use reduces the body's ability to acclimate to high temperatures;
- Monitor themselves and their fellow employees for symptoms of heat-induced illness;
- Take the precautions necessary to prevent heat-induces illness;
- Notify supervision if symptoms develop.

A. Safety
- Assess exposures.
- Conduct annual refresher training.
- Periodically evaluate the program to ensure continued effectiveness;

E. Supervisors
- Monitor employees for signs of heat-induced illness;
- Ensure that employees are provided with the facilities or equipment (i.e., fluids, shelter, ventilation, cool vests, etc.) to mitigate the effects of elevated temperatures;
- Permit employees to self-regulate exposures to elevated temperatures.

EXPOSURE MONITORING

Upon request, Safety will measure work area temperature conditions. The results will be compared with the information in Table 1 below to determine the recommended work-rest regimen for the job.

Table 1. Permissible Heat Exposure Threshold Limit Values

Work-Rest Regimen	Light Work	Moderate Work	Heavy Work
Continuous Work	86	80	77
75% Work, 25% Rest each hour	87	82	78
50% Work, 50% Rest, each hour	89	85	82
25% Work, 75% Rest, each hour	90	88	86

NOTE

These values are to be applied for guidance only and are not hard and fast rules. They represent tolerances for acclimatized workers in normal work clothing. Subtract 2 ˚F for Nomex or "paper Tyvek" coveralls. Subtract 6 ˚F for "chemical" or "acid" suits. Under certain circumstances, degrees may be added to these values for the use of heat stress equipment.

HEAT STRESS EQUIPMENT

There are several options available to make hot work environments more tolerable. Among the most widely used are:
- Forced-air ventilation;
- Supplied air respirators using compressed air;
- Cool vests.

Supervisors are responsible for ensuring that this equipment is available for use as needed. Some will be better suited than others, depending on the temperature and the application involved. Consult with Safety for additional guidance.

HEAT STRESS PREVENTION

Follow the following guidelines to protect against heat-induced illness:

A. Drink water

- 8-oz. cups every 20 minutes during the job.
- Water, not Gatorade, is preferred.
- Drink several cups of water before starting a job.
- Don't wait until you are thirsty to start drinking.

B. Cool yourself

- When you have a choice and always during breaks, get under some shade.
- If available, position air coolers or A/C near work area.
- Above 95˚F air temp, fans can *increase* the heat load to the body.

C. Protect yourself and others

- Know your limits.
- Notify your supervisor if you develop symptoms of heat strokes, heat exhaustion, or heat cramps.
- Watch your fellow workers for heat stress symptoms and alert them and your supervisor if symptoms are observed.
- Be especially alert when entering a confined space in warm weather.

D. Avoid overuse of alcoholic beverages after hours

Consumption of alcoholic beverages reduces the body's ability to effectively regulate temperature. Avoid excessive alcohol consumption, especially before periods of acclimatization.

SIGNS, SYMPTOMS, AND TREATMENT

The signs and symptoms of heat-induced illness and associated treatments are presented in Table 2 below.

Table 2. Heat-Induced Illness Signs, Symptoms, and Treatments

Condition	Symptoms	Treatment
HEAT STROKE Least Common but MOST dangerous. Fatal if treatment is delayed.	• Red dry skin • Body temp above 105˚F • Confusion / Irrational behavior • Dizziness / Headache • Nausea / Vomiting • Loss of consciousness	• Call for Medical • Move to cool area • Remove unnecessary clothing • Fan & sponge body with cool water • If alert, give sips of cool water
HEAT EXHAUSTION Less Dangerous. Caused by overexertion, low water intake, or not being use to the heat.	• Sweating • Pale clammy shin • Headache, weakness • Nausea / Vomiting • Thirst, Fainting • Body Temp. up to 101˚F	• Call for medical • Move to cool area • Remove unnecessary clothing • If alert, give sips of cool water
HEAT CRAMPS Occurs during or after hard physical work, especially with low water intake.	• Muscle or stomach cramps, may reoccur • Can occur in people acclimatized	• Move to cool area • Remove unnecessary clothing • Give water • Notify Medical

PROGRAM EVALUATION

A3M Safety will periodically review the Heat Stress Prevention program to ensure that it continues to be effective.

INCIDENT INVESTIGATION AND REPORTING

PURPOSE

The purpose of an incident investigation is to investigate all incidents.

SCOPE AND APPLICATION

Establish guidelines for conducting investigations that:

- Determine the basic cause of the incident
- Establish necessary action including responsibility and timing to prevent recurrence of the incident or similar incidents
- Alert other employees to take similar preventive action(s) where applicable

RESPONSIBILITIES

It is the responsibility of all A3M employees, including sub-contractors, to report incidents. Further responsibilities are described in detail, in the content of this procedure, from the time an incident / accident occurs until final closure of investigation.

DEFINITIONS

Incident - An unexpected, unplanned, and/or undesirable event. This term is used to encompass all serious and less than serious events.

Serious Incident - An occurrence or near occurrence (near-miss) that results in or could have reasonably resulted in:

- A recordable or lost workday injury
- Damage to health, environment, and/or property
- A catastrophic release of hazardous chemicals
- Any safety rule violation
- A reportable spill to land or water

Initial Investigation - The account and analysis of the undesired event based on factual information gathered by a thorough and conscientious examination of all contributing factors. Included are recommendations of remedial action and the distribution of immediate action(s) taken (or to be taken) to prevent recurrence of the event.

Near Miss - A “near miss” is an undesired event that, under slightly different circumstances, could have resulted in physical harm to personnel, equipment damage, hazardous material release or product loss.

Follow-up Designee - The individual assigned by the investigation team to track serious incident documentation and recommendations to resolution.

Safety Alert - Reporting notice to be used whenever it is desirable to circulate safety information about a less than serious incident. Etc

TRAINING

A3M personnel must be trained in their roles and responsibilities for incident reposnse and incident investigation techniques. The training program consist of the following topic relative to incident investigation and reporting:

1. Awareness
2. First Responder
3. Investigation

This training will be provided to employees by A3M prior to initial job assignment and annually thereafter.

EQUIPMENT

A3M must provide personnel will the proper equipment to aid in conducting an accurate and efficient incident investigation. Equipment provided to personnel may include but is not limited to:

- Writing utensils
- Cameras
- Video/Audio Recorders
- Measuring Equipment (e.g. tape measure)
- Small Tools
- PPE
- Marking Devices (e.g. flags, flames)
- Equipment Manuals

PROCEDURE

Initial Investigation

Reporting of incidents or near miss incidents is the responsibility of all personnel, including subcontractors. When personal injury is involved, the first obligation is to get qualified medical attention to the injured as soon as possible. Management shall be notified as soon as possible. If needed the event area may be barricaded (red tape) to prevent unauthorized personnel from entering the area. When ever possible, pictures of the conditions should be taken for review. The person in charge shall compose a written list of the people, equipment, and materials involved in the incident. The environmental factors should also be recorded immediately. These factors may include but are not limited to weather, illumination, noise, temperature, ventilation, and physical factors such as age, fatigue, and medical conditions. Nothing should be destroyed or discarded. All pertinent information (permits, safety task analysis. etc.) shall be turned in to management.

While all incidents should be investigated, the extent of such investigation shall reflect the seriousness of the incident utilizing a root cause analysis process or other similar method.

If the incident is clearly serious, statements will be collected from involved personnel and witnesses. Interviews of witnesses shall be conducted by trained interviewer. The interviewer is responsible for locating witnesses, ensuring unbiased testimony, and choosing an appropriate location for holding the interviews. If classified as a serious incident, Management and Supervision will conduct a review of the incident and issue findings on the Incident Form. If questions or concerns remain following the review conducted by Management and Supervision, follow-up interviews of both individuals' involved and witnesses are permitted and encouraged. The intent of any follow-up interview is to assist in the clarification of the actual incident and aid in the validity of the Incident Report.

A written incident report shall be prepared based on the findings of the incident investigation. The written incident report shall include and incident report form and a detailed narrative statement concerning the events. The format of the narrative report shall include: an introduction, methology, summary of the incident, investigation board members names, narrative of the incident, findings, and recommendations. Any photographs taken at the scene of the incident, witness statements, sketchs, and any other data used in the investigation should be included in the Incident Report. After a review with all affected employees is complete, the Incident Report will be forwarded to Safety for distribution and archiving.

In addition, Management & Supervision should determine if there were any abnormal operating conditions at the time of the incident, describe any equipment malfunction in detail, and determine the date and extent of the last maintenance and/or inspection check of equipment involved. Also, employee training records and operating procedures should be reviewed, including any other material necessary for the investigation.

The investigation is complete when the Management can describe the incident, list the results of the investigation, list the major causes of the incident, and develop a set of recommendations to prevent a similar incident from happening in the future. Management shall review the lessons learned from the incident investigation and communicate the lesson to all A3M personnel. In the event that current procedures or processes are found to be unsatisfactory, changes to the effected processes and procedure must be put into to place and become immediately effective to prevent reoccurance of this particular incident or similar event.

Reporting

A3M shall report the incident to both OSHA and the owner client within a specific time frame.

Required incidents must be verbally reported to OSHA within eight (8) hours of their discovery.

A3M will report the incident to the owner client with twenty-four (24) hours of the recorded incident.

Completed incident investigation reports shall be retained in the Safety files for at least five (5) years from the date of the incident along with statements, permits and other data collected during the investigation.

IN PLANT RAIL SAFETY

PURPOSE

This program has been developed to provide employees with the proper safety guidelines and procedures for In Plant Rail Safety.

SCOPE AND APPLICATION

The proper training program will provide employees with the knowledge necessary to maintain a safe and healthy work environment and reduce the risks of incidents and injuries regarding In Plant Rail Safety.

RESPONSIBILITIES

It is the responsibility of A3M to ensure all employees receive proper training and information about In Plant Rail Safety. It is the responsibility of all employees to follow all safety rules and guidelines provided in this program.

TRAINGING

Appropriate training will be provide based on the complexity of the job and potential hazards related to in plant rail safety provided to all applicable employees. Assessments shall be used to determine whether the personnel have the knowledge and have demonstrated skills to safely perform their work assignments. All training will be documented and filed in the employees personnel file. This training documentation will include the employee's signature, the signature of the person who administered the training, and the date of the training.
If unsafe or unsatisfactory job performance is witnessed by management or supervisor, Retraining and testing is required before that employee is able to return to duty.

PERSONAL PROTECTIVE EQUIPMENT

A3M will provide employees with the appropriate PPE to ensure the safety and health of individuals. Approved hard hats, approved metatarsal boots and approved safety glasses with permanently attached side shields shall be worn in designated areas

SAFETY

The following procedures and guidelines must be followed by all employees:

1. Prior to performing work within six (6) feet of any railroad track the following procedures must be completed:
    a. Permission must be obtained from railroad Supervisor or other elected person
    b. Once adequate permission is obtained, the railroad track must be taken out of service
2. Employee/Pedestrian Railroad Crossing Procedures

a. In all cases pedestrians/employees shall cross at existing designated pedestrian rail crossings where provided.
b. Vehicle crossings are not intended as pedestrian crossings unless they are so identified and/or located, and no other pedestrian crossings exist in the area.
c. In the instance that a designated pedestrian/employee crossing is not available:
    - Do not cross within 10 feet of the end of a parked rail car,
    - Do not cross between uncoupled cars, stop, look and listen prior to proceeding across the tracks
    - Never step on rails, as they may be slippery
d. Employee should NEVER under any circumstances:
    - Attempt to crawl under rail equipment
    - Attempt to climb over moving rail equipment
    - Attempt to cross in front of moving rail equipment

3. Employee should NEVER position any part of the body in a potential pinch point. Rail equipment is capable of moving in either direction at any given time.

MOBILE EQUIPMENT SAFETY

PURPOSE

The purpose for this program is to provide a set of safety guidelines that will help to minimize mobile equipment incidents and ensure employee safety.

SCOPE AND APPLICATION

The following guidelines set forth by A3M shall be followed by all personnel when operating mobile equipment.

RESPONSIBILITY

It is the responsibility of all A3M personnel to adhere to the mobile equipment safety requirements in order to maintain a safe work environment for themselves as well as their fellow employees. It is the responsibility of Management and Supervisors to make certain that all employees abide by the following safety guidelines, and to take action when a violation is observed in order to prevent additional hazards or injury.

TRAINING

1. Only authorized employees shall be allowed to operate mobile equipment. The following is required to receive authorization:
    a. Proper training is required to receive
    b. Employee must pass a proficiency test
2. Unauthorized Personnel
    a. Unauthorized personnel shall not be permitted to ride on equipment

PROCEDURES

1. At the beginning of each shift, the driver/operator shall inspect and check the assigned equipment. The driver/operator shall inspect the following:
    - Clutch
    - Breaking System
    - Steering
    - Lighting
    - Control system
    - Locking/Tagging out the equipment if necessary
2. If any malfunction is found or observed during the pre-trip inspection, the driver/operator shall immediately report the findings to the Supervisor/Dispatcher.
3. The driver/operator shall not operate the mobile equipment if the following requirements are not met:
    a. The mobile equipment must have the protection of an enclosed cab
    b. The driver operator must have the approved eye protection required for the assigned job.

4. Prior to starting the engine, the driver/operator must fasten seat belts and adjust them to ensure a proper, safe, and secure fit.
5. The driver/operator shall make certain that the warning signal is properly operating when the equipment is in reverse. If the warning signal is not working properly, the operator/driver must report the malfunction to the Supervisor. The mobile equipment shall not be put back into service until the issue is resolved.

PROPER USAGE

1. The driver/operator shall not use, or attempt to use any mobile equipment in any manner or for any purpose other than for which it is designed and intended for.
2. The driver/operator shall not attempt the following:
    a. Driver/operator shall not load the mobile equipment beyond its established load limit
    b. Shall not move loads that have not been centered and secured for safe transportation due to the loads length, width, or height

FUELING PROCEDURES

1. The operator of a gasoline or diesel vehicle must shut off the engine before filling the fuel tank.
2. The operator must be certain that the nozzle of the filling hose makes contact with the filling neck of the tank.
3. There shall be no individual(s) on the vehicle during the fueling operations except if specifically required by design.
4. There shall be NO SMOKING during the fueling operations.
5. There shall be NO open flames in the immediate area during fueling operations.

DRIVER SAFETY

Purpose

A3M is to provide a general set of guidelines that will help minimize incidents, near-misses and accidents in company vehicles.

Scope & Application

A3M Guidelines should be followed anytime an employee is operating an A3M vehicle inside and outside of the A3M site.

Responsibilities

It is the responsibility of all personnel to adhere to the safety requirements listed below to minimize or eliminate incidents, near-misses and accidents.
Each employee is responsible for reporting all accidents and incidents to management.

General

1. Authorized Drivers
    - Only authorized employees will drive a motor vehicle in the course and scope of work or operate a company owned vehicle.
2. Driver Verification
    - Drivers should be properly assessed by management.
    - Drivers should possess a valid and current driver's license.
    - Drivers should be trained to operate the company vehicle.
3. Driver is not allowed to operate the vehicle:
    - When he/she is under the influence of alcohol.
    - When he/she is under the influence of illegal drugs.
    - When he/she is under the influence of certain medical prescriptions that may impair driving.
4. Reporting Violations and Accidents
    - Authorized drivers must report any collisions or traffic violations while driving on company duties to approved personnel.
5. Vehicle Operations
    - Driver is responsible for properly obtaining the securement of a load.
    - Driver should know the correct size if the vehicle.
    - Driver should know the intended use that the vehicle was designed for.
    - Driver should know the hazards if the vehicle is not operated correctly.
6. Manufacturers Specifications:
    - Drivers must not exceed the manufacturer's specifications and legal limits for the vehicle.
7. Vehicle Inspection Report
    - Driver must conduct an inspection of the vehicle before, during, and after a job to ensure that the vehicle is maintained in a safe working order.

- Driver must report any problems or malfunctions that the vehicle is experiencing to management as soon as possible so that they can be addressed and fixed.

8. Safe Driving Behaviors/Practices
    - Driver and passengers must wear a seatbelt at all times while vehicle is in motion.
    - Cell phone use is prohibited while operating a vehicle unless the cell phone is hands-free.
    - Driver must not manipulate the radio as it can be a distraction.
    - Driver should not exceed the posted speed limit on a public highway or inside a facility.
    - Driver must maintain a safe distance between other vehicles.

GAS HAZARDS

PURPOSE
The purpose of this program is to provide A3M employees with the proper safety guidelines and procedures for Gas Hazards.

GAS HAZARD AWARENESS
Gas hazard awareness training must be provided before initial assignment and annually thereafter.

TRAINING
Gas Hazard Awareness training should include at a minimum:

1. Locations of alarm stations
2. Gas Monitoring Equipment- Portable and Fixed Detection Gas Alarms
3. Gas Hazards- Characteristics of gases, to include oxygen deficiency, oxygen or nitrogen enrichment, carbon monoxide and hydrogen sulfide at a minimum. Hazard training must also include any plant or department specific gases of concern. Training must include signs and symptoms of overexposure
4. Personnel Rescue Procedures
   Use and care of Self-Contained Breathing Apparatus (SCBA)- includes donning and emergency procedures (if applicable)
5. Evacuation Procedures
6. Staging Areas – Primary and Secondary

RECORDKEEPING
Gas Hazard Awareness training shall be documented and available for review.

HIGH GAS HAZARD AREAS
Each employee shall use a portable gas detector as required in all high gas hazard areas.

GAS MONITORS
The gas monitor must be calibrated per manufacturer's recommendations and contain a current calibration sticker on the monitor providing the date of calibration.

DAILY BUMP TESTS
Bump test are required to be completed at the beginning of each day the monitor is in use per the requesting owner client and manufacturer's guidelines to ensure the monitor is functioning correctly.

SITE SPECIFIC CONTINGENCY/EMERGENCY PLANS
Employees will be aware of the owners contingency plan provisions including evacuation routes and alarms. Employees should participate in emergency evacuation drills and practice rescue procedures.

HAZARD IDENTIFICATION & RISK ASSESSMENT

PURPOSE

The purpose of this program is to provide A3M employees with the proper safety guidelines and procedures for Hazard Identification and Risk Assessment.

PROCESS FOR IDENTIFYING POTENTIAL HAZARDS

JSA's

The uses of Job Safety Analysis's and facility wide or area specific analysis/inspections processes are in place to identify potential hazards.

Responsibilities

- A3M ensures that employees and sub-contractors are actively involved in the hazard identification process.
- Employer is responsible for reviewing hazards with all employees concerned.

Use of Process

- The hazard identification process should be used for routine and non-routine activities as well as new processes, changes in operation, products or services as applicable.

Hazards are classified/prioritized and addressed based on:

- The risk associated with the task / (Risk analysis matrix outlining severity and probability).

Identified hazards are addressed and mitigated by dedicated assignment, appropriate documentation of completion, and implemented controls.

TRAINING

Employees will be properly trained in the hazard identification process

This training shall include:

- Use of PPE
- Proper care of PPE

PURPOSE

The program shall be designed to identify, evaluate, and control safety and health hazards, and provide for emergency response for hazardous waste operations.

DEFINITIONS

Buddy system: A system of organizing employees into work groups in such a manner that each employee of the work group is designated to be observed by at least one other employee in the work group. The purpose of the buddy system is to provide quick assistance to employees in the event of an emergency.

Certified employee: An employee that has completed all of the requirements for training certification.

Certified supervisor: A supervisor that has completed all of the requirements for training certification.

Clean-up operation: An operation where hazardous substances are removed, contained, incinerated, neutralized, stabilized, cleared-up, or in any other manner processed or handled with the ultimate goal of making the site safer for people or the environment.

Decontamination: The removal of hazardous substances from employees and their equipment to the extent necessary to preclude the occurrence of foreseeable adverse health effects.

Emergency response, or responding to emergencies: A response effort by employees from outside the immediate release area or by other designated responders (i.e., mutual aid groups, local fire departments, etc.) to an occurrence which results, or is likely to result, in an uncontrolled release, which may cause high levels of exposure to toxic substances, or which poses danger to employees requiring immediate attention. Responses to incidental releases of hazardous substances where the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate release area, or by maintenance personnel are not considered to be emergency responses within the scope of this standard. Responses to releases of hazardous substances where there is no immediate safety or health hazard (i.e., fire, explosion, or chemical exposure) are not considered to be emergency responses.

NOTE: The "immediate release area" can be the entire geographic boundary of the employee's assigned work area.

Facility: A. Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, storage container, motor vehicle, rolling stock, or aircraft, or B. any site or area where a hazardous substance has been deposited, stored, disposed of, placed, or otherwise come to be located; but does not include any consumer product in consumer use or any water-borne vessel.

Hazardous materials response (HAZMAT) team: An organized group of employees, designated by the employer, which is expected to perform work to handle and control actual or potential leaks or spills of hazardous substances requiring possible close approach to the substance. The team members perform responses to releases or potential releases of hazardous substances for the purpose of control or stabilization of the incident. A HAZMAT team is not a fire brigade nor is a typical fire brigade a HAZMAT team. A HAZMAT team, however, may be a separate component of a fire brigade or fire department.

Hazardous substance: Any substance designated or listed under A. through D. below, exposure to which results or may result in adverse affects on the health or safety of employees:

A. Any substance defined under Section 101(14) of CERCLA or under Sections 25316 and 25317 of the California Health and Safety Code;
B. Any biological agent and other disease-causing agent which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any person, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations in such persons or their offspring;
C. Any substance listed by the U.S. Department of Transportation and regulated as hazardous materials under 49 CFR 172.101 and appendices; and
D. Hazardous waste as herein defined.

Hazardous waste: A waste or combination of wastes as defined in 40 CFR 261.3, or regulated as hazardous waste in California pursuant to Chapter 6.5, Division 20, California Health and Safety Code, or B. those substances defined as hazardous wastes in 49 CFR 171.8.

Hazardous waste operation: Any operation conducted within the scope of this regulation including hazardous substance removal work as defined in Labor Code Section 142.7(b).

Hazardous waste site, or site: Any facility or location at which hazardous waste operations within the scope of this regulation take place.

Health hazard: A chemical, mixture of chemicals or a pathogen for which there is statistically significant evidence, based on at least one study conducted in accordance with established scientific principles that acute or chronic health effects may occur in exposed employees. The term "health hazard" includes chemicals which are carcinogens; toxic or highly toxic agents; reproductive toxins; irritants; corrosives; sensitizers; hepatotoxins; nephrotoxins; neurotoxins; agents which act on the hematopoietic system; and agents which damage the lungs, skin, eyes, or mucous membranes. It also includes stress due to temperature extremes. Further definition of the terms used above can be found in Title 8, California Code of Regulations, Section 5194.

IDLH or Immediately dangerous to life or health: An atmospheric concentration of any toxic, corrosive or asphyxiate substance that poses an immediate threat to life or would cause irreversible or delayed adverse health effects or would interfere with an individual's ability to escape from a dangerous atmosphere.

Incidental release: An incidental release is one that does not cause a health or safety hazard to employees and does not need to be cleaned up immediately to prevent death or serious injury to employees.

Oxygen deficiency: That concentration of oxygen by volume below which air supplying respiratory protection must be provided. It exists in atmospheres where the percentage of oxygen by volume is less than 19.5 percent oxygen.

Permissible exposure limit (PEL): The exposure, inhalation or dermal permissible exposure limit specified in 8 CCR, Chapter 4, Subchapter 7, Groups 14 and 15; and Group 16, Articles 107, 109, and 110.

Post-emergency response: That portion of an emergency response performed after the immediate threat of a release has been stabilized or eliminated and clean-up of the site has begun. If post emergency response is performed by an employer's own employees who were part of the initial emergency response, it is considered to be part of the initial response and not post-emergency response. However, if a group of an employer's own employees, separate from the group providing initial response, performs

the clean-up operation, then the separate group of employees would be considered to be performing post-emergency response.
Qualified person: A person with specific training, knowledge and experience in the area for which the person has the responsibility and the authority to control.
Site safety and health supervisor (or official): The individual located on a hazardous waste site that is responsible to the employer and has the authority and knowledge necessary to implement the site safety and health plan and verify compliance with applicable safety and health requirements.
Uncontrolled hazardous waste site: An area where an accumulation of hazardous waste creates a threat to the health and safety of individuals or the environment or both. Some sites are found on public lands, such as those created by former municipal, county, or state landfills where illegal or poorly managed waste disposal has taken place. Other sites are found on private property, often belonging to generators or former generators of hazardous waste. Examples of such sites include, but are not limited to, surface impoundments, landfills, dumps, and tank or drum farms. Normal operations at TSD sites are not covered by this definition.
Uncontrolled release: An uncontrolled release is the accidental release of a hazardous substance from its container. If not contained, stopped, and removed, the release would pose a hazard to the employees in the immediate area or in areas in the path of the release, or from its byproducts or its effects (such as toxic vapors, fire, over-pressurization, toxic gases, or toxic particulates.

TRAINING

All employees working on site (such as but not limited to equipment operators, general laborers, and others) exposed to hazardous substances, health hazards, or safety hazards, and their supervisors and management responsible for the site shall receive training meeting the requirements of this subsection before they are permitted to engage in hazardous waste operations that could expose them to hazardous substances, safety, or health hazards, and they shall receive review training.

Employees shall not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

The training shall thoroughly cover the following:

1. Names of personnel and alternates responsible for site safety and health;
2. Safety, health and other hazards present on the site;
3. Use of PPE;
4. Work practices by which the employee can minimize risks from hazards;
5. Safe use of engineering controls and equipment on the site;
6. Medical surveillance requirements including recognition of symptoms and signs which might indicate overexposure to hazards; and

Initial Training

General site workers (such as equipment operators, general laborers, and supervisory personnel) engaged in hazardous substance removal or other activities which expose or potentially expose workers

to hazardous substances and health hazards shall receive a minimum of 40 hours of instruction off the site, and a minimum of three days actual field experience under the direct supervision of a trained, experienced supervisor.

Workers on site only occasionally for a specific limited task (such as, but not limited to, ground water monitoring, land surveying, or geo-physical surveying) and who are unlikely to be exposed over PELs and published exposure levels shall receive a minimum of 24 hours of instruction off the site, and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

Workers regularly on site who work in areas which have been monitored and fully characterized indicating that exposures are under PELs and published exposure levels where respirators are not necessary, and the characterization indicates that there are no health hazards or the possibility of an emergency developing, shall receive a minimum of 24 hours of instruction off the site and the minimum of one day actual field experience under the direct supervision of a trained, experienced supervisor.

Workers with 24 hours of training and who become general site workers or who are required to wear respirators, shall have the additional 16 hours and two days of training necessary to total the training.

Management and Supervisor Training

On-site management and supervisors directly responsible for, or who supervise employees engaged in, hazardous waste operations shall receive 40 hours initial training, and three days of supervised field experience (the training may be reduced to 24 hours and one day if the only area of their responsibility is employees and at least eight additional hours of specialized hazardous waste operations management training at the time of job assignment on such topics as, but not limited to, the employer's safety and health program and the associated employee training program, PPE program, spill containment program, and health hazard monitoring procedure and techniques.

Qualifications for Trainers

Trainers shall be qualified to instruct employees about the subject matter that is being presented in training. Such trainers shall have satisfactorily completed a training program for teaching the subjects they are expected to teach, or they shall have the academic credentials and instructional experience necessary for teaching the subjects. Instructors shall demonstrate competent instructional skills and knowledge of the applicable subject matter.

Training Certification

Employees and supervisors that have received and successfully completed the training and field experience shall be certified by their instructor or the head instructor and trained supervisor as having successfully completed the necessary training. A written certificate shall be given to each person so certified. Any person who has not been so certified shall be prohibited from engaging in hazardous waste operations.

Emergency Response

Employees who are engaged in responding to hazardous emergency situations at hazardous waste clean-up sites that may expose them to hazardous substances shall be trained in how to respond to such expected emergencies.

Refresher Training

Employees and managers and supervisors shall receive eight hours of refresher training annually. Any critique of incidents that have occurred in the past year that can serve as training examples of related work, and other relevant topics.

Equivalent Training

Employers who can show by documentation or certification that an employee's work experience and/or training has resulted in training equivalent to that training this section shall not be required to provide the initial training requirements of those subsections to such employees. However, certified employees or employees with equivalent training new to a site shall receive appropriate, site specific training before site entry and have appropriate supervised field experience at the new site. Equivalent training includes any academic training or the training that existing employees might have already received from actual hazardous waste site work experience.

EMERGENCY RESPONSE PLAN

An emergency response plan shall be developed and implemented by all employers to handle anticipated emergencies prior to the commencement of hazardous waste operations. The plan shall be in writing and available for inspection and copying by employees, their representatives, Division personnel, and other governmental agencies with relevant responsibilities.

Elements of an emergency response plan: The employer shall develop an emergency response plan for emergencies which shall address, as a minimum, the following:
(A) Pre-emergency planning.
(B) Personnel roles, lines of authority, and communication.
(C) Emergency recognition and prevention.
(D) Safe distances and places of refuge.
(E) Site security and control.
(F) Evacuation routes and procedures.
(G) Decontamination procedures which are not covered by the site safety and health plan.
(H) Emergency medical treatment and first aid.
(I) Emergency alerting and response procedures.
(J) Critique of response and follow-up.
(K) Personal protective equipment (PPE) and emergency equipment.

MEDICAL SURVEILLANCE

Employers engaged in operations specified and employers of employees specified shall institute a medical surveillance program in accordance with this program.

The medical surveillance program shall be instituted by the employer for the following employees:

(A) Any employee who is or may be exposed to hazardous substances or health hazards at or above the PELs or, if there is no PEL, above the published exposure levels for these substances, without regard to the use of respirators, for 30 days or more a year.
(B) Any employee who wears a respirator during any part of a day for a period of 30 days or more in a year, or as required by 8 CCR 5144.
(C) Any employee who is injured, becomes ill or develops signs or symptoms due to possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation; and
(D) Members of HAZMAT teams.

Frequency of Medical Examinations and Consultations

Medical examinations and consultations shall also be made available by the employer to each employee covered on the following schedules:

1. Prior to assignment
2. At least once every twelve months for each employee covered, unless the attending physician believes a longer interval (not greater than biennially) is appropriate.
3. At termination of employment or reassignment to an area where the employee would not be covered if the employee has not had an examination within the last six months.
4. As soon as possible, upon notification by an employee either that the employee has developed signs or symptoms indicating possible overexposure to hazardous substances or health hazards or that the employee has been injured or exposed above the PELs or published exposure levels in an emergency situation.
5. At more frequent times, if the examining physician determines that an increased frequency of examination is medically necessary.

Examination by a physician and costs: All medical examinations and procedures shall be performed by or under the supervision of a licensed physician, preferably one knowledgeable in occupational medicine, and shall be provided without cost to the employee, without loss of pay, and at a reasonable time and place.

Information provided to the physician: The employer shall provide one copy of this standard and its appendices to the attending physician, and in addition, the following for each employee:

(A) A description of each employee's duties as they relate to the employee's exposures.
(B) Each employee's exposure levels or anticipated exposure levels.
(C) A description of any PPE used or to be used by each employee.

(D) Information from previous medical examinations of each employee which is not readily available to the examining physician.
(E) Information required by 8 CCR 5144 for each employee.

HYDROGEN SULFIDE – H2S

PURPOSE
To prevent accident and incidents and inform employees of the dangers of Hydrogen Sulfide.

GENERAL
There are may incidents of on the job fatalities caused by hydrogen sulfide gas but with proper training, and monitoring equipment and safety and health procedures for entering confined spaces, employees can work safely without incident when encountering hydrogen sulfide gas at reservoirs and dams and other locations.

I. Locations Where Employees May Be Exposed To H2S:
   1. Drilling Operations.
      A. Recycled Drilling Mud.
      B. Water from sour crude wells.
      C. Blowouts
   2. Tank Gauging (tanks at producing, pipeline & refining operations).
   3. Field Maintenance.
      A. Tank batteries and wells, etc.

II. Characteristics of Hydrogen Sulfide:
   1. Toxicity
      - H2S is Toxic
   2. Color
      - H2S is Colorless
   3. Odor
      - Hydrogen sulfide has a strong odor of rotten eggs at low concentrations
      - Sickening sweet odor at higher locations
      - Odor should not be used as a warning of exposure since at concentrations of (20-30 parts per million) hydrogen sulfide may deaden the sense of smell by paralyzing the respiratory center of the brain and olfactory nerve.
   4. Solubility
      - H2S is soluble in water
   5. Flammability
      - H2S is an EXTREMELY FLAMMABLE GAS.
      - Forms explosive mixtures with air over a wide concentration range.
      - Very low ignition energy.
      - Gas is heavier than air and may hug the ground.
      - Distant ignition and flashback are possible.
   6. Toxic by-products
      - During a fire, irritating/toxic sulfur dioxide may be generated.

HEALTH EFFECTS
- Irritating to eyes and respiratory tract
- Conjunctivitis, pain, lacrimation and photophobia may persist for several days
- Coughing, pain in breathing, pain in nose and throat

- Repeated exposure causes headache, dizziness and digestive disturbances
- Collapse and death

EFFECTS OF EXPOSURE

Hydrogen sulfide can affect the body if it is inhaled or it comes in contact with the eyes, skin, nose or throat. It can also affect the body if it is swallowed.

Inhalation of low concentrations may cause:

- Headache
- Dizziness
- Upset stomach
- Repeated exposure to low concentrations causes conjunctivitis, photophobia, corneal bullae, tearing, pain and blurred vision

At higher concentrations hydrogen sulfide may cause:

- Loss of consciousness
- Death
- Exposure to high concentrations causes rhinitis, bronchitis, and pulmonary edema

DETECTING HYDROGEN SULPHIDE

Methods:

1. Detector tubes indicate amount of gas by color change of chemically coated granules in a glass tube
2. Electronic monitors
2. Personal or area monitors will sound an alarm when PEL exceeds the preset level of 20 PPM for 1910 or 10 PPM for 1926.

Air Monitoring:

- Must be conducted prior to entry, and periodically (continuous monitoring is recommended)
- Monitor confined space from the outside or use extension probe or lower monitor into space
- Monitor must be calibrated for accuracy
- Conditions may change suddenly
- Monitor alarms may be set or preset
- Have back-up or stand-by equipment
- Be sure batteries are charged
- Electrochemical sensors will require periodic replacement
- Detector tubes have a 1-3 year shelf life
- Sensors will last 1-2 years

RESPIRATORY PROTECTION

There are two types of respiratory protection acceptable for protection from hydrogen sulfide gas:

1. SCBA
2. Supplied airline respirator

Respiratory protection should only be used if engineering controls are not feasible to control exposure to hydrogen sulfide gas.

HYDROGEN SULFIDE – H2S

ENGINEERING CONTROLS

- If a confined space contains hydrogen sulfide on a regular basis as determined by periodic monitoring then the employer must implement engineering controls
- Exhaust or fresh air ventilation systems must be installed to remove the hydrogen sulfide gas and make the area safe for entry

EXPOSURE PREVENTION

- Conduct air monitoring before entering any confined space that may contain hazardous atmospheres
- Entering a confined space may require special confined space training
- Special procedures must be followed
- An entry permit may be required
- Rescue procedures must be in place
- Employees must be aware of owners contingency plan provisions

PURPOSE
The purpose of Process Safety Management is to prevent or minimize consequences of catastrophic releases of toxic, reactive, flammable or explosive chemicals in various industries such as refineries, etc.

DEFINITONS
Catastrophic release - means a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace.
Facility - means the buildings, containers or equipment which contains a process.
Highly hazardous chemical - means a substance possessing toxic, reactive, flammable, or explosive properties and specified by paragraph (a)(1) of this section.
Hot work - means work involving electric or gas welding, cutting, brazing, or similar flame or spark-producing operations.
Process - means any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.
Trade secret - means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it.

TRAINING

Initial Training

Each employee presently involved in operating or maintaining a process, and each employee before working in a newly assigned process, shall be trained in an overview of the process and in the operating procedures to which they are assigned. The training shall include emphasis on the specific safety and health hazards, procedures, and safe practices applicable to the employee's job tasks.

Refresher and Supplemental Training

At least every three years, and more often if necessary, refresher and supplemental training shall be provided to each maintenance or operating employee and other workers necessary to ensure safe operation of the facility. The employer in consultation with employees involved in operation or maintenance of a process shall determine the appropriate frequency of refresher training.

Training Certification

The employer shall ensure that each employee involved in the operation or maintenance of a process has received and successfully completed training as specified by this subsection. The employer, after the initial or refresher training shall prepare a certification record which contains the identity of the employee, the date of training, and the signatures of the persons administering the training.

Testing Procedures

Verbal questioning by employer will ensure competency in job skill levels and safe and healthy work practices.

CONTRACTORS

1. The employer shall inform contractors performing work on, or near, a process of the known potential fire, explosion or toxic release hazards related to the contractor's work and the process, and require that contractors have trained their employees to a level adequate to safely perform their job. The employer shall also inform contractors of any applicable safety rules of the facility, and assure that the contractors have so informed their employees.
2. The employer shall explain to contractors the provisions of the emergency action plan.
3. Contractors shall assure that each of their employees have received training to safely perform their job and that the contract employees shall comply with all applicable work practices and safety rules of the facility.
4. The contract employer shall advise the employer of any unique hazards presented by the contract employer's work, or of any hazards found by the contract employer's work.
5. The contractor's training program shall be performed in accordance with the requirements of this program.
6. The employer when selecting a contractor shall obtain and evaluate information regarding the contract employer's safety program.
7. The employer shall periodically evaluate the performance of contract employers in fulfilling their obligations.
8. The employer shall obtain and make available upon request a copy of the contract employer's injury and illness log related to the contractor's work in the process areas.
9. All contract employers must respect the confidentiality of trade secret information when the process safety information is released to them.

Contractor Employees

Contractor employees shall abide by employers safe work practices during operations such as:

- lockout/tagout
- confined space entry
- opening process equipment or piping
- controls over entrance to facility

HOT WORK PERMIT

1. The employer shall develop and implement a written procedure for the issuance of "hot work" permits.
2. The permit shall certify that the applicable portions of the fire prevention and protection requirements contained in Sections 4848 and 6777 have been implemented prior to beginning the hot work operations; indicate the date(s) authorized for hot work; and identify the equipment or facility on which hot work is to be done. The permit shall be kept on file until completion of the hot work operations.

3. Contract employees shall not perform hot work until a hot work permit is obtained from employer. The permit shall document that the fire prevention and protection requirements in have been implemented prior to beginning the hot work operations.

INCIDENT REPORTING

Employees must immediately report all accidents, injuries and near misses in accordance with the processes and procedures as described in A3M's Incident Investigation and Reporting Program.

- An incident investigation must be initiated within 48 hours.
- Resolutions and corrective actions must be documented and maintained 5 years.

Management of Change

Management of change – means a process to evaluate and effectively manage any changes to the control or operations of a process.

Replacement in kind- means an item (equipment, chemical, procedure, etc.) that meets the specification of the item it is replacing.

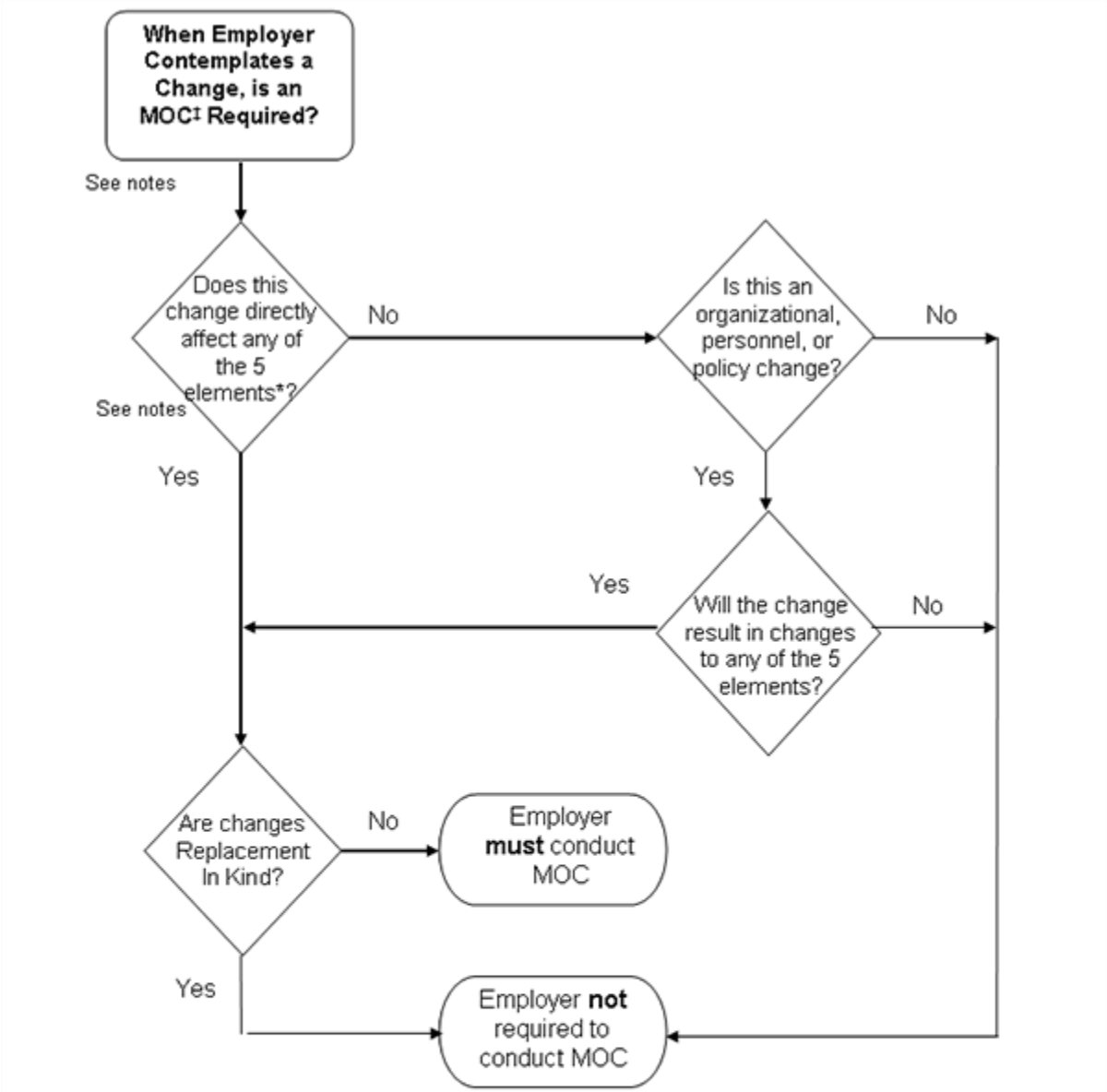
Management of Change is intended to assess for operational or environmental changes that may pose new threat or risks to employees. OSHA believes "that one of the most important and necessary aspects of safety management is appropriately managing changes to the process."

Reference: 1910.119(1)

The procedures shall assure that the following considerations are addressed prior to any change:

(1) The technical basis for the proposed change
(2) The impact of the change on safety and health
(3) The modifications to the operation procedures
(4) The necessary time period for the change
(5) The authorization requirements for the proposed change

A3M will use the OSHA tool provided on the next page to conduct management of change. Any such changes will be recorded and new training for the employees will be provided and documented.



‡If at any point in the decision making process the employer decides not to implement the contemplated change, there is no requirement to conduct an MOC.

*Contemplated changes to the following 5 elements trigger MOC review in 1910.119 (l)(1), except for Replacement In Kind (RIK):
- Process chemicals
- Technology
- Equipment
- Procedures
- Facilities

EMPLOYEE CONFIRMATION OF SAFETY PROGRAM

This is to certify that I, _____,
have read and will observe the safety practices as outlined in this booklet and other rules presented to me during my employment with A3M Vacuum Services, LLC. I understand that the safety practices listed are not the only procedures and/or rules that I will be called upon to follow.

I also understand that it is a requirement of my employment that any injury/illness be reported to my supervisor immediately.

SIGNED_____

WITNESS_____

DATE_____