

E Light Electric Services

Process Safety Management Program

Facility Name: _____

(This program is to be modified by the Director of Education and Loss Prevention in cooperation with the Project Manager for each facility specifically. The modified specific plan must be approved by the Facility Owner before implementation)

Introduction

This Program has been developed for the

at

to meet the requirements of OSHA Standard 29 CFR 1910.119 Process Safety Management of Highly Hazardous Substances (PSM). Additional program requirements have been taken from applicable ANSI & (List Sources of Standards used in your Industry such as IIAR) Standards.

Responsibilities

Project Management

- assign sufficient resources and qualified operators to ensure safe operating and material conditions are maintained
- assign a qualified supervisor to oversee and direct operations, maintenance and training
- involve operators in the various elements of this program
- request, as necessary, assistance from Facility Engineering to execute the PSM Program and conduct effective audits
- Ensure the E Light Electric Employees are not assigned to any tasks that are not within our specific scope of work.
- E Light Employees shall only be allowed to perform maintenance on systems and shall not be allowed to operate systems. All operations of systems shall be done by qualified facility operators.

Electricians

- actively participate in the PSM program
- exercise good engineering practices in the operation and maintenance of the systems
- comply with all safety procedures

Human Resource Manager

- Provide PSM overview indoctrination training for all new employees as part of the New Hire Safety Orientation training if an employee is to be assigned to a facility requiring Process Safety Management.

PSM Elements

The PSM Standard contains 14 Elements that must be addressed in this program.

1. Employee Participation
2. Process Safety Information (PSI)
3. Process Hazard Analysis (PHA)
4. Operating Procedures
5. Training
6. Contractor Safety
7. Pre-Startup Safety Review
8. Mechanical Integrity
9. Hot Work Program
10. Management of Change (MOC)
11. Incident Investigation
12. Emergency Planning and Response
13. Compliance Audits
14. Trade Secrets

Section 1: Employee Participation

Requirements: The standard requires the project manager to:

- Develop a Plan of Action for implementation of Employee Involvement
- Consult with employees on the conduct of the development of PSM Elements
- Provide access to PSM information
- This plan must be developed in coordination with the facility owner

Section 2: Process Safety Information (PSI)

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Requirements: the OSHA standard requires compiling of technical information on the process and equipment in the system. This requirement is to allow for PHA and maintaining information on the system for Operator training and reference. The project manager shall secure this information from the facility owner and forward to the Director of Education and Loss Prevention.

Specifically:

- Hazards of the specific system pertaining to the technology of the system
- Information pertaining to the equipment in the process
- Documentation that equipment complies with recognized and generally accepted good engineering practices.

Section 3: Process Hazard Analysis

Requirements: An initial process hazard analysis must be conducted by a team with expertise in engineering and process operations, including at least one employee who has experience and knowledge on the system. This initial process hazard analysis shall be conducted by the facility owner.

After Initial PHA

- Establish a system to promptly address the team's findings and recommendations
- Assure that the recommendations are resolved in a timely manner
- Document resolutions
- Document what actions are to be taken
- Complete actions as soon as possible
- Develop a written schedule of when these actions are to be completed; Communicate the actions to operating, maintenance

PHA review is required at periodically as determined by the facility owner and all updates shall be sent to the project manager and relayed through training to the electricians.

PHA must address: The hazards of the process;

Identify previous incident which had a likely potential for catastrophic consequences in the workplace

- Engineering and administrative controls
- Detection methods for providing early warning of releases
- Consequences of failure of engineering and administrative controls
- Facility site

- Human factors
- Qualitative evaluation of a range of the possible safety and health effects of failure of controls on employees

Section 4: Operating Procedures

Requirements: Obtain from the facility owner written operating procedures that provide clear instructions for safely conducting operations and maintenance. Operating procedures shall be readily accessible to employees. The operating procedures shall be reviewed as often as necessary to assure that they reflect current operating practice. E Light shall ensure that the operating procedures have been certified annually by the facility owner.

Develop and implement safe work practices to provide for the control of hazards during operations such as lockout/tagout; confined space entry; opening process equipment or piping; and control over entrance into a facility by maintenance, contractor, laboratory, or other support personnel. These safe work practices shall apply to employees and contractor employees.

Procedures shall include:

- Initial startup
- Normal, temporary and emergency operations
- Normal shutdown
- Startup following a turnaround or after an emergency shutdown
- Operating limits
- Consequences of deviation & Steps required to correct or avoid deviation.
- Safety and health considerations:
- Precautions necessary to prevent exposure, including engineering controls
- Administrative controls, and personal protective equipment
- Control measures to be taken if physical contact or airborne exposure occurs
- Quality control for raw materials and control of hazardous chemical inventory levels
- Safety systems and their functions.

Section 5: Training

Requirements

Initial training: E Light Employees must be trained in an overview of the process and in the operating procedures as applies to the maintenance and repair. The training shall include emphasis on the specific safety and

health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks.

For those employees already involved in operating a process on May 26, 1992, an employer may certify in writing that the employee has the required knowledge, skills, and abilities to safely carry out the duties and responsibilities as specified in the operating procedures.

Refresher training shall be provided at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. The employer, in consultation with the employees involved in operating the process, shall determine the appropriate frequency of refresher training.

Training documentation. E Light Electric Services shall ascertain that each employee involved in operating a process has received and understood the training required by this paragraph. The employer shall prepare a record that contains the identity of the employee, the date of training, and the means used to verify that the employee understood the training.

Section 6: Contractors

Requirements

- Obtain and evaluate information regarding the contract employer's safety performance and programs
- Communicate to contractors the known potential fire, explosion, or toxic release hazards related to the contractor's work .
- Develop and implement safe work practices to control the entrance, presence and exit of contract personnel
- evaluate the performance of contract employers in fulfilling their obligations
- a contract employee injury and illness log related to the contractor's work in process areas

Section 7: Pre-Startup Safety Review

Requirements: Coordinate with the facility owner to perform a pre-startup safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information. The

purpose of the Pre-Startup Review is to confirm that, prior to the introduction of highly hazardous chemicals to a process:

- Construction and equipment is in accordance with design specifications;
- Safety, operating, maintenance, and emergency procedures are in place and are adequate
- Modified facilities meet the requirements contained in Management of Change
- Training of each employee involved in operating a process has been completed.

Section 8: Mechanical Integrity

Requirements: Establish and implement written procedures in cooperation with the facility owner to maintain the on-going integrity of the equipment. This includes:

Test & Inspections (T&Is) on equipment following recognized and generally accepted good engineering practices, manufacturers recommendations and operating experience for the conduct and frequency.

Documentation of T&Is, identifying:

- date
- name of the person performing T&I
- serial number or other identifier of the
- description of the inspection or test performed
- results

Equipment deficiencies. Correct deficiencies in equipment that are outside acceptable limits before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

New Equipment. Assure that equipment as it is fabricated is suitable for the process application for which they will be used. Additionally, conduct appropriate checks and inspections to assure that equipment is installed properly and consistent with design specifications and the manufacturer's instructions.

Material Control. Assure that maintenance materials, spare parts and equipment are suitable for the process application for which they will be used.

Section 9: Hot Work

Requirements: The employer shall issue a hot work permit for hot work operations conducted on or near a covered process. The permit shall document that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; it shall indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed. The permit shall be kept on file until completion of the hot work operations. The hot work shall be conducted in accordance with E Light Electric Services Hot Work Policy.

Section 10: Management of Change (MOC)

Requirements: Obtain from the facility owner written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process for which our employees may have contact.

Prior to the change, address the following considerations:

- The technical basis for the proposed change;
- Impact of change on safety and health;
- Modifications to operating procedures;
- Necessary time period for the change; and,
- Authorization requirements for the proposed change.

Train affected employees and contract employees in the change prior to start-up of the process or affected part of the process.

Obtain Up-dated PSI, PHA and Operating Procedures

Section 11: Incident Investigation

Requirements:

Investigate each incident that resulted in, or could reasonably have resulted in a catastrophic release of highly hazardous chemical in the workplace. An incident investigation shall be initiated as promptly as possible, but not later than 48 hours following the incident. This investigation shall be separate from and in parallel to any investigation conducted by the facility owner. Results of the investigation shall be communicated to the Facility Owner.

Incident Reports: A report shall be prepared at the conclusion of the investigation that includes at a minimum:

- Date of incident
- Date investigation began
- Description of the incident
- Factors that contributed to the incident
- Recommendations resulting from the investigation

Corrective Actions: Establish a system to promptly address and resolve the incident report findings and recommendations. Forward recommendations to the facility owner.

Report Review: The report shall be reviewed with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable. Incident investigation reports shall be retained for five years

Section 12: Emergency Planning & Response

Requirements:

Obtain from the facility owner an emergency action plan for the entire plant in accordance with the provisions of 29 CFR 1910.38(a). and 29 CFR 1910.120(a), (p) and (q). In addition, the emergency action plan shall include procedures for handling small releases.

Train all E Light Employees on the emergency action plan and document the successful completion of this training.

Section 13: Compliance Audits

Requirements: Obtain from the facility owner verification that a compliance audit has been performed and ask for the results of the audit. Certify that E Light Electric Service employees are in compliance with the provisions of the PSM Standard at least every three years to verify that the procedures and practices developed under the standard are adequate and are being followed.

- The compliance audit shall be conducted by at least one person knowledgeable in the process.
- A report of the findings of the audit shall be developed.
- Promptly determine and document an appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected.

- Retain the two (2) most recent compliance audit reports.

Section 14: Trade Secrets

Requirements: E Light Electric Service personnel shall not share any information obtained from the facility owner with any outside source unless compelled to do so by a court with appropriate jurisdiction.

E Light Electric Services shall comply with the confidentiality and trade secret policies of the facility owner.