

Safety Audit Summary

Air Liquide Large Industries at Phillips 66 Rodeo Refinery

1391 San Pablo Avenue, Rodeo

Introduction

Contra Costa Health Services Hazardous Materials Programs (CCHSHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by Air Liquide Large Industries U.S. LP at the Phillips 66 Rodeo Refinery (Air Liquide Rodeo). This safety audit conducted in January 2019 was performed to determine compliance with the California Accidental Release Prevention (CalARP) Program and the more comprehensive Contra Costa County Industrial Safety Ordinance (ISO) Safety Program. The prevention programs address maintenance, operating procedures, contractor safety, personnel training, incident investigations and understanding hazards at the plant. The inspection also examined the management systems in place to implement these programs and the plant's emergency response program to ensure that the plant is prepared to respond to an emergency involving a hazardous chemical.

The audit verified that Air Liquide Rodeo has addressed the Contra Costa County's specific requirements for managing additional safety programs beyond those already required under State and Federal regulations. These additional safety programs include:

- Effectively managing organizational changes at the facility so there is minimal impact to emergency response and operations;
- Conducting detailed incident investigations to fix the systems or safety programs that were at fault, instead of just assigning blame to an employee, in order to prevent possible future similar incidents from occurring;
- Reviewing the plant's operations for signs of hidden problems that could lead to possible significant incidents. Identifying these signs and correcting them are the primary purposes of the Human Factors Program;
- Assessing ways to improve new and existing equipment/processes to reduce the impact of hazards and make the processes safer to run.

During a comprehensive safety audit, CCHSHMP reviews individual safety programs through answering up to 409 questions. The CCHSHMP 2019 safety audit at Air Liquide Rodeo plant resulted in 35 corrective actions for Air Liquide Rodeo to implement, and 23 other items that are not required but may assist in accident prevention. Identified below is a summary of some of the findings, both good and bad, within the various safety programs. For ease of presentation, the safety programs have been grouped into three broad topics: management systems, process/equipment issues, and the County ISO requirements.

Management System

• *Oversight/Communication:* The CalARP/Safety Program implementation and management responsibilities between the plant and corporate staff were mostly defined, coordinated and integrated. The facility needs to strengthen the corporate oversight of the CalARP and ISO program elements and complete the related action items in a timely manner.

- *Training:* The facility needs to conduct timely initial and refresher training for operators and document that operators understood the training. Specialized training for human factors needs to be documented.
- *Contractor Safety:* Air Liquide Rodeo needs to improve on how to conduct an evaluation of the performance of the contract owner/employees in the field when they are doing work and also confirm that their training is done and documented.
- *Emergency Response:* An emergency response plan is in place to protect workers, the public, and the environment from harm due to possible emergencies. Procedures were in place for notification of first responders and different agencies.
- *Safe Work Practice:* Procedures are in place to conduct safe work practices.

Process/Equipment Issues

- *Mechanical Integrity:* Air Liquide Rodeo uses contractors to perform much of the major maintenance. An electronic maintenance management database is used to track and plan these maintenance items. Tests and inspections were performed on process equipment, but the facility needs to ensure that process safety valves are tested or replaced on the required frequency as specified by the mechanical integrity program.
- *Operating Procedures:* The operating procedures are available, but improvement is needed in identifying health and safety requirements and latent conditions for all of the procedures.
- *Process/Equipment Safety Information:* Safety and design information for process equipment was found to be well-documented and accessible to personnel.

- *Process Hazard Analysis:* Air Liquide Rodeo has a PHA program in place, but they need to include consideration of incidents at similar facilities and ensure that PHA actions are targeted to be complete within one year unless a plant shutdown is required.

Industrial Safety Ordinance (ISO) Requirements

- Senior management need to allocate time and resources for all of the Safety Program elements including those for ISO. Improvements are needed in establishing expertise in the following: Inherently Safer Systems (ISS) and training of Human Factors program.
- CCHSHMP also identified deficiencies in the following: Review of all operating and maintenance procedure for human factors deficiencies; ensuring that the PHA deficiencies are tracked through resolution; training of plant personnel in writing effective procedures; conducting safety culture assessments on a timely basis, and effectively addressing inherently safer systems/design (look for ways to reduce the hazard and make the process safer).

Next Steps

An announcement to review the complete safety audit will be made and a public meeting will be held to provide opportunity for CCHSHMP to receive public comments and questions. Questions regarding this facility or about the hazardous materials program in general can be directed to (ARPTeam@cchealth.org) or addressed to Contra Costa Health Services Hazardous Materials Programs, c/o Matt Kaufmann , 4585 Pacheco Blvd., Suite #100, Martinez, CA. 94553. CCHSHMP will respond to all written comments.

Additional Information

For more information, logon to the Hazardous Materials Programs website:
<http://www.cchealth.org/groups/hazmat/>
The complete safety audit report is at the Rodeo Library @ 220 Pacific Avenue, Rodeo, and Crockett Public Library @ 991 Loring Avenue, Crockett