

Safety Audit Summary

Phillips 66 Rodeo Refinery

1380 San Pablo Avenue, Rodeo

Introduction

Contra Costa Health Hazardous Materials Program (CCHHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by the Phillips 66 Rodeo Refinery (Phillips 66), located at 1380 San Pablo Avenue, Rodeo. This safety audit, conducted in the fall of 2022, was performed to assess compliance with the California Accidental Release Prevention (CalARP) Program and Contra Costa County's Industrial Safety Ordinance (ISO) Safety Program. In 2017 the State CalARP regulations were modified to add Program 4 requirements for petroleum refineries that closely matched those contained within the County's ISO. The prevention programs under these regulations address maintenance, operating procedures, contractor safety, personnel training, incident investigations, and understanding hazards at the plant. The inspection also examines the adequacy of the management systems in place to implement these programs and the plant's emergency response program to verify the plant's ability and preparedness to respond to a hazardous chemical emergency.

The audit verified that Phillips 66 has addressed State and County specific requirements for managing additional safety programs beyond those already required under Federal regulations. These additional safety programs include:

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

During a comprehensive safety audit, CCHHMP reviews safety programs by answering up to 444 questions. The CCHHMP 2022 safety audit at Phillips 66 resulted in 11 corrective actions for Phillips 66 to implement and 18 other items that are not required but may assist in accident prevention. Identified below is a summary of some of the issues found, both good and bad, within the various safety programs. For ease of presentation, the safety programs have been grouped into two broad topics: management systems and process/equipment issues.

Management System

- *Overall:* Phillips 66 has developed a robust management system to ensure all safety programs are properly implemented. Numerous policies and procedures are in place to manage safety, including effective management of changes to processes and procedures. The leadership's commitment to safety is commendable, with senior management actively participating in safety meetings and promoting continuous improvement.
- *Training:* An effective operator training program is in place. Additional efforts are needed to ensure the workforce is comprehensively trained in an overview of the CalARP Program 4 requirements. All employees have access to the necessary Process Safety Information (PSI), and the training materials are regularly updated to reflect current standards and practices.
- *Compliance Audit:* The refinery has performed several self-audits; however, these audits need to be documented as complete every three years in a detailed written report.
- *Contractor Safety:* The refinery has a process to verify proper contractor performance and safety programs. However, assessments need to be expanded to smaller contracting companies and performed more frequently each year. The refinery should ensure that all contractors are periodically evaluated and provided with necessary training documentation.
- *Emergency Response:* An emergency response program was developed and implemented to protect workers, the public, and the environment from harm due to refinery emergencies. The program includes comprehensive emergency action plans, regular drills, and proper maintenance of emergency equipment.
- *Safety Culture:* The refinery is overdue for completing a Process Safety Culture Assessment to satisfy CalARP Program 4/ISO requirements. The leadership's active participation in safety meetings and collaboration with union representatives contribute to maintaining a strong safety culture.

Process/Equipment Issues

- *Mechanical Integrity:* Preventive maintenance inspection and testing is routinely performed as scheduled and is well documented.
- *Operating Procedures:* Operating procedures were found to be clear and in sufficient detail. These procedures are readily accessible to all personnel and cover all modes of operation, including startup, shutdown, and emergency operations.
- *Process/Equipment Safety Information:* The refinery has compiled and made available electronically, process and equipment information to personnel as necessary. This includes process flow diagrams, piping and instrumentation diagrams (P&IDs), and safety data sheets (SDSs).

Next Steps

The results of the entire safety audit are available for review at the Rodeo and Crockett libraries and at the Hazardous Materials Program Office. (See information below).

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 Crockett Public Library at 991 Loring Avenue, the Rodeo Public Library at 220 Pacific Avenue, or call 925-655-3200 for an appointment to view the report at CCHSHMP's offices.