Safety Audit Summary
Phillips 66 Rodeo Refinery

Introduction
Contra Costa Health Services Hazardous Materials Program (CCHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by the Phillips 66 Rodeo Refinery (Phillips 66), formerly called the ConocoPhillips Refinery) located at 1380 San Pablo Avenue, Rodeo. This safety audit, conducted in the winter of 2017, was performed to assess compliance with the California Accidental Release Prevention (CalARP) Program and the more comprehensive Contra Costa County’s 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 examines the adequacy of the management systems in place to implement these programs and the plant’s emergency response program to verify the plant ability and preparedness to respond to a hazardous chemical emergency.

The audit verified that Phillips 66 has addressed 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 plant so there is minimal impact to emergency response and operations;

- Conducting detailed incident investigations to correct safety programs or management system 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 the ISO’s 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, CCHMP reviews safety programs through answering up to 409 questions. The CCHMP 2017 safety audit at Phillips 66 resulted in 24 corrective actions for Phillips 66 to implement and 30 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 three broad topics: management systems, process/equipment issues, and the County ISO requirements.
Management System

- **Overall:** Phillips 66 has developed a good management system to make sure that all of the safety programs are properly implemented. Numerous policies and procedures are in place to manage safety, including effectively managing changes to process and procedures.
- **Training:** An effective operator training program is in place.
- **Compliance Audit:** The refinery has performed a number of self-audits; however, these audits need to be improved to document areas that were assessed to be effective and working, and to promptly identify responses for areas that need improvement.
- **Contractor Safety:** The refinery has a process to verify proper contractor performance and safety programs although more assessments need to be performed each year.

Process/Equipment Issues

- **Mechanical Integrity:** Preventive maintenance inspection and testing is routinely performed as scheduled and is well documented. Initial testing of independent protection layers is only partially done and needs to be completed for all units.
- **Operating Procedures:** Operating procedures were found to be clear and in sufficient detail. Inconsistencies were found between Emergency Isolation Procedures and process safety information.
- **Process/Equipment Safety Information:** The refinery has compiled, and made available electronically, process and equipment information to personnel as necessary.

Industrial Safety Ordinance (ISO) Requirements

- Phillips 66 needs to define ‘Major Change’ in the context of evaluating inherently safer systems for qualifying management of change or incident investigation recommendations.
- Phillips 66 needs to expand the involvement of employees in the review of the human factors latent conditions checklists.
- The process for managing organizational changes needs to be improved to match regulatory requirements to clearly document all affected positions.
- The refinery completed a required safety culture assessment and needs to establish acceptable participation levels for each workgroup and develop metrics to make sure the refinery’s safety culture program improvement plans are being met.

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 925-335-3200 for an appointment to view the report at CCHMP’s offices.

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