

Safety Audit Summary

Chevron Refinery

841 Chevron Way, Richmond

Introduction

Contra Costa Health Services Hazardous Materials Program (CCHSHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by the Chevron Refinery located at 841 Chevron Way, Richmond. This safety audit, conducted in the Summer of 2019, was performed to assess compliance with the California Accidental Release Prevention (CalARP) Program and the City of Richmond's Industrial Safety Ordinance (RISO) 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.

This audit verified that Chevron has 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 to emergency response, operations, Health and Safety, and maintenance;
- 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 RISO'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, CCHSHMP reviews safety programs through answering over 440 questions. The CCHSHMP 2019 safety audit at Chevron resulted in 42 corrective actions for Chevron to implement and 36 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 City of Richmond's ISO requirements.

Management System

- *Oversite/Communication:* Chevron has implemented a metric system as part of their management systems to track goals for the site. Numerous policies and procedures are in place to manage safety, including effectively managing changes to process and procedures. Chevron needs to invite the employee representatives to actively participate on the audit/inspection teams including internal compliance audits
- *Training:* Chevron has a system in place to train all operations personnel in the duties they need to perform as well as an extensive maintenance employee apprenticeship program. Improvements in refresher training for operating procedures are needed.
- *Emergency Response:* An emergency response plan was developed to protect workers, the public, and the environment during possible emergencies. Procedures were in place for notification of first responders and different agencies and other back up if necessary.
- *Contractor Safety:* Chevron implemented a way to qualify contractors and perform periodic audits; however, there is areas for improvement in documentation of periodic audits.
- *Safety Culture:* Assessments performed to date did not fully satisfy all of the new CalARP requirements so another study needs to be performed as soon as administratively practicable.

Process/Equipment Issues

- *Mechanical Integrity:* Preventive maintenance inspection and testing is routinely performed and is documented in individual equipment files including data, test methods and descriptions; however the facility needs to address gaps in the Damage Mechanism program.
- *Operating Procedures:* Operating procedures are available electronically, and emergency procedures are available both electronically and within each control room. The triennial procedure review process appears sufficient to address any remaining issues within operating procedures.
- *Process/Equipment Safety Information:* Chevron has compiled, and made available electronically, a substantial amount of process and equipment information.

Industrial Safety Ordinance (ISO) and Refinery Specific Requirements

- *Human Factors:* Chevron has a human factors program in place but needs to ensure that CalARP Program 4 requirements are met. The facility also needs to improve their fatigue management program.
- *Process Hazards:* Chevron has very robust programs. However, both the PHA and LOPA processes need to improve in the area of safeguards both in documentation and application within the studies.

- *Organizational Changes:* The process for managing changes in the organization is detailed. There is need for improvement in defining when MOCs are triggered.
- *Incident Investigation:* Chevron needs to develop a process for the personnel to recognize when an incident could reasonably have been Major Chemical Accidental Release or Major Incident so that it could be investigated accordingly. These incidents were investigated, however, may not have been the corresponding protocol.

Next Steps

The results of the entire safety audit are available for review at the Richmond 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:

- Richmond Public Library
325 Civic Center Plaza
- Point Richmond Public Library
135 Washington Ave.
- CCHSHMP's office: call 925-335-2200 for an appointment to view the report.

