Introduction

Contra Costa Health Services Hazardous Materials Program (CCHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by Tesoro Golden Eagle Refinery (Tesoro) located at 150 Solano Way, Martinez. This safety audit, conducted in the January of 2014, 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 verifies that Tesoro 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 497 questions. The CCHMP 2014 safety audit at Tesoro resulted in 29 corrective actions for Tesoro to implement and 45 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:** Tesoro has developed a good management system to make sure that all of the safety programs are properly implemented including a comprehensive self-audit of these programs.
- **Management-of-Change:** Tesoro has improved their MOC program to consistently meet the requirements of the program.
- **Employee Participation:** Tesoro needs to ensure that employees and their representatives are involved in providing input for review of written instructions/programs related to Process Safety Management and that this is documented.
- **Contractor Safety:** Tesoro conducts various audits of contractors. Each contractor is trained in the work practice to safety perform his or her job.

Process/Equipment Issues

- **Mechanical Integrity:** Tesoro has developed a very detailed mechanical integrity program. However, Tesoro needs to consistently follow their existing process to abandon, mothball or demolish equipment; develop a process to prioritize and resolve issues associated with inhibited alarms that incorporates feedback from other departments; and further evaluate their maintenance risk-ranking process to better understand its strengths and weaknesses.
- **Operating Procedures:** Tesoro has improved their operating procedures although needs to include safety and health considerations such as properties of, and hazards presented by, the chemical used in the process in their operating procedures.
- **Preparation for Maintenance Work:** Tesoro has a thorough system to implement maintenance work. However, Tesoro does not consistently perform retesting of permitted space atmospheres after periods of non-use. Improvement is also needed in developing job-specific emergency rescue plans and in maintaining rescue training records.

Industrial Safety Ordinance (ISO) Requirements

Tesoro developed a few maintenance procedures, and each of these procedures were evaluated for hidden or missing issues called human factors before approved for use. However, Tesoro needs to write a number of other maintenance procedures and evaluate them for human factors. Tesoro also needs to review the interrelated maintenance procedures and eliminate any gaps and overlaps. Improvement is also needed in completing more detailed analyses of procedures in a formal and systematic method to minimize potential for human error, such as, missing a step or reversing the order of the steps in a procedure. Improvement is also needed in on-site documentation of Safety Culture Assessments performed as outlined in the County’s guidance document, including: report preparation, participation level, sharing results with contractors, and implementation of improvement plans.

Next Steps

The results of the entire safety audit are available for review at the Martinez library 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 Martinez Library at 740 Court St, Martinez, CA 94553, or call 925-335-2200 for an appointment to view the report at CCHMP’s offices.

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