

# **Safety Audit Summary**

## **Air Products and Chemicals at Shell Martinez Refinery** *110 Waterfront Road, Martinez*

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## **Air Products and Chemicals at Tesoro Refinery** *Tract 1 Solano Way, Martinez*

### **Introduction**

Contra Costa Health Services Hazardous Materials Programs (CCHSHMP) conducted the seventh comprehensive audit/inspection of the safety programs, policies, and procedures developed by Air Products and Chemicals, Inc. (APCI) at the Shell Martinez Refinery (AP-Shell) and at Tesoro's Golden Eagle Refinery (AP-Tesoro). This safety audit conducted in April 2018, 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 AP-Shell and AP-Tesoro plants have 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, CCHSHMP reviews individual safety programs through answering up to 480 questions. The CCHSHMP 2018 safety audit at APCI Martinez plants resulted in 34 corrective actions for APCI to implement, and 28 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

- *Management Oversight:* Systems to manage the safety programs were in place and functioning per the requirements of the regulation. However, there were many changes to management and APCI should closely monitor their programs.
- *Compliance Audit:* The facility documented that completed compliance audits have been performed to verify that all CalARP/ISO programs are in place.

## Process/Equipment Issues

- *Mechanical Integrity:* APCI has long-term contracts with engineering design firms that design the equipment for the Hydrogen process. During the audit, CCHSHMP confirmed the facility is performing piping inspections and implementing best practices for installing machinery.
- *Process/Equipment Changes:* The facility has improved the equipment change process since the last audit and is being well executed
- *Process/Equipment Safety Information:* Safety and design information for process equipment was found to be well-documented and accessible to personnel.

## Industrial Safety Ordinance (ISO) Requirements

- The facility needs to improve the documentation and execution of both their Safety Culture and Security Vulnerability Assessment.
- Operating Procedures were well written with employees involvement. This included a human factors review performed by Operators with support from the human factors specialist.

## 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 Public Library at 740 Court St., Martinez or call 925-335-3200 for an appointment to view the report at CCHSHMP's offices.



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