

Safety Audit Summary

Air Products and Chemicals Inc.

110 Waterfront Road, Martinez

Introduction

Contra Costa Health Hazardous Materials Programs (CCHHMP) conducted the eight comprehensive audit/inspection of the safety programs, policies, and procedures developed by Air Products and Chemicals, Inc. (APCI) at the Martinez Refinery Company. This safety audit conducted in 2023, 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-MRC plant 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, CCHHMP reviews individual safety programs through answering up to 480 questions. The CCHHMP 2023 safety audit at APCI Martinez plant resulted in 11 corrective actions for APCI to implement, and 16 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:* The system overseeing the implementation of CalARP/ISO/RISO programs was effective, with a reduction in action items from previous audits indicating improvements. Despite two changes in the Site Supervisor role over three years, the current supervisor has maintained continuity in safety programs.
- *Compliance Audit:* The facility performs compliance audits every three years to ensure safety programs are in place and followed. The most recent audits in 2021 and 2023 confirm they meet this requirement.

Industrial Safety Ordinance (ISO) Requirements

- *Inherently Safer Systems (ISS):* The ISS analysis for existing processes was incomplete, lacking consistent documentation of considered and implemented safety measures. Some safety improvements were not documented, and new technologies to enhance safety were not consistently reviewed or incorporated.
- *Process Hazard Analysis:* The facility's PHA reports lacked complete documentation, including close-out forms and safer system analyses. Some action items from the 2020 PHA were not completed within the required timeframe. Additionally, the process of updating safety measures was inconsistently documented.
- *Safety Culture Assessment:* The 2019 Safety Culture Assessment's action items were not tracked effectively, missing due dates and milestones. Furthermore, there were no metrics to measure the success of the safety improvements.

Process/Equipment Issues

- The P&ID drawings did not accurately reflect the current plant setup. Several valves marked as cut/capped in the drawings were found not to be so during field verification. The diagrams need updating to reflect the true status of the plant and ensure all safety information is current.

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 925-655-3200 for an appointment to view the report at CCHSHMP's offices.



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