Safety Audit Summary
Shell Oil Products U.S.
Martinez Refinery
3485 Pacheco Blvd., Martinez

Introduction
Contra Costa Health Services Hazardous Materials Program (CCHMP) conducted a comprehensive audit/inspection of the safety programs, policies, and procedures developed by Shell Oil Products U.S. Martinez Refinery (SMR) located at 3485 Pacheco Blvd., Martinez. This safety audit, conducted in the spring of 2015, 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 SMR 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 228 questions. The CCHMP 2015 safety audit at SMR resulted in 6 corrective actions for SMR to implement and 21 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**: SMR 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 initial and refresher training program is in place.
- **Compliance Audit**: The refinery has performed a number of self-audits that have identified areas that need improvement. However, these audits need to be improved to also document areas that are assessed to be effective and working.
- **Contractor Safety**: SMR has a good process to evaluate the safety performance of their contractors; however, they need to enhance the verification process that contract employees have proper training.
- **Emergency Response**: An emergency response program was developed and implemented to protect workers, the public, and the environment from harm due to refinery emergencies.

Process/Equipment Issues

- **Mechanical Integrity**: Preventive maintenance inspection and testing is routinely performed as scheduled and is well documented.
- **Operating Procedures**: The refinery has developed a complete set of operating procedures to ensure consistency for refinery operations. CCHMP mimicked some of these procedures with operating personnel and found them to be very accurate.
- **Process/Equipment Safety Information**: The refinery has compiled, and made available electronically, process and equipment information to personnel as necessary. CCHMP field verified some process drawings with operating personnel and found several situations where drawings did not reflect actual process equipment so improvement is needed.

Industrial Safety Ordinance (ISO) Requirements

- SMR has effective programs in place to manage organizational/staffing changes.
- SMR has effective programs in place to evaluate how to make existing processes, as well as new processes, safer.
- The process for evaluating procedural hazards needs to be improved to include more than just the critical steps(s) within the procedure.
- The refinery needs to improve documentation of their evaluation of maintenance procedures to minimize potential impacts to their processes due to human error.

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 CCHMP's offices.

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