



richmond refinery modernization project

mitigation monitoring and reporting program

human energy®

background

The Richmond City Council approved the Refinery Modernization Project on July 29, 2014. The project is a \$1 billion investment to modernize our facilities by replacing older equipment with more modern technologies to create a newer, safer, cleaner Refinery. The improvements will result in an overall decrease in emissions, as well as safety enhancements that far exceed regulatory requirements.

The project includes important community benefits, including an estimated 1,000 construction jobs, 1,300 related jobs, and \$90 million for community programs including college scholarships, grants for nonprofits and funding to fight climate change and create green jobs.

The project is currently in the planning, engineering and pre-construction phase. Construction could begin as early as the summer of 2016 and will take 18-24 months to complete.

mitigation monitoring and reporting program

Pursuant to the Project approvals and environmental impact report, Chevron is required to implement a Mitigation Monitoring and Reporting Program (MMRP). The MMRP is designed to ensure that mitigation measures and project approval conditions are being implemented. Chevron updates the City of Richmond and our workforce on the MMRP on a regular basis. Some of the MMRP requirements include implementation of the Modernization Project Reliability Program, which will enhance the safety and reliability of equipment and operations at the Richmond Refinery. The Reliability Program includes tracking implementation of actions taken following the August 6, 2012 fire.

Operating safely is one of our core values. Nothing is more important than protecting people and the environment. We have implemented actions to prevent a recurrence.

To this end, we have worked closely and cooperatively with local, state, and federal agencies, including the City of Richmond, to determine the root causes of the fire. We are committed to considering recommendations from all agency investigations, and taking appropriate actions in response.

Our efforts to improve safety and reliability at the Richmond Refinery are ongoing. We continue to evaluate and undertake efforts to enhance mechanical integrity and safe operations at the Richmond Refinery.



highlights of actions taken

Since the 2012 incident, we have taken a wide range of actions not only in response to the fire, but also as part of our efforts to continuously improve process safety performance. In addition, we have implemented actions based on recommendations from Chemical Safety Board. The following section summarizes the actions taken by the Richmond Refinery.

damage mechanism reviews

Chevron has implemented a refinery standard for improving and developing robust work processes around Damage Mechanism Reviews, and considering them in our Process Hazard Analyses. The standard sets forth a process that was designed in accordance with applicable industry best practices. The Richmond Refinery led this effort across the Chevron refinery system and has employed learnings from the initial implementation to improve the program.

pipings inspections

The Richmond Refinery completed a 100% component inspection of carbon steel piping systems identified as potentially susceptible to sulfidation corrosion. Over 12,000 individual piping components were inspected. In addition, the Refinery is upgrading 17 piping circuits in the Crude Unit as part of the Modernization Project Reliability Program.

leak response

The Richmond Refinery has implemented an updated protocol for evaluating process leaks with simple guidance to assist in making necessary and rapid decisions concerning leak response and further enhancing situational awareness skills. The leak response protocol was shared with CCHS, Cal/OSHA, CSB, as well as other refineries and industrial facilities in Contra Costa County and beyond.

tracking maintenance (turnaround work)

The Richmond Refinery has developed and implemented a process for tracking maintenance (turnaround work) of fixed equipment (process piping). In addition, the state enacted legislation (SB 1300) that imposes on California refineries certain notification obligations regarding turnaround work. The Richmond Refinery maintains a log of turnaround work items as required by SB 1300.

inspector training and certification

The Richmond Refinery is improving its mechanical integrity training as a way to further support its leaders, inspectors, operating groups, and engineers. To that end, the Richmond Refinery has developed a standard to guide essential training and competencies for individuals who are performing a Fixed Equipment Inspector or Analyst role.