



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE

SUMMARY

Report:	Chevron Refinery Fire
Recommendation Number(s):	2012-3-I-CA-R22
Date Issued:	November 5, 2014
Recipient:	Governor and Legislature of the State of California
New Status:	Open– Acceptable Response or Alternate Response
Date of Status Change:	August 12 th , 2015

Recommendation Text(s):

Implement a compensation system to ensure the regulator has the ability to attract and retain a sufficient number of employees with the necessary skills and experience to ensure regulator technical competency at all levels of process safety regulatory oversight and policy development in California. A market analysis and benchmarking review should be periodically conducted to ensure the compensation system remains competitive with California petroleum refineries.

Board Status Change Decision:

A. Rationale for Recommendation

On August 6, 2012, the Chevron Refinery in Richmond, California, experienced a catastrophic pipe failure in a crude unit, causing the release of flammable hydrocarbon process fluid which partially vaporized into a large cloud. Nineteen Chevron employees engulfed by the vapor cloud escaped, narrowly avoiding serious injury. The ignition and subsequent continued burning of the hydrocarbon process fluid resulted in a large plume of unknown particulates and vapor. Approximately 15,000 people from the surrounding area sought medical treatment in the weeks following the incident.

As California's Division of Occupational Safety and Health (Cal/OSHA) administers the California Occupational Safety and Health Program and enforces California's process safety management (PSM) standard, the CSB investigation examined the effectiveness of the Cal/OSHA program. The CSB found that the three planned inspections of the Chevron refinery conducted between 2006 and 2012 averaged only 150 inspector hours, whereas a typical refinery inspection conducted under the Refinery National Emphasis Program (NEP) between 2007 and 2011 was 1,000 inspector hours. The CSB also found that Cal/OSHA inspector salaries were 46% lower than an equivalent position at a refinery, making it difficult for Cal/OSHA to attract and competent retain inspectors. The CSB's investigation concluded that Cal/OSHA did not receive sufficient funding to employ a well-staffed, multi-disciplinary team capable of conducting thorough inspections of PSM-covered facilities in California.

B. Response to the Recommendation

In May 2014, California Department of Industrial Relations (DIR) amended Process Safety Management (PSM) Assessment Regulations, 8 CCR §§ 344.76 and 344.77 to collect an annual fee from California refineries based on the total number of barrels processed as a percentage of the state's total and are independent of the state's general fund. In addition, the 2014 budget approved \$2.4 million from the Occupational Safety and Health Fund for the PSM program to fund an additional 11 positions. The fee collection program allowed DIR to expand the PSM unit from ten positions in 2012 to 26 positions in

2015. As of January 2015, the PSM program has 21 inspectors. Of the 16 new positions added, 12 are Compliance Safety and Health Officers (Engineers), two Senior Safety Engineers, one District Manager and one Management Services technician. All new inspectors hired have industry experience or advanced academic training in engineering or other relevant disciplines. The new funding has supported PSM training for new hires, including eleven weeks (600 hours for each new hire) of training. Cal/OSHA will continue monitor staff workload and fee amounts to ensure sufficient funding for the PSM program. The result has been an increase in inspection hours (1,413 inspection hours for Chevron) in planned Program Quality Verification (PQV) inspections.

Although DIR has been able to increase the number of inspections and inspection hours, it has not yet demonstrated that it will be able to retain these inspectors through its compensation system, by making that compensation system competitive with refinery industry salaries.

C. Board Analysis and Decision

Based on the action taken by the State of California to hire additional PSM engineers, increase inspections and create a sustainable funding system inspectors, the Board voted to change the status of CSB Recommendation No. 2012-3-I-CA-R22 to: “**Open – Acceptable Response or Alternate Action.**”