



# U. S. Chemical Safety and Hazard Investigation Board

## RECOMMENDATIONS STATUS CHANGE

### SUMMARY

<b>Report:</b>	Chevron Refinery Fire
<b>Recommendation Number(s):</b>	2012-3-I-CA-R24
<b>Date Issued:</b>	November 5, 2014
<b>Recipient:</b>	City of Richmond, California
<b>New Status:</b>	Open - Acceptable Response or Alternate Response
<b>Date of Status Change:</b>	August 12 <sup>th</sup> , 2015

#### Recommendation Text(s):

*Implement or cause to be implemented 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 Richmond, 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. The CSB's investigation found that the pipe failure was caused by sulfidation corrosion, a damage mechanism that causes piping walls to thin over time. The CSB found multiple reasons for the failure of the Richmond refinery, as well as the city's regulatory mechanism, to detect this serious damage to prevent the failure. The City of Richmond has an agreement with the CCHMP to implement and enforce the Richmond Industrial Safety Ordinance (ISO) within the city. The CSB found that the Contra Costa Health Services' Hazardous Materials Program (CCHMP) suffered from a lack of resources and funding, limiting its ability to hire additional highly qualified staff to oversee the petroleum refineries in Contra Costa County.

##### B. Response to the Recommendation

The City of Richmond has been proactive in responding to the CSB's recommendations. Following issuance of the CSB's recommendations, the Richmond City Council adopted a resolution directing the City Manager and the City Attorney to take steps to implement all of the recommendations from the CSB.

On July 1, 2014, the City of Richmond adopted ordinance No. 13-14 N.S. which amended sections of the Richmond Municipal Code Chapter 6.43 relating to the ISO. With regards to addressing recommendation 2012-3-I-CA-R24, the City of Richmond added the following language in Sections 6.43.080(b).

6.43.080(b)

*(b) Petroleum Refineries shall fund the costs of a full-time qualified expert in refinery safety for each petroleum refinery (a full-time "Accidental Release Prevention Engineer"). The expert shall be selected and retained by Contra Costa Health Services at Contra Costa Health Services' discretion, to review, inspect, and audit the safety program at that refinery, and shall have access to the refinery's documentation and facilities as set forth in subsection (a). Petroleum Refineries shall provide to Contra Costa Health Services the level of funding required to hire a full-time accidental release prevention engineer on a contract basis or as a Contra Costa Health Services employee at an amount comparable to engineer salaries in the refinery industry.*

In addition, the Contra Costa County Supervisors (which applies to the City of Richmond) approved a wage increase of 12% effective July 1, 2014, an additional increase of 10% on July 1, 2015, and a final increase of 3% on July 1, 2016, bringing the average annual salary range for engineers on July 1, 2016, between \$96,394 and \$117,168. The City of Richmond has not yet demonstrated how it will maintain competitive salaries over time. ~~While the City of Richmond has made significant progress towards satisfying the CSB recommendation, in order to close the recommendation, the CSB will request how the City of Richmond intends to make maintain competitive salaries over time.~~

C. Board Analysis and Decision

As the City of Richmond has ~~initiated~~ initiated actions to satisfy the CSB Recommendation No. 2012-3-I-CA-R24, the Board voted to change the status of this recommendation to: **"Open - Acceptable Response or Alternate Response."**