



U. S. Chemical Safety and Hazard Investigation Board RECOMMENDATION STATUS CHANGE SUMMARY

Report:	Chevron Refinery Fire
Recommendation Number:	- 2012-03-I-CA-R36 - 2012-03-I-CA-R37
Date Issued:	January 28, 2015
Recipient:	- Board of Supervisors, Contra Costa County - Mayor and City Council, City of Richmond
New Status:	- Closed – Acceptable Alternative Action - Closed – Acceptable Alternative Action
Date of Status Change:	April 14, 2022

Recommendation Text:

CSB 2012-03-I-CA-R36:

Revise the Industrial Safety Ordinance (ISO) regulations for petroleum refineries to require a process safety culture continuous improvement program including a written procedure for periodic process safety culture surveys across the work force. Require an oversight committee comprised of the regulator, the company, the company's workforce and their representatives, and community representatives. This oversight committee shall:

- a. Select an expert third party that will administer a periodic process safety culture survey;*
- b. Review and comment on the third party expert report developed from the survey;*
- c. Oversee the development and effective implementation of action items to effectively address identified process safety culture issues; and*
- d. Develop process safety culture indicators to measure major accident prevention performance.*

The periodic process safety culture report shall be made available to the plant workforce.

CSB 2012-03-I-CA-R37:

Revise the Richmond Industrial Safety Ordinance (RISO) regulations for petroleum refineries to require a process safety culture continuous improvement program including a written procedure for periodic process safety culture surveys across the work force. Require an oversight committee comprised of the regulator, the company, the company's workforce and their representatives, and community representatives. This oversight committee shall:

- a. Select an expert third party that will administer a periodic process safety culture survey;*
- b. Review and comment on the third party expert report developed from the survey;*
- c. Oversee the development and effective implementation of action items to effectively address identified process safety culture issues; and*

- d. *Develop process safety culture indicators to measure major accident prevention performance.*

The periodic process safety culture report shall be made available to the plant workforce.

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 a part of its investigation, the U.S. Chemical Safety and Hazard Investigation Board (CSB) examined the 1) Chevron organization, emergency response, and safety culture; 2) industry leak response standards; and 3) mechanical integrity industry standards. Additionally, the CSB found that additional state, county, and local safety oversight was necessary. As a result of these findings, the CSB issued six recommendations to the Board of Supervisors, Contra Costa County (CCC) and six recommendations to the Mayor and City Council, City of Richmond (CoR). This status change summary pertains to CSB Recommendation Nos. 2012-03-I-CA-R36 (R36) and 2012-03-I-CA-R37 (R37).

B. Response to the Recommendation

The CCC Industrial Safety Ordinance (ISO) is contained in the CCC Code which is a codification of the general ordinances of Contra Costa County, California. The CCC ISO is contained in Title 4 (Health and Safety), Division 450 (Hazardous Materials and Wastes), Chapter 450-8 (Risk Management). The CCC ISO falls under the purview of CCC Health Services and is managed by the CCC Hazardous Materials Program (CCCHMP). For clarification, what the CSB recommendation calls a *Safety Culture Survey*, CCC and CoR refer to as a *Safety Culture Assessment*.

There has been frequent communication among the CCCHMP, the CoR, and the CSB in an effort to address the recommendations. On November 30, 2021, the CCCHMP informed the CSB that they believed their cumulative activities address the recommendations by providing a methodology in which the safety culture assessment is reviewed by workforce, regulators, and the community and the site is held accountable to the actions developed from the Safety Culture Reports.

They referred to the CCC ISO and the ISO Guidance Document (primarily Sections E and F) in addressing all of the recommendation requirements. However, instead of selecting an expert third party to administer process safety culture surveys as subparagraph a) of the

recommendation requires, the CCC ISO assigns that responsibility to the individual stationary source (a.k.a. “the company” or “the facility”), which has the option of using a third party.

The CCCHMP also provided the CSB with the March 9, 2020, presentation of their Safety Culture Assessment report. The presentation met the requirements found in Section E of the ISO Guidance Document and provided a timeline for the implementation of the program, provided safety culture assessment statuses and methods, as well as results and analysis of the assessment data to determine what effect the action items have on the overall safety culture over time. Per the CCC ISO the report is available to the public.

C. Board Analysis and Decision

The City of Richmond has adopted the CCC ISO verbatim and refers to the CCC ISO as the Richmond Industrial Safety Ordinance (RISO)¹²³. Therefore, an evaluation of the CCC ISO will yield the same result for the RISO.

Based upon the totality of the information provided in the CCC ISO and ISO Guidance Document and the Safety Culture Assessment presentation, the Board determined that the Board of Supervisors, Contra Costa County and the Mayor and City Council, City of Richmond have met the requirements and/or intent of the recommendations. As such, the Board voted to change the statuses of CSB Recommendation Nos. 2012-03-I-CA-R36 and 2012-03-I-CA-R37 to: “Closed—Acceptable Alternative Action.”

¹ <https://cchealth.org/hazmat/iso/>

² <https://www.ci.richmond.ca.us/ArchiveCenter/ViewFile/Item/5958>

³ https://library.municode.com/ca/richmond/codes/code_of_ordinances?nodeId=ARTVIBURE_CH6.43INSA