



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE SUMMARY

Report:	Chevron Refinery Fire
Recommendation Number(s):	2012-3-I-CA-R34
Date Issued:	April 19, 2013
Recipient:	Chevron USA
New Status:	Open – Acceptable Response or Alternate Response
Date of Status Change:	October 4, 2016

Recommendation Text:

CSB Recommendation No. 2012-3-I-CA-R34

Develop an auditable process to be available for all recommended turnaround work items necessary to address mechanical integrity deficiencies or inspection recommendations that are denied or deferred. This process shall provide the submitter of the denied or deferred recommendation with the option to seek further review by his or her manager, who can further elevate and discuss the recommendation with higher level management, such as the Area Business Unit Manager. Maintain an auditable log of each of these potential turnaround work items, including the ultimate determination of approval, deferral, or rejection, justification determination, and the person or team responsible for that 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's investigation identified several contributing causes of the incident relating to the Chevron Richmond Refinery's safety culture, including decision making that encourages continued operation of a unit despite hazardous leaks, reluctance among employees to use their Stop Work Authority, and substandard equipment maintenance practices. As a result of these findings, the CSB issued a recommendation to Chevron USA to develop an auditable process for resolving turnaround items, and to ensure that employees have the ability to seek further review of denied or deferred turnaround work item recommendations.

B. Response to the Recommendation

CUSA has implemented a process for tracking turnaround work items necessary to address mechanical integrity deficiencies identified by the Company's American Petroleum Institute (API) certified

Recommendation Response Evaluation
U.S. Chemical Safety and Hazard Investigation Board
Office of Recommendations

inspectors that are denied or deferred, which is consistent with California S.B. 1300.¹ CUSA's "Turnaround Database" of work items includes the ultimate determination of deferral or rejection of turnaround work items.

The CUSA turnaround database allows personnel to search the status of any turnaround work item, generate a report which shows the approval status of a turnaround work item, and review any denied or deferred work items. When action is taken on a worklist item, the originator receives an automated email notifying them of the change and a link for viewing the decision notes. CUSA states that it encourages employees to raise concerns about a denial or deferral with their supervisor or their supervisor's manager. CUSA states that they are in the process of improving the turnaround databases and guidance materials to further emphasize the ability of the originator to seek additional review of deferred or denied turnaround work items.

C. Board Analysis and Decision

As CUSA has indicated that they plan to fulfill the intent of the recommendation and have taken steps towards implementing this recommendation, the Board voted to designate **2012-3-I-CA-R34** as "**Open – Acceptable Response or Alternate Response.**" Closure of this recommendation will be contingent upon successful implementation and CSB evaluation of the above described processes, as well as documentation that the turnaround databases have been completed and function as described above.

¹ The State of California Senate Bill ("S.B.") 1300 requires California refineries notification obligations regarding turnaround work and requires a petroleum refinery employer to make available upon request to the California Division of Occupational Safety and Health.