



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

<b>Report:</b>	Tesoro Anacortes Fatal Explosion and Fire
<b>Recommendation Number:</b>	2010-08-I-WA-R16
<b>Date Issued:</b>	May 1, 2014
<b>Recipient:</b>	United Steelworkers Local 12-591
<b>New Status:</b>	Closed – Acceptable Action
<b>Date of Status Change:</b>	February 12, 2018

## Recommendation Text:

*Effectively participate in the Tesoro Anacortes Refinery process safety culture survey oversight committee as recommended under recommendation 2010-08-I-WA-R15.*

## Board Status Change Decision:

### A. Rationale for Recommendation

On April 2, 2010, a catastrophic heat exchanger rupture at the Tesoro Anacortes refinery fatally injured seven workers. The U.S. Chemical Safety and Hazard Investigation Board's (CSB) investigation identified numerous deficiencies in the safety culture at the Anacortes refinery that contributed to the severity of the incident, including:

- The acceptance of frequent heat exchanger leaks during unit start-up activities as “normal”;
- The use of excessive numbers of personnel to participate in hazardous, non-routine operations;
- The failure to verify actual process conditions in assessing the potential for high temperature hydrogen attack; and
- The use of Process Hazard Analysis assumptions that contributed to ineffective hazard evaluations.

Based upon these findings, the CSB issued Recommendation No. 2010-08-I-WA-R15 to the Tesoro Anacortes Refinery, which recommended that the facility implement a process safety culture continuous improvement program that included a written procedure for periodic process safety culture surveys across the workforce. The recommendation specified that the process safety culture program will be overseen by a tripartite committee of Tesoro management, United Steelworkers (USW) representatives, Washington State Department of Labor and Industries Division of Occupational Safety and Health (Washington L&I), and the U.S. Environmental Protection Agency (U.S. EPA).

The CSB made parallel recommendations to these three entities to effectively participate in the Tesoro Anacortes Refinery process safety culture survey oversight committee (Recommendation

2010-08-I-WA-R4 to the U.S. EPA, Recommendation 2010-08-I-WA-R9 to Washington L&I, and Recommendation 2010-08-I-WA-R16 to USW Local 12-591).

This status change summary concerns Recommendation 16 made to USW Local 12-591.

#### B. Response to the Recommendation

On October 2, 2016, and in a follow-up letter dated July 21, 2017, Tesoro informed the CSB that they had developed and implemented a process safety continuous improvement program containing the elements laid out in the recommendation. Tesoro conducted the first survey in August of 2016, which was distributed to all Tesoro refineries. The Process Safety Council, made up of three refinery staff members, three primary USW council members, and three USW council members, was newly formed to oversee the program. The Council developed a supplemental survey for the Anacortes Refinery, reviewed the survey results and established a prioritized plan with action items to address the findings.

The CSB received communications from the USW Local 12-591 point of contact, who confirmed that sufficient progress had been made regarding this program and that the Council has become a “functional, productive group.”

#### C. Board Analysis and Decision

Based on the information provided to the CSB by Tesoro and the USW Local 12-591 point of contact, the Board voted to designate **CSB Recommendation No. 2010-08-I-WA-R16** as: **“Closed – Acceptable Action.”**