



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

Report:	Tesoro Refinery Fatal Explosion Fire
Recommendation Number:	2010-8-I-WA-R7
Date Issued:	May 1, 2014
Recipient:	Governor and Legislature of the State of Washington
New Status:	Open - Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	Not Applicable – Initial Status

Recommendation Text:

Work with the regulator, the petroleum refining industry, labor, and other relevant stakeholders in the state of Washington to develop and implement a system that collects, tracks, and analyzes process safety leading and lagging indicators from operators and contractors to promote continuous process safety improvements. At a minimum, this program shall:

- a. Require the use of leading and lagging process safety indicators to actively monitor the effectiveness of process safety management systems and safeguards for major accident prevention. Include leading and lagging indicators that are measureable, actionable, and standardized. Include indicators that measure safety culture, such as incident reporting and action item implementation culture. Require that the reported data be used for continuous process safety improvement and accident prevention;*
- b. Analyze data to identify trends and poor performers and publish annual reports with the data at facility and corporate levels;*
- c. Require companies to publicly report required indicators annually at facility and corporate levels;*
- d. Use process safety indicators (1) to drive continuous improvement for major accident prevention by using the data to identify industry and facility safety trends and deficiencies and (2) to determine appropriate allocation of regulator resources and inspections; and*
- e. Be periodically updated to incorporate new learning from world-wide industry improvements in order to drive continuous major accident process safety improvements in Washington.*

Board Status Change Decision:

A. Rationale for Recommendation

On May 1, 2014, the U.S. Chemical Safety Board (CSB) released its report on the April 2, 2010, catastrophic heat exchanger rupture at the Tesoro Anacortes refinery which fatally injured seven workers.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) investigated the incident and found several safety issues including the ineffective evaluation of the potential for high temperature hydrogen attack (HTHA), the damage mechanism which caused the heat exchanger rupture; insufficient Process Safety Management state regulations; and a technically insufficient and understaffed regulator. As a result of these findings, the CSB issued three recommendations to the Governor and Legislature of the State of Washington. This status change summary addresses CSB Recommendation No. 2010-8-I-WA-R7.