



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

Report:	ExxonMobil Torrance Refinery Electrostatic Precipitator Explosion
Recommendation Number(s):	2015-02-I-CA-R8
Date Issued:	May 3, 2017
Recipient:	Torrance Refining Company LLC
New Status:	Closed-Acceptable Action
Date of Status Change:	May 29, 2018

Recommendation Text(s):

In the event safety critical equipment is operated beyond its inspection and/or maintenance interval (e.g. extended turnaround interval), require the Torrance refinery to perform a risk evaluation (e.g. MOC or risk assessment) to identify the safety consequences of the extended operation. Require that each mode of operation, including but not limited to normal operation, start up, shut down, and “Safe Park” modes of operation is evaluated during the risk evaluation.

Board Status Change Decision:

A. Rationale for Recommendation

On February 18, 2015, an explosion occurred in the ExxonMobil Torrance, California refinery’s Electrostatic Precipitator (ESP); a pollution control device in the fluid catalytic cracking (FCC) unit that removes catalyst particles using charged plates that produce sparks during normal operation. The incident occurred when ExxonMobil was attempting to isolate equipment for maintenance while the unit was in an idle mode of operation. Preparations for the maintenance activity caused a pressure deviation that allowed hydrocarbons to backflow through the process and ignite in the ESP.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) identified several process safety design weaknesses in the Torrance refinery FCC unit at the time of the incident. As a result, the CSB made four recommendations to Torrance Refining Company LLC (TORC). This recommendation is specific to requiring a risk evaluation to identify the consequences of safety-critical equipment that is operated beyond its inspection and/or maintenance interval.

B. Response to the Recommendation

TORC stated to the CSB that it has implemented the Process Safety Management System (PSMS) for managing safety, security, health and environmental risks at the Torrance Refinery. Their system covers critical equipment, including safety critical devices, and is designed to prevent, mitigate, detect, or respond to process incidents that could result in the loss of containment of flammable or toxic materials, potential severe injuries or deaths, or a release of materials that could have a serious environmental impact. This system plan is also intended to

help ensure critical equipment operates when called upon. Before any critical equipment, including safety critical devices, inspection and/or maintenance interval can be reset, the reset request is subject to a rigorous, structured, and cross-functional review.

In addition, TORC stated that during a formal risk assessment a cross-functional team will evaluate all possible scenarios, including but not limited to all modes of operation, and develop a plan for each identified scenario.

C. Board Analysis and Decision

As the above changes meet the requirements of the CSB recommendation, the Board voted to change the status of CSB Recommendation No. 2015-02-I-CA-R8 to: **“Closed-Acceptable Action.”**