



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

Report:	ExxonMobil Torrance Refinery Explosion
Recommendation Number:	2015-02-I-CA-R2
Date Issued:	May 3, 2017
Recipient:	ExxonMobil Corporation
New Status:	Closed – Acceptable Action
Date of Status Change:	January 20, 2021

Recommendation Text:

ExxonMobil did not have an operating procedure for operating the FCC unit in its Safe Park mode of operation. At all ExxonMobil U.S. refineries, develop a program to ensure operating procedures are written and available for each mode of operation – such as unit standby – for all ExxonMobil U.S. refinery FCC units. Specify in the program that ExxonMobil U.S. refineries develop and train operators on any new procedure.

Board Status Change Decision:

A. Rationale for Recommendation

On February 18, 2015, an explosion occurred in the ExxonMobil (EM) 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 EM 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.

As a part of the investigation, the U.S. Chemical Safety and Hazard Investigation Board (CSB) found that this incident occurred due to weaknesses in the EM Torrance refinery's process safety management (PSM) system. These weaknesses led to the operation of the FCC unit without pre-established safe operating limits and criteria for unit shutdown; reliance on safeguards that could not be verified; the degradation of a safety-critical safeguard; and the re-use of a previous procedure deviation without a sufficient hazard analysis to confirm that the assumed process conditions were still valid. As a result, the CSB issued five recommendations to EM Corporation regarding their PSM system. This status change summary is specific to Recommendation No. 2015-02-I-CA-R2.

B. Response to the Recommendation

EM formed an internal multidisciplinary task force to address the recommendation. EM provided the CSB with documentation that is included in their best practice for emergency shutdown response and Safe Park operations. The documentation demonstrated that they

strengthened their FCC emergency shutdown and unit standby procedures, implemented safe park procedures as well as met the other requirements of the recommendation.

C. Board Analysis and Decision

Based upon EM's actions above to implement the recommendation, the Board voted to change **Recommendation No. 2015-02-I-CA-R2 to: "Closed - Acceptable Action."**