



U. S. Chemical Safety and Hazard Investigation Board

RECOMMENDATIONS STATUS CHANGE

SUMMARY

Report:	ExxonMobil Torrance Refinery Explosion
Recommendation Number:	2015-02-I-CA-R10
Date Issued:	May 3, 2017
Recipient:	American Fuel and Petrochemical Manufacturers
New Status:	Closed – Acceptable Action
Date of Status Change:	September 25, 2017

Recommendation Text:

Facilitate forum(s)—attended by fluid catalytic cracking unit engineers and other relevant personnel from American Fuel and Petrochemical Manufacturers member companies—to discuss the causal factors of the February 18, 2015 ExxonMobil Torrance refinery incident. Encourage participants to share topics such as design, maintenance, and procedural practices that can prevent a similar incident. Topics of discussion should include:

- (1) Detection of hydrocarbons flowing to an ESP;*
- (2) Isolation strategies to prevent mixing of air and hydrocarbons during standby operations;*
- (3) Safe operation during unit standby;*
- (4) Use of SCSVs as a safeguard during standby operations;*
- (5) Use of reactor steam as a safeguard during standby operations;*
- (6) Measuring reactor / main column differential pressure during standby operations;*
- (7) ESP explosion safeguards; and*
- (8) Preventing ESP explosions.*

Create documentation that creates institutional knowledge of the information discussed in the forum(s), and share with the member companies and forum attendees.

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.

As a result, the CSB made a recommendation to American Fuel and Petrochemical Manufacturers (AFPM) to set up forums for its members to discuss the causal factors of this incident to prevent similar incidents.

B. Response to the Recommendation

In a letter dated August 3, 2017, AFPM provided the CSB with dates of various forums in which fluid catalytic cracking unit engineers and other relevant personnel from American Fuel and Petrochemical Manufacturers member companies were invited to discuss the causal factors of the February 18, 2015,

ExxonMobil Torrance refinery incident and encouraged to share topics such as design, maintenance, and procedural practices that can prevent a similar incident. One was held on May 10, 2017, in which the CSB's Lead Investigator for this incident presented his findings. Additionally, there are future event dates, one of which reoccurs every 2 years.

C. Board Analysis and Decision

As a result of the above information, the Board voted to change the status of CSB Recommendation No. **2015-02-I-CA-R10** to: **"Closed – Acceptable Action."**