



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

Report:	Williams Olefins Case Study
Recommendation Number:	2013-03-I-LA-R3
Date Issued:	October 19, 2016
Recipient:	Williams Geismar Olefins Facility (Williams)
New Status:	Closed – Acceptable Action
Date of Status Change:	June 8, 2017

Recommendation Text:

Develop and implement a program that demands robust and comprehensive assessments of the process safety programs at the Williams Geismar facility, at a minimum including Management of Change, Pre-Startup Safety Review, Process Hazard Analyses, and Operating Procedures. Ensure that the assessments thoroughly evaluate the effectiveness of these important safety programs. To drive continual improvement of process safety programs to meet good practice guidance, ensure these assessments result in the development and implementation of robust action items that address identified weaknesses. Engage an expert independent of the Geismar site to lead these assessments at least once every three years.

Board Status Change Decision:

A. Rationale for Recommendation

On June 13, 2013, a fire and explosion occurred at the Williams Olefins, Inc. (Williams), Plant located in Geismar, Louisiana, when a reboiler, which supplied heat to a propylene fractionator column, ruptured due to an overpressurization event while it was isolated from its pressure relief device. Two Williams employees were killed and 167 employees were injured. The 167 injured employees consisted of three Williams employees and 164 contractor employees.

As a part of its investigation, the U.S. Chemical Safety and Hazard Investigation Board (CSB) examined the plant's process safety management (PSM) program as well as the plant's process safety culture. The CSB found significant weaknesses in the Williams process safety culture that were demonstrated by a series of deficiencies in implementing the plant's PSM programs as well as weaknesses in the written programs themselves. These deficiencies included: (1) poorly conducted Management of Change and Pre-Startup Safety Reviews; (2) ineffective safeguard selections, insufficient safeguard evaluation requirements, and poor implementation of action items in Process Hazard Analyses; (3) inadequate focus on development and maintenance of operating procedures; and (4) uncontrolled field equipment manipulations without a hazards assessment prior to the development of a procedure.

To address these areas, the CSB Board issued three recommendations aimed at improving the plant's PSM program and process safety culture. This status change summary only addresses the recommendation to have an independent third party perform process safety audits at the plant (e.g., 2013-3-I-LA-R3).

B. Response to the Recommendation

- From April 4 through 8, 2016, a PSM/Risk Management Program (RMP) audit was conducted by an outside independent process safety consulting firm at the Williams Geismar plant. The audit utilized the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) protocols, covered all fourteen PSM elements, and included reviews of records, interviews with employees, and observations of onsite conditions.
- All findings generated by audit are being tracked to completion in an electronic system by the Williams Geismar plant.
- On March 31, 2017, the Williams facility modified its “PSM and RMP Compliance Audits and Assessment” procedure was updated to require audits be led by outside independent experts.

C. Board Analysis and Decision

Based on the above actions taken by the Williams Geismar plant, the Board voted to change the status of CSB Recommendation No. 2013-3-I-LA-R3 to: “**Closed – Acceptable Action.**”