



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

Report:	BP America Refinery Explosion, Texas City
Recommendation Number:	2005-4-I-TX-R5
Date Issued:	March 23, 2007
Recipient:	Occupational Safety & Health Administration (OSHA)
New Status:	Closed – Acceptable Action
Date of Status Change:	March 31, 2015

Recommendation Text:

- 1) *Implement a national emphasis program for all oil refineries that focuses on:*
 - *The hazards of blowdown drums and stacks that release flammables to the atmosphere instead of to an inherently safer disposal system, such as a flare. Particular attention should be paid to blowdown drums attached to collection piping systems servicing multiple relief valves;*
 - *The need for adequately sized disposal knockout drums to safely contain discharged flammable liquid based on accurate relief valve and disposal collection piping studies*
- 2) *Urge states that administer their own OSHA plan to implement comparable emphasis programs within their respective jurisdictions.*

Board Status Change Decision:

A. Rationale for Recommendation

On March 23, 2005, the BP Texas City refinery experienced severe explosions and a fire in an isomerization unit (ISOM) that resulted in 15 deaths, 180 injuries and significant economic losses. The accident occurred when a raffinate splitter tower overfilled during startup. The overfilling caused pressure relief devices to open and dump flammable liquid into a blowdown drum and stack that vented directly to the atmosphere. When the drum and stack also overfilled, flammable liquid and gas were released into the surrounding area, contacted an ignition source, and ignited, resulting in the explosions and fire.

The CSB investigation found that the Occupational Safety and Health Administration's (OSHA's) national focus on inspecting facilities with high personnel injury rates had resulted in reduced attention to preventing less frequent, but catastrophic, process safety incidents. OSHA's inspection of highly hazardous facilities and enforcement of process safety regulations was found to be insufficient; very few comprehensive process safety inspections were conducted prior to the BP incident and only a limited number of OSHA inspectors had the specialized training and experience to effectively inspect facilities that are covered by the Process Safety Management (PSM) standard.

The CSB issued a recommendation to OSHA to conduct a national emphasis program (NEP) for oil refineries focused on the hazards of blowdown drums and stacks that may release flammables to the atmosphere, as well as inadequately sized disposal drums. The CSB further recommended that states that administer their own OSHA plans implement comparable emphasis programs within their jurisdictions.

B. Response to the Recommendation

On June 7, 2007, OSHA launched a “Petroleum Refinery Process Safety Management National Emphasis Program” (NEP) via issuance of Program Directive No. CPL 03-00-004. This directive urged all state plans to implement equivalent programs to the NEP.

From June 2007 through 2013, federal OSHA inspected 61 non-Voluntary Protection Programs (VPP) refineries under its jurisdiction resulting in 1,288 citations, of which 963 were PSM citations, and total proposed penalties exceeding \$9,336,000. These inspections resulted in the documented abatement of violations and better control of the associated hazards. OSHA also conducted a rigorous follow-up inspection of the BP-Texas City Refinery in 2009 in lieu of an NEP inspection. A total of 27 proposed blowdown-related citations were issued as a result of the NEP. State Plans with refineries in their jurisdiction inspected an additional 13 refineries in accordance with the NEP, proposing 262 citations and \$1.57 million in penalties

C. Board Analysis and Decision

The CSB concluded that the completion of OSHA’s Refinery NEP adequately addressed the recommendation and voted to designate CSB Recommendation No. 2005-4-I-TX-R5 as: **“Closed-Acceptable Action.”**