



# U. S. Chemical Safety and Hazard Investigation Board

## RECOMMENDATIONS STATUS CHANGE

### SUMMARY

<b>Report:</b>	DuPont LaPorte Facility Toxic Chemical Release
<b>Recommendation Number(s):</b>	2015-01-I-TX-R1 through R5
<b>Date Issued:</b>	September 30, 2015
<b>Recipient:</b>	DuPont LaPorte, Texas Chemical Facility
<b>New Status:</b>	R1 through R5: Closed – No Longer Applicable
<b>Date of Status Change:</b>	March 5, 2018

#### Recommendation(s) Text:

##### **CSB Recommendation No. 2015-01-I-TX-R1**

*Prior to resuming Insecticide Business Unit (IBU) manufacturing operations, conduct a comprehensive engineering analysis of the manufacturing building and the discharge of pressure relief systems with toxic chemical scenarios to assess potential inherently safer design options. At a minimum, evaluate the use of an open building structure, and the direction of toxic chemical leaks and the discharge of pressure relief systems with toxic chemical scenarios to a destruction system. Implement inherently safer design principles to the greatest extent feasible and effectively apply the hierarchy of controls such that neither workers nor the public are harmed from potential highly toxic chemical releases. Detail the analysis, findings, and corrective actions in a written report and make this report available to DuPont La Porte employees, their representatives, and the CSB.*

##### **CSB Recommendation No. 2015-01-I-TX-R2**

*Prior to resuming Insecticide Business Unit (IBU) manufacturing operations, conduct a robust engineering evaluation of the manufacturing building and the dilution air ventilation system that includes the implementation of corrective action(s) to the greatest extent feasible in order to ensure a safe environment for all workers. Develop a documented design basis for the manufacturing building and the air dilution ventilation system that identifies effective controls for highly toxic, asphyxiation, and flammability hazards and implement these controls to the greatest extent feasible. Address nonroutine operations and emergency response activities in the design basis. The design basis for the manufacturing building and the dilution air ventilation system must use the hierarchy of controls and inherently safer design principles to the greatest extent feasible.*

##### **CSB Recommendation No. 2015-01-I-TX-R3**

*Prior to resuming manufacturing operations, ensure all Insecticides Business Unit (IBU) pressure relief systems are routed to a safe location and effectively apply the hierarchy of controls to protect workers and the public. Commission a pressure relief device analysis, consistent with API Standard 521 and the ASME Code, including a field review. Include an evaluation of relief system discharge location to ensure that relief systems are discharged to a safe location that will prevent toxic exposure, flammability, or asphyxiation hazards in order to ensure public and worker health and safety to the greatest extent feasible. Include an evaluation of relief scenarios consistent with API Standard 521.*

##### **CSB Recommendation No. 2015-01-I-TX-R4**

*Develop and implement an expedited schedule to perform more robust process hazard analyses (PHAs) consistent with R1, R2, and R3 for all units within the Insecticides Business Unit (IBU). At a minimum, the PHAs must effectively identify and control the hazards referenced in this document utilizing the hierarchy of controls. The PHA schedule must be prioritized based on anticipated risks to the public and workers in order to ensure that the highest risk areas receive priority consideration. At a minimum, the*

more robust PHAs must be consistent with the approach applied to post-incident reviews described above in paragraph 10<sup>1</sup>.

#### **CSB Recommendation No. 2015-01-I-TX-R5**

*Work together with the International Chemical Workers Union Council of the United Food and Commercial Workers (ICWUC/UFCW) Local 900C and the ICWUC/UFCW staff (at the request of the local) to develop and implement a plan to ensure active participation of the workforce and their representatives in the implementation of Recommendations R1 through R4. In addition, provide a copy of DuPont's integrated plan for restart to La Porte workers and their local union representatives.*

#### **Board Status Change Decision:**

##### **A. Rationale for Recommendations**

On November 15, 2014, nearly 24,000 pounds of methyl mercaptan was released inside the Lannate® unit at the E. I. du Pont de Nemours chemical manufacturing facility in La Porte, Texas (DuPont). The release resulted in the fatalities of three operators and a shift supervisor inside the Lannate® manufacturing building. The four DuPont employees died from a combination of asphyxia and acute exposure to toxic chemicals including methyl mercaptan. All four victims were located inside the manufacturing building—three on the third floor and one descending the stairs between the third and second floor.

The U.S. Chemical Safety and Hazard Investigation Board (CSB) issued the above interim recommendations to the DuPont La Porte facility to address the following issues noted in CSB's investigation to date: (1) Lack of an inherently safer design review for the process; (2) Lack of a documented design basis for the manufacturing building; (3) Unsafe relief system discharge points at several locations in the unit; (4) Deficiencies uncovered in existing process hazard analyses; (5) Ensure active workforce participation during the restart; and (6) Ensure public transparency concerning the cause of the accident and ongoing plans for the safe restart of the unit. This status change summary addresses DuPont's response to numbers one through five of the interim recommendations (2015-01-I-TX-R1 through R5). Recommendation No. 2015-01-I-TX-R6 was addressed in a separate summary.<sup>2</sup>

##### **B. Response to the Recommendation**

In December of 2015, DuPont advised the CSB in regard to Recommendation Nos. 2015-01-I-TX-R1 through 2015-01-I-TX-R6 that DuPont was in the process of fulfilling the intent of the CSB recommendations, providing a timeframe for completion, and indicating that they would provide supporting documentation for evaluation for closure for each recommendation issued. The full analysis of DuPont's initial commitment to fulfill the CSB's recommendations is available in a separate status change summary.<sup>3</sup>

In July of 2016, DuPont informed the CSB that it was in the process of developing and executing plans to decommission and permanently dismantle the manufacturing facilities in La Porte's Insecticide Business Unit (IBU) and Herbicide Business Unit (HBU). DuPont cited changes in the global crop protection chemicals market, and that based on these changes, DuPont had concluded that resumption of production is no longer feasible.

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<sup>1</sup> Reference to paragraph in CSB's DuPont LaPorte Interim Recommendations Report

<sup>2</sup> [http://www.csb.gov/assets/recommendation/Status\\_Change\\_Summary\\_DuPont\\_LaPorte\\_R6\\_C-AA.pdf](http://www.csb.gov/assets/recommendation/Status_Change_Summary_DuPont_LaPorte_R6_C-AA.pdf)

<sup>3</sup> [http://www.csb.gov/assets/recommendation/Status\\_Change\\_Summary\\_\\_LaPorte\\_R1-R6\\_\\_O-ARAR.pdf](http://www.csb.gov/assets/recommendation/Status_Change_Summary__LaPorte_R1-R6__O-ARAR.pdf)

In January of 2018, DuPont informed the CSB that the process of dismantling and removing the existing buildings and equipment from the La Porte site that were associated with product manufacture in the Insecticide Business Unit (“IBU”) and Herbicide Business Unit (“HBU”) have been completed.

C. Board Analysis and Decision

As DuPont has decided not to restart the IBU unit, and the IBU manufacturing unit has been removed, recommendations 2015-01-I-TX-R1 through 2015-01-I-TX-R5 which relate to the IBU are no longer applicable. Therefore, the Board voted to designate **Recommendations No. 2015-01-I-TX-R1 through 2015-01-I-TX-R5** as “**Closed – No Longer Applicable.**”