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

Report:	DuPont La Porte Facility Toxic Chemical Release
Recommendation Number:	2015-01-I-TX-R8
Date Issued:	June 25, 2019
Recipient:	DuPont La Porte, Texas, Chemical Facility (Corteva Agriscience)
New Status:	Open – Awaiting Response or Evaluation/Approval of Response
Date of Status Change:	June 25, 2019

Recommendation Text:

Work together with emergency response team (ERT) member companies (DuPont, Chemours, Kuraray, and Invista), the International Chemical Workers Union Council of the United Food and Commercial Workers (ICWUC/UFCW) Local 900C, and the ICWUC/UFCW staff (if requested by the Local 900C) to update the DuPont La Porte emergency response plan. The emergency response program should ensure that periodic exercises or drills are performed on new procedures developed to address key lessons to strengthen ERT capabilities. The emergency response program should address the following:

- *Preidentifying unit experts as technical support personnel and ensuring that backup capability is available in the event the primary technical support personnel become unavailable. (Section 4.2: Process Coordinator Was Missing)*

- *Clearly detailing in plant emergency procedures the alerting and notification protocols for different types of plant emergencies. Provide initial training to new plant personnel and periodic training to all plant personnel on these emergency communication procedures. These procedures should also include guidance for emergency responders when there is insufficient initial information to effectively assess the nature of the problem and the level of ERT resources required. (Section 4.3.1: Call for ERT Response)*

- *Developing and applying regular maintenance schedules for emergency response vehicles consistent with the National Fire Protection Association's Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Emergency Vehicles (NFPA 1911), which requires weekly visual and operational checks of emergency vehicles and has example checklists to use when performing preventive maintenance on emergency vehicles. (Section 4.3.2: ERT Mini-Pumper Truck Not Operational)*

- *Ensuring that ERTs have reliable means to characterize hazardous atmospheres, for example equipment that monitors toxicity, explosivity, and oxygen levels. Additionally, ensure that ERT members know where the equipment is stored, can access it, and are trained on its proper use. (Section 4.4.1: Entry into Potentially Explosive Atmosphere)*

- *Evaluating high-hazard areas, including PSM covered processes, to determine whether detectors and alarms are necessary to identify chemical releases (or other types of*

emergencies). Additionally, consider equipping high-hazard areas with surveillance technology to identify personnel in the field. (Section 4.4.2: No Technology to Locate Missing Workers)

- *Developing and implementing written policy and procedures to update emergency response plan documents when hazards are identified. For example, personnel can identify these types of hazards in process hazard analyses, facility siting studies, management of change reviews, and incident investigations. Changes to emergency planning documents should be effectively communicated to the site ERT as soon as possible after identifying the hazard. (Section 4.4.3: Unrecognized Manufacturing Building Collapse Hazard)*

- *Ensuring that emergency response planning accounts for difficulties in conducting response efforts, including (1) maps included in emergency response plans to show the layout of buildings containing hazardous chemicals, for use by emergency responders and to aid evacuation and rescue efforts; (2) coordination of periodic (at least annual) site tours for plant and external emergency responders; (3) training emergency responders to help ensure familiarity with facility access points, hazards, emergency response issues, and site or facility layout; and (4) building teamwork by having members (from the different companies) of the ERT field train (by conducting drills) together when practicable. (Section 4.5: Difficulties Navigating Manufacturing Building)*

- *Assigning knowledgeable personnel the responsibility to analyze process data to assess the source, scope, and magnitude of any incident. (Section 4.6: No Analysis of Process Data to Identify Source of Leak)*

- *Training emergency response team members to (1) physically designate the hot zone; (2) communicate the location of the hot zone and entry control points to all personnel assisting with the emergency response, including operations personnel; and (3) control entry and exit points of the hot zone. (Section 4.7: Inadequate Control of Hot Zone)*

- *Addressing in the emergency response plan how to characterize (including size, concentration, location, and direction of release) hazardous chemical releases and providing guidance on how and where people should take protective action (e.g., sheltering-in-place) in the event of a chemical release. (Section 4.8.1: Release Modeling)*

- *Developing a procedure in the emergency response plan to effectively monitor for hazardous gases along the fence line at chemical facilities during the release to help workers understand and clearly communicate the extent of a release. (Section 4.8.4: Air Monitoring)*

In addition, provide a copy of the emergency response plan to the Emergency Response Team and their local union representatives.

Board Status Change Decision:

A. Rationale for Recommendation

On November 15, 2014, approximately 24,000 pounds of highly toxic methyl mercaptan was released from an insecticide production unit (Lannate® Unit) at the E. I. du Pont de Nemours and Company (DuPont) chemical manufacturing facility in La Porte, Texas. The release killed three operators and a shift supervisor inside a manufacturing building. They died from a combination of asphyxia and acute exposure (by inhalation) to methyl mercaptan.

Among other issues, the U.S. Chemical Safety and Hazard Investigation Board (CSB) determined that the emergency response efforts at the DuPont La Porte facility during the toxic chemical release were disorganized and placed at risk operators, emergency responders, and potentially the public. The chemical facility lacked a robust emergency response program necessary to mitigate emergencies as well as to protect the health of workers, emergency responders, and the public.