

U.S. CHEMICAL SAFETY BOARD NEWS CONFERENCE  
APRIL 19, 2012 – DUPONT BUFFALO  
RAFAEL MOURE-ERASO, CSB CHAIRPERSON  
JOHNNIE BANKS, LEAD INVESTIGATOR

CHAIRPERSON MOURE-ERASO COMMENTS:

Welcome to this Chemical Safety Board news conference. We are here this morning to release the draft report and safety recommendations resulting from the CSB's investigation into a November 9, 2010, explosion at the DuPont facility near Buffalo, New York. The accident occurred while a contract worker was welding on a tank that unknown to him contained flammable gas. The explosion blew off the top off the tank, throwing the welder to the ground, killing him instantly. A second contract worker was burned and seriously injured.

“Hot work” accidents – which result from welding, cutting or grinding near a flammable atmosphere - occur at an alarmingly high rate. The CSB specifically addressed hot work accidents in a 2010 safety bulletin.

At a public meeting this evening at 6 pm CSB board members will be voting on the final report and safety recommendations.

Today we are also releasing a computer animation recreating the fatal accident – which will be part of a full safety video that will be available when the report is approved.

At this time I would like to introduce CSB Lead Investigator Mr. Johnnie Banks.

INVESTIGATOR JOHNNIE BANKS:

Thank you, Chairperson Moure-Eraso. You will see in our final report that the key issues examined by the CSB over the course of this investigation were flammable gas monitoring during hot work, tank isolation and proper protocol surrounding hot work permits. First allow me to discuss the events leading up to the November 2010 accident.

To do so I will be playing an excerpt from the CSB's latest safety video entitled “Hot Work: Hidden Hazards,” which will be released in its entirety tomorrow morning.

(PLAY)

Our investigation found that DuPont's process hazard analysis incorrectly assumed that vinyl fluoride in the Tedlar process could not reach flammable levels in the slurry tanks. And, critically, DuPont personnel did not properly isolate and lock out tank 1 from tanks 2 and 3 prior to authorizing the hot work. The flammable vapor was able to pass through the overflow line into the tank the welder was working on, unknown to him, or to the operators who signed off on the hot work permit.

We found that the contractors DID obtain hot work permits for welding on Tank 1. But those permits were authorized by DuPont employees who were unfamiliar with the specific hazards of the process and the permits did not require testing the atmosphere inside the tanks.

The CSB also determined that DuPont should have regarded the three storage tanks as covered by the Occupational Safety and Health Administration's or OSHA's Process Safety Management rules. However, the CSB found company engineers believed any vinyl fluoride in the slurry would be too low in concentration to be hazardous in the tanks. Yet on the day of the accident, a compressor failure led to higher concentrations of vinyl fluoride vapor in the polyvinyl fluoride slurry.

Furthermore, a U-shaped seal loop within tank 2 had a "fishmouth" split in the pipe that could emit vinyl fluoride vapor. Engineers concluded further operation with the broken seal loop presented no hazards. The CSB determined the pipe split provided a potential pathway for flammable VF gas to enter the tank and travel through the overflow line into Tank 1.

The CSB's report concludes that had technicians tested Tank 1 for a flammable atmosphere, they would have known that any hot work presented a serious explosion hazard. But plant engineers did not realize that significant amounts of flammable gas could be present in the slurry tanks, and the testing was never done.

As a result of these findings the board is being asked to consider several recommendations that will be voted on at a meeting this evening.

Chairperson Moure-Eraso will give an overview of the recommendations.

### RAFAEL MOURE-ERASO

Thank you, Investigator Banks.

In its final report, the CSB is recommending that DuPont revise its corporate policies to require atmospheric monitoring inside tanks before and during any hot work. The draft report further recommends that DuPont require all process piping, including vent lines on tanks, to be positively isolated before authorizing any hot work. Finally, the CSB is recommending that DuPont regularly audit their plant hot work permitting processes.

As I noted earlier the CSB released a safety bulletin in 2010 on accidents which occurred during hot work on tanks. All 11 of the accidents were similar to the accident at DuPont and all involved hot work on tanks that ignited a flammable atmosphere inside. In each case monitoring for a flammable atmosphere was either done improperly, or not performed at all.

I would like to make a few comments about DuPont and CSB investigations. First, we recognize and thank DuPont for its cooperation with our investigations into the plant accident we discussed today, and also the three accidents that occurred over a 33-hour period at DuPont's

Belle, West Virginia facility beginning on January 23, 2010, culminating in the death of a worker from phosgene exposure.

In our first DuPont investigation report, issued last September, we took notice of the fact that DuPont has long enjoyed a very high reputation for safety management. The Board therefore found it of concern that this company would have those accidents, including maintenance issues and a phosgene release that our Board believed could have been prevented by enclosing the phosgene operation many years earlier.

The CSB investigation found common deficiencies in all three accidents at the DuPont Belle plant. These deficiencies included maintenance and inspections, accident investigation, emergency response, and alarm and hazard recognition.

Just ten months later, in November of 2010, we were again concerned to learn of the accident that was discussed here today – an explosion where some basic company safety procedures were not implemented.

A question naturally arose among our board members following these four accidents, and the determination of their root causes, as to whether there might have been a safety culture decline at DuPont, so long considered to be an industry safety leader.

One indication of the state of DuPont's safety culture will likely become evident as we follow the company's response to our safety recommendations.

*(PAUSE)*

The main message of our report is that hot work is a common yet dangerous work activity. Hot work incidents across the country continue to cause death, injury and property damage with alarming frequency. The CSB is currently conducting a more comprehensive evaluation of hot work regulations and standards and expects to issue related safety recommendations in the near future.

I will now take questions from the media – please state your name and affiliation.