

Monsanto Chemical Company
Texas City, Texas

August 17, 1959

To: W. E. Repschleger

H. M. Keating

Chief Operators D4-5-7-8
Extra (5)

Subject: Department 4 Fire

At 1740 Sunday, August 16, 1959, a fire occurred at the sample tap on the discharge side of 4P5-1 as a hot EB sample was being caught in a 5-gallon bucket. A fire alarm was turned in and the fire was extinguished by dry powder extinguishers. There was very slight equipment damage consisting mostly of blackening of paint and charring of insulation. EB production in department 4 was interrupted for about 30 minutes. An operator received minor burns to his right hand and forearm when the flash occurred.

The stream being sampled was the department 4 EB column (4D2) overhead, which is 99.7+ EB at about 100°C. This temperature is well below the EB autoignition temperature but above the EB flash point. All equipment and process temperatures appeared to be normal just before the fire.

Two sources of ignition are possible:

- 1) Accumulation of some type of pyrophoric material in the sample tap. This is thought the least likely because no similar trouble had ever been encountered before on this stream and because of the rapidity with which the ignition occurred after the tap was opened. The bucket itself was an ordinary open top 5-gallon can with handle, and had been in slop use in the unit for some time. It is highly unlikely that it could have contained anything violently reactive with EB.
- 2) Ignition by a static discharge is thought to be the real cause of this fire. The material in the tap was very dry and above the flash point. The bucket had a wooden hand protector on the handle and could easily have been hung on the sample tap without making electrical contact with the pipe. Such a setup could easily have produced a static spark when the sample tap valve was opened and dry EB allowed to fall into the insulated bucket.

This incident will be made the subject of a series of safety meetings outlining methods of preventing static hazards involved in flowing streams and static sparks.

SC

16694

G. L. Stacy / wea
G. L. Stacy

LAM023963