

A January 29, 2003, dust explosion at the West Pharmaceutical Services, Inc., plant in Kinston, North Carolina, killed six workers and injured 38 others, including two firefighters.



Manufacturing Process

- ⇒ rubber drug-delivery components such as syringe plungers, septums, and vial seals.
- ⇒ compounding process consisted of two separate production lines, each with a mixer, a mill, and batchoff equipment.
- ⇒ Raw materials were prepared in another area of the plant.
- ⇒ Production operations included rubber compounding, molding, and extrusion.

Root Cause

⇒ determined that accumulated polyethylene dust above a suspended ceiling fueled the explosion. Because of the extent of damage to the Kinston facility, it was not possible to definitively determine the event that dispersed the dust or what ignited it.

CSB determined the following root causes of the January 29

- ⇒ West did not perform adequate engineering assessment of the use of powdered zinc stearate and polyethylene as antitack agents in the rubber batchoff process.
- ⇒ West engineering management systems did not ensure that relevant industrial fire safety standards were consulted.
- ⇒ West's management systems for reviewing material safety data sheets did not identify combustible dust hazards.
- ⇒ The Kinston plant's hazard communication program did not identify combustible dust hazards or make the workforce aware of such.









ANGER
LINE







FLAMMABLE GAS
PROPANE
NO SMOKING





10 6:37 AM



I'm not going to carry him.

Me neither



MOBILE AIR MONITORING
LABORATORY

NC DIVISION OF AIR QUALITY