

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date. 685

Facility: Allied Chemical Company
Metropolis, IL 62960

License No: 040-003392

Licensee Emergency Classification:
☐ Notification of an Unusual Event
☐ Alert
☐ Site Area Emergency
☐ General Emergency
☒ Not Applicable

Subject: URANIUM HEXAFLUORIDE CYLINDER OVERFILL

On March 23, 1986, the licensee notified the NRC that a uranium hexafluoride cylinder had been overfilled due to operator error during loading operations at the Metropolis uranium conversion plant. There was no significant increased potential for release of uranium hexafluoride due to the incident. The excess uranium hexafluoride was successfully removed without reheating the cylinder. There was no damage to the cylinder.

An operator failed to correctly "zero out" the load scale before he began filling a Model 48H cylinder with uranium hexafluoride on March 22, 1986. Because the load scale had previously been "zeroed out" for a heavier Model 48Y cylinder, the scale read approximately 2000 pounds too light. The operator realized his error shortly after he began to fill the cylinder. It was then decided to control the cylinder filling based on the flow rate, which is not as accurate as the load scale. Based on the flow rate, personnel calculated that the cylinder would be filled to the administrative limit of 26,500 pounds at 4:30 a.m. on March 23, 1986.

The operator on shift at 4:30 a.m. on March 23 recalculated the cylinder fill time and determined that the cylinder would not reach 26,500 pounds until 5:00 a.m. He therefore continued to fill the cylinder until 5:00 a.m., without notifying his supervision.

The overfill was detected when the cylinder was lifted off the load cell. The lifting crane includes a scale, which showed the cylinder to contain 28,207 pounds of uranium hexafluoride. (This scale was one of the improvements made at the plant after a 1984 overfill incident.) The cylinder was returned to the load cell, and the excess uranium hexafluoride was withdrawn without incident. (In January 1986 Region III (Chicago)

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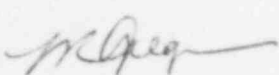
issued a Confirmatory Action Letter to the licensee, documenting the licensee's agreement not to reheat an overfilled cylinder without Region III's review and concurrence. Reheating was not necessary in this incident.)

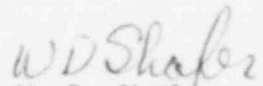
Region III has dispatched an inspector to review the circumstances of this overfill incident. The licensee has now changed its operating procedures to require shift supervisors to observe all principal cylinder filling activities and to have a process engineer on all shifts until plant operators are thoroughly retrained in cylinder handling activities.

Region III will document these measures with a Confirmatory Action Letter.

The State of Illinois will be informed.

The licensee notified the Headquarters Duty Officer of this incident at 2:52 p.m., March 23, 1986. This information is current as of 11:00 a.m., March 24, 1986.


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