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PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-III-94-41

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.

<u>Facility</u>	<u>Licensee Emergency Classification</u>
Shell Chemical Co.	General Emergency
Belpre, Ohio	Site Area Emergency
	Alert
License No. 34-13012-01	Unusual Event
	X Not Applicable

Subject: GAUGES CONTAINING CESIUM-137 INVOLVED IN EXPLOSION AND FIRE

About 6 a.m. on May 27, 1994, an explosion and fire occurred at the licensee's facility, a large complex which processes petroleum products and chemicals. The licensee has about 100 NRC-licensed gauges on site which are used principally for measuring levels of material in tanks.

Two Region III inspectors responded to the facility later that day and determined that a total of four fixed gauges, each containing 5 millicuries of cesium-137 in sealed sources were involved in the explosion and fire. None of the other licensee's gauges were affected by the event. The cesium-137 in the devices are in the form of microspheres which is less susceptible to dispersal and inhalation if the source capsules are damaged.

The device manufacturer (Ohmart, Cincinnati, Ohio) responded to the scene on May 28, 1994, to assist in recovery/monitoring efforts. In subsequent conversations with the manufacturer, it was revealed that as of May 30, 1994, one device had been recovered with the sealed source intact. The unit was however, badly deformed with the shutter mechanism blown off. Preliminary wipe tests of the device did not indicate contamination. The device was subsequently placed in locked storage, on site. It is believed that the remaining three gauges are located below 30-40 feet of debris.

Initial perimeter surveys performed by the NRC inspectors, the device manufacturer and the licensee's Radiation Safety Officer (RSO), failed to reveal readings in excess of background levels.

The device manufacturer's RSO is currently on site and will continue to assist recovery/survey efforts which have been hampered by continuing fire flare-ups and uncertain structural integrity. To date, no contamination has been detected and no material is leaving the site without radiation surveys.

Approximately four other devices located in adjacent areas of the explosion were inspected and surveyed and revealed no apparent damage.

The State of Ohio responded to the site on May 27, 1994.

Region III has responded to news media inquiries on this event and will continue to monitor device recovery efforts.

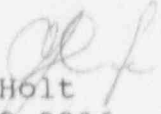
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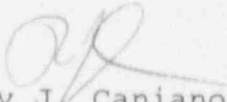
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PNO-III-94-041 PDR

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Region III was notified of this event at about 8 a.m. on May 27, 1994, by the licensee's assistant radiation safety officer. Additional information has been obtained from State of Ohio personnel. The information in this preliminary notification has been reviewed with licensee management and is current as of 1:00 p.m. (CDT) on May 31, 1994.

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