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

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
Belpra, 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 ARE RECOVERED (UPDATE)

About 6:30 a.m. on May 27, 1994, an explosion and fire occurred at the licensee's facility, a large complex which produces synthetic rubber. The licensee has about 100 NRC-licensed gauges on site which are used principally for measuring levels of material in tank. Two Region III inspectors responded to the facility later that day and determined that four gauges were involved in the explosion and fire. None of the licensee's other gauges were affected by the event. The device manufacturer responded to the scene on May 28, 1994, to assist in recovery/monitoring efforts.

The four fixed gauges that were involved in the licensee's May 27, 1994 explosion and fire have been found. Each gauge contained 5 millicuries (185 MBq) of cesium-137 in sealed sources. Preliminary wipe test measurements on all four devices indicate no removable radiation contamination and thus, no leakage of the sealed sources. The wipe tests samples have been sent to the device manufacturer (Ohmart Corporation, Cincinnati, Ohio) for further analysis. Three of the four devices were found to be in good condition. The gauges are currently stored in a locked radioactive material storage shed on the licensee's site.

The first gauge was recovered on May 28, and was severely damaged and burned with the shutter assembly missing. The second one was located on May 31 but could not be retrieved until June 2. Also on June 2 the third gauge was recovered. The fourth gauge was found on June 4. The last three gauges were found intact with the shutter and lead shielding in place. The exterior surfaces of the gauges were slightly burned. The maximum radiation level at one foot from any of the devices was 34 mR/hr (8.8 microcoulombs per kilogram per hour).

Region III was notified of this event at about 8:00 a.m. on May 27, 1994, by the licensee's assistant radiation safety officer. There was continued communication between the licensee and Region III until recovery of the four gauges. Additional information was obtained from State of Ohio personnel. The information in this preliminary notification has been reviewed with licensee management and is current as of 8:00 a.m. (CDT) on June 7, 1994.

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