January 24, 2002

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-IV-02-006A

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 IV staff on this date.

Facility
Owensby and Kritikos
Sulphur, Louisiana
(State of Louisiana Licensee)

Licensee Emergency Classification
___ Notification of Unusual Event
___ Alert
___ Site Area Emergency
___ General Emergency
_X_ Not Applicable

SUBJECT: CORRECTION, ERROR ON UNITS (**BOLDED**) - INDUSTRIAL ACCIDENT RESULTING IN DAMAGE TO A RADIOACTIVE SEALED SOURCE

DESCRIPTION: On January 18, 2002, a State of Louisiana licensee, Owensby and Kritikos, notified the State of an industrial accident at a refinery in Lake Charles, Louisiana. During routine radiography activities the source drive cable crossed a high voltage cable resulting in damage to the radioactive source. The radiography device was manufactured by AEA Technologies, Model 660B, (Serial Number B-2956) and contained 1.52 terabequerel (41 curies) of Iridium-192. The State of Louisiana immediately dispatched an inspector to the site.

The following information was reported to the State by the licensee on January 18, 2002. The radiography work was being performed in a vessel about 50 feet overhead at the refinery. The licensee said that they believed that they were able to retract the damaged source into the camera. The refinery health and safety unit responded to the scene, and the area was secured. Radiation readings outside the vessel manway were reported to be approximately 100 mr/hr and greater than 1 r/hr just inside the vessel manway.

Followup information indicated that the maximally exposed individual was the radiographer who was in the vessel when the accident occurred and who later exited through the vessel manway. His personal dosimetry indicated a 240 mrem exposure. Six individuals were originally identified with contamination as a result of the event. Five were reported with shoe contamination and one with skin contamination. All shoes were successfully decontaminated. The individual with skin contamination had minor residual contamination on his hand even after several decontamination attempts. Early in the event, one individual with shoe contamination left the scene to get tools for the source recovery. The individual's truck was held and an office that he entered was locked for contamination evaluation. The State initially suggested that the licensee do nasal smears to evaluate the potential for internal intake by any individuals. Region IV also suggested that the licensee consider whole body counting for any individuals suspected to have received any intake.

The licensee contracted with AEA Technologies for recovery of the camera, and with two other contractors for the decontamination effort. The State continued to monitor licensee activities over the holiday weekend and plans to do confirmatory surveys following the decontamination activities.

Region IV offered assistance to the State and the State initially indicated that none was necessary.

On Monday January 21, 2002, the State informed NRC that the two radiographers involved in the incident were evaluated with a gamma scan at a local hospital and the radiographer that was in the vessel had indications of an intake in the lungs. The State subsequently requested assistance from he NRC in obtaining whole body counting at a local nuclear power plant for the two radiographers and

five other individuals who were involved in the source recovery efforts over the weekend. The five individuals became concerned after hearing of the results of the gamma scan for the radiographer. The five individuals were apparently wearing full face respirators during the recovery effort.

Arrangements were made for whole body counting to be performed on Tuesday, January 22, 2002. Ultimately, eight individuals received whole body counts including a refinery employee. The results received from the State for the eight individuals indicated that the radiographer involved in the event had the highest level intake of 1.0 megabequerel (27.1 microcuries), a second radiographer's intake was 1.57 E-3 megabequerel (4.23 E-2 microcuries), and a refinery employee had an intake of 1.2 E-3 megabequerel (3.24 E-2 microcuries). The five contractors' results indicated no intake. The licensee is evaluating the dose for the radiographer with the high level of intake. Initial dose estimates for the radiographer indicates that there was no apparent dose in excess of the annual dose limit of 5 rem.

The State provided additional information to NRC on Wednesday as follows. The radiography camera had been placed in a plastic bag outside the vessel and dose reading within inches of the camera were about 300 mr/hour, which would indicate that the remainder of the source has been retracted and secured in the camera. The licensee believes that the remaining contamination is confined to the vessel and in the immediate vicinity (10-20 feet) outside the vessel. The licensee believes that all other areas contaminated as a result of the event have been decontaminated including the office building that was locked previously. As much as 180-370 **gigabequerel** (5-10 curies) of the radioactive source is estimated to remain in the vessel. It was noted that a localized area on the very bottom of the vessel was reading about 1000 r/hour on contact. The licensee is developing a plan for further recovery work.

Region IV continues to monitor the status of this situation through the State of Louisiana and continues to be available to provide assistance to the State as requested. At 3:00 p.m. (CST) on Wednesday, January 23, 2002, the State requested NRC assistance in coordinating with DOE Radiation Emergency Assistance Center (REAC) to further evaluate the health effects for the radiographer.

The State issued a press release on January 22, 2002.

NRC Operations Center received notification of this occurrence from the State of Louisiana at 12:39 p.m. (EST) on January 18, 2002, and NRC received updated information and a request for assistance on January 21, 2002. Region IV NRC received additional updated information on January 22 and 23, 2002. Region IV has informed OEDO, NMSS, OSTP, RIV SLO, and the PAO. Region IV also conducted a Commissioner Assistant's brief at 7 p.m. on January 18, 2002.

This information has been discussed with the State and is current as of 3:00 p.m. (CST) on January 23, 2002.

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