February 13, 2003

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-III-03-007

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.

Facility
Southeast Missouri State University
Cape Girardeau, MO

Docket: 030-33508
License No. 24-09296-02

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

SUBJECT: OCCUPATIONAL OVEREXPOSURE

DESCRIPTION:

Southeast Missouri State University (SEMO) of Cape Girardeau, Missouri, notified Region III (Chicago) that a professor at the University received a committed dose equivalent (CDE) of 76 rem (bone surface) and committed effective dose equivalent (CEDE) of 4.2 rem from exposure to americium-241 (Am-241). The university considers this dose to the individual to be an occupational exposure. The NRC limits are 50 rem CDE and 5 rem CEDE.

Region III conducted a special inspection at the university beginning June 21, 2000, through November 6, 2000, to review the circumstances surrounding reported Am-241 contamination. That inspection identified Am-241 contamination spread throughout Magill Hall on the SEMO campus and an overexposure of a consultant who, in the summer of 2000, attempted to decontaminate an area in the basement. Several University employees, including the professor, were evaluated in the summer and fall of 2000 for Am-241 intake by a mobile whole body counting service. All results were reported as negative. However, data from the professor's studies revealed an unexplained gamma energy peak near Am-241. The special inspection resulted in a Severity Level I violation issued to the University.

The licensee continued evaluations of staff for intake of Am-241 by contracting for several urinalysis studies. The potential overexposure of the professor was discovered after he received skull, lung, and liver scans at Radiation Emergency Assistance Center (REAC) in Oak Ridge, Tennessee, on December 10, 2001. The study at REAC was conducted as a result of the unexplained gamma peak from the initial whole body count. An intake of Am-241 by the professor was confirmed. Subsequent to the scans conducted by REAC, the professor elected to undergo a series of chelation treatments during 2002 and early 2003 in order to reduce his committed dose. The NRC accepted the licensee's proposal to take credit for the chelation treatments in determining the final dose.

The licensee decontaminated Magill Hall and the NRC conducted an inspection and confirmed that the building was suitable to release for unrestricted use.

NRC staff members are reviewing the licensee's report of the overexposure.

NMSS and the State of Missouri have been notified. The information in this preliminary notification has been reviewed with Southeast Missouri State University. The information in this preliminary notification is current as of February 13, 2003, at 4:00 p.m. (CST).

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