



November 9, 2010

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

To Whom it May Concern:

This letter is being written to fulfill the 30-day reporting requirement pursuant to Title 10, Code of Federal Regulations Part 20, Section 2201 (10 CFR 20.2201) "Reports of theft or loss of licensed material" and 10 CFR 20.2203 "Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits".

Southeast Missouri State University (NRC License number 24-09296-02) has been investigating, using procedures tied to its license, the apparent contamination of a small strip of soil near Magill Hall of Science. Magill Hall is the site of a historical release of americium-241 (Am-241) which was discovered in 2000. On October 26, 2010, the University was notified by its consultant that the results of surface soil sampling showed elevated activity of Am-241. In 7 of 15 samples the concentration of Am-241 in the soil exceeded the 2.1 pCi/g surface soil screening value prescribed by the U.S. Nuclear Regulatory Commission (NRC) in NUREG-1757. The total area in excess of 2.1 pCi/g was approximately 7 m².

Two biased sample locations identified pursuant to radiological walkover surveys with a Field Instrument for the Detection of Low-Energy Radiation (FIDLER) exhibited Am-241 concentrations of 2,330 pCi/g and 2,400 pCi/g. These analytical samples are nominally 500 g; therefore, the total amount of radioactivity in each sample exceeds 1000 nanocuries (i.e., 1 microcurie). Given a 10 CFR 20, Appendix C value of 1 nanocurie for Am-241, and the fact that the total amount of radioactivity exceeds 1000 times the Appendix C value, USNRC Region III was notified of this event on Wednesday, October 27, 2010 at 8 AM.

The date the original contamination event occurred is unknown, but likely falls in the timeframe extending from January, 1970 until November, 2000.

The following steps have been taken by Southeast Missouri State University, in conjunction with its consultant, with respect to this incident:

1. The area of contamination is enclosed by a six-foot high chain-link fence and is accessible only to the Radiation Safety Officer or his designee. The area is posted in accordance with 10 CFR 20.1902, and as a "contaminated area" in accordance with the University's Radiation Protection Plan.

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2. An area around Magill Hall comprising over 32,000 square feet of unpaved ground has had 100 percent gamma walkover surveys using both 2x2 NaI and FIDLER detectors. The preliminary analysis of these walkover surveys indicates that no elevated activities exist beyond the contaminated area.
3. A soil sampling plan has been executed. This plan, which was reviewed by NRC Region III, resulted in additional sampling of the radiologically elevated area to determine the lateral and vertical extent of Am-241 contamination. An additional 54 sampling locations were identified using a systematic triangular grid over the 32,000 square foot (3000 square meter) area. Both surface and subsurface samples were collected at each location. The samples were sent to an off-site radio-analytical laboratory for gamma spectroscopy analysis which will include results for Am-241 and Cs-137. Results from the analysis of these samples are expected in mid-December, 2010.
4. The University RSO is conducting a historical site assessment to determine if currently paved roads, parking lots, and sidewalks in the area near the contamination have changed in configuration since 1970. The results of this assessment, in conjunction with the soil sampling results, will be used to determine whether soil sampling is required beneath currently paved surfaces.

Sincerely,



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