



## Department of Energy

Washington, DC 20585

October 24, 2011

Mr. Christopher P. Leichtweis  
Chief Executive Officer  
Safety and Ecology Corporation  
SEC Business Center  
2800 Solway Road  
Knoxville, TN 37931

NEL-2011-04

Dear Mr. Leichtweis:

The Office of Health, Safety and Security's Office of Enforcement and Oversight conducted an evaluation of the two contamination events at the Separations Process Research Unit (SPRU) at the Knolls Atomic Power Laboratory (KAPL) in Niskayuna, New York. On August 24, 2010, contaminated sludge leaked from two pumps inside the Building H2 Tank Farm Weather Enclosure after excessive pressure was applied to clear a clogged nozzle. The sludge contained radioisotopes from nuclear fuel reprocessing and separation testing, including Am-241, Cs-137, Pu-239/240, and Sr-90. Radiological control technician (RCT) coverage for this work was provided by Safety and Ecology Corporation (SEC) as part of a subcontract with URS Washington Group International, Inc. (URS), the U.S. Department of Energy's (DOE) prime contractor. The spill area was subsequently reported by SEC as cleaned up and posted as a Contamination Area; however, on December 20, 2010, areas of high contamination were identified during a routine survey, and the area was reposted as a High Contamination Area. On February 11, 2011, additional areas of high contamination were identified, with maximum reported levels of 14,000 dpm/100 cm<sup>2</sup> alpha contamination and 562,000 dpm/100 cm<sup>2</sup> combined beta/gamma contamination. On February 17, 2011, URS reported an evaluation of this event in the Occurrence Reporting and Processing System (ORPS) report EM---WGI-G2H2-2011-0001, *Higher Than Expected Contamination Levels Inside H2 Tank Farm Weather Enclosure*.

On September 29, 2010, a radiological contamination event occurred while URS personnel performed open air demolition of Building H2 at SPRU. The event was traced to the removal and size reduction of evaporator system components that contained internal radiological residue from legacy chemical process operations; this residue was released from the crushed equipment and spread to other areas of SPRU and KAPL. The RCT responsible for covering the work, again provided by SEC, was assigned unrelated duties in addition to covering this task. The RCT did not perform any radiological surveys after a white "puff" was observed during size reduction of a condenser column; instead, the RCT checked for explosive gases and allowed the crew to resume demolition. The



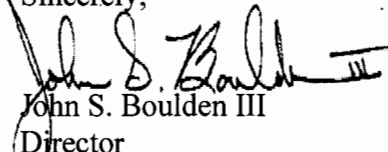
release and spread of contamination inside the demolition area was first identified at approximately noon, when a frisker alarmed. Following that alarm, an RCT was summoned, who ordered the equipment operators to exit the work area. Contamination was found on the work boots of the equipment operators as they exited the area. Subsequently, radioactive contamination from this event was found outside of the controlled area, including operational areas within the KAPL. On October 8, 2010, URS reported this event as a Management Concern, Significance Category 2, in ORPS report EM---WGI-G2H2-2010-0001, *Management Concern - Operational Weaknesses*. Potential noncompliances associated with this event were reported into DOE's Noncompliance Tracking System (NTS) on October 26, 2010, NTS--SPRU-URSWD-SPRU-2010-0001, *Contamination During Demolition*.

DOE considers these radiological contamination events to be of high safety significance. Although the actual consequences were limited, the potential consequences were significant. This event reflected programmatic breakdowns in the work processes used by SEC to prevent exposure to radioactive materials. Based on a review of the evidence associated with these events, DOE identified potential noncompliances with 10 C.F.R. Part 835, *Occupational Radiation Protection*. Deficiencies include failure to adequately monitor areas for contamination and failure to control the spread of contamination. A Preliminary Notice of Violation has been issued to URS regarding these and other quality assurance and occupational radiation protection issues.

The Office of Enforcement and Oversight is aware that SEC is no longer under contract with URS to provide radiological support at SPRU. In light of this, and also in consideration of the investigation, root cause analysis, and corrective actions performed by URS at SPRU, the Office of Enforcement and Oversight has elected to exercise its enforcement discretion and not pursue further enforcement activity against SEC at this time.

No response to this letter is required. If you have any questions, please contact me at (301) 903-2178, or your staff may contact Mr. Steven Simonson, Deputy Director for Enforcement, Office of Enforcement and Oversight, at (301) 903-7707.

Sincerely,



John S. Boulden III

Director

Office of Enforcement and Oversight  
Office of Health, Safety and Security

cc: Steven Feinberg, SPRU FO  
David Hall, WGI  
Michael Lempke, NRLFO  
Richard Azzaro, DNFSB