



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF RESEARCH AND DEVELOPMENT  
NATIONAL RISK MANAGEMENT RESEARCH LABORATORY  
CINCINNATI, OHIO 45268

March 25, 2016

Director  
Office of Nuclear Material Safety and Safeguards  
~~ATTN: GLTS~~  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Sir or Madam:

The United States Environmental Protection Agency is providing this report in accordance with 10 CFR 31.5(c)(5). On March 11, 2016 the EPA Cincinnati Radiation Safety Officer (RSO) removed a sealed source electron capture device (ECD) from a gas chromatograph (GC) at the EPA's Experimental Stream Facility, Shimadzu ECD RI #1469 Serial #612714. The ECD had been leak tested every six months with the last test performed on 12/22/2015 with all results showing less than 0.005 microcuries of removable contamination. At the time of removal, the RSO performed a leak test of the instrument and wipe testing of the gas chromatograph surfaces. Combined wipe testing showed 0.008 microcuries (18558 dpm) measured on the outer casing of the ECD and the highest surface contamination level of 98,196 dpm/100 cm<sup>2</sup> within the GC oven near the ECD inlet.

The ECD was placed in a sealed bag and transferred to the EPA Cincinnati radiation safety laboratory for storage pending return to the manufacturer for disposal. The area surrounding the gas chromatograph was isolated. Decontamination using commercial cleaning solutions and paper towels was performed and surveys were performed on March 18, 2016. Survey results showed surrounding surfaces including the floor, table, and exterior GC surfaces were less than 100 dpm/100 cm<sup>2</sup>. Contamination within the GC oven was reduced to less than 1000 dpm/100 cm<sup>2</sup> (587 dpm), less than the unrestricted equipment release criteria per NUREG 1556 Volume 7 table Q.2.

The ECD shall be transferred to the manufacturer or to another person authorized to receive the device by a specific license for disposal per 10 CFR 31.5(c)(8). EPA Cincinnati shall continue to monitor all remaining ECDs every six months as required.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen E. Musson".

Stephen E. Musson  
Radiation Safety Officer  
U.S. EPA Office of Research and Development  
Cincinnati, Ohio