

**ORISE**  
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION

January 10, 2005

Mr. Peter Lee  
U.S. Nuclear Regulatory Commission  
Region III  
801 Warrenville Road  
Lisle, IL 60532-4351

**SUBJECT: ANALYTICAL RESULTS FOR SOIL SAMPLES FROM THE BATTELLE COLUMBUS LABORATORY DECOMMISSIONING PROJECT, COLUMBUS, OHIO [INSPECTION REPORT NO. 070-0008/2004-004] (RFTA NO. 05-001)**

Dear Mr. Lee:

The Environmental Survey and Site Assessment Program (ESSAP) of the Oak Ridge Institute for Science and Education (ORISE) received six soil samples on December 20, 2004 that were collected at the Battelle Columbus Laboratory Decommissioning Project in Columbus, Ohio, on December 15, 2004. The soil samples were analyzed by gamma spectroscopy for cobalt-60 (Co-60) using the 1173.22 keV photopeak and cesium-137 (Cs-137) using the 661.65 keV photopeak (Procedure CP1, Revision 14). The concentrations are reported in Table 1.

ESSAP's Quality Control (QC) requirements were met for these analyses. The QC files are available for your review upon request.

If you have any questions, please call me at (865) 241-3242 or Wade Ivey at (865) 576-9184.

Sincerely,



Dale Condra  
Laboratory Manager  
Environmental Survey and  
Site Assessment Program

RDC:WPI:ar

Enclosure

cc: T. McLaughlin, NRC/NMSS/TWFN 7F27                      E. Abelquist, ORISE/ESSAP  
E. Knox-Davin, NRC/NMSS/TWFN T8A23                    T. Vitkus, ORISE/ESSAP  
File 1647

Distribution approval and concurrence:	Initials	Date
Technical Management Team Member	TCP	11/10/2005
Quality Manager	ATP	1/10/2005

P. O. BOX 117, OAK RIDGE, TENNESSEE 37831-0117

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ORISE TABLE 1

COBALT-60 (Co-60) AND CESIUM-137 (Cs-137) CONCENTRATIONS  
IN SOIL SAMPLES  
BY GAMMA SPECTROSCOPY  
CP1, REVISION 14  
BATTELLE COLUMBUS LABORATORY DECOMMISSIONING PROJECT  
COLUMBUS, OHIO

ESSAP Sample ID	NRC Region III Sample ID	Radionuclide Concentrations <sup>a</sup> (pCi/g dry weight)	
		Co-60	Cs-137
1647S0001	118-1	0.02 ± 0.03 <sup>b</sup>	0.18 ± 0.04
1647S0002	118-2	0.00 <sup>c</sup> ± 0.02	0.03 ± 0.03
1647S0003	118-3	0.01 ± 0.02	0.06 ± 0.03
1647S0004	119-1	0.01 ± 0.02	0.03 ± 0.02
1647S0005	119-2	-0.01 ± 0.02	0.01 ± 0.02
1647S0006	119-3	0.00 ± 0.02	0.06 ± 0.02

<sup>a</sup>The MDC for a one hour count of soil in a 0.5L Marinelli for Co-60 is 0.04 pCi/g and for Cs-137 is 0.03 pCi/g.

<sup>b</sup>Uncertainties represent the 95% confidence level, based on total propagated uncertainties.

<sup>c</sup>Zero values are due to rounding.