

January 12, 2010

Mr. Jeremy Tapp
U. S. Nuclear Regulatory Commission
Region III
2443 Warrenton Road
Lisle, IL 60532-4351

**SUBJECT: ORISE CONTRACT NO. DE-AC05-06OR23100
LETTER REPORT FOR ANALYTICAL RESULTS FOR FIVE SOIL
SAMPLES FROM NASA PLUM BROOK, SANDUSKY, OHIO
[INSPECTION REPORT NOS. 05000030/2009001;05000185/2009001]
(RFTA NO. 10-001), DCN: 2009-LR-01-0**

Dear Mr. Tapp:

The Oak Ridge Institute for Science and Education (ORISE) received five soil samples on December 7, 2009 from NASA Plum Brook in Sandusky, Ohio. The samples were analyzed according to the 303 form supplied with the samples. The sample identification numbers are presented in Table 1. The gamma spectroscopy results for cobalt-60 and cesium-137 are in Table 2. The pertinent procedure references are included with the data tables.

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

My contact information is listed below. You may also contact Wade Ivey at 865.576.9184 with any questions or comments.

Sincerely,



Dale Condra, Manager
Laboratory

RDC:WPI:jc

Enclosures

c: T. Carter, NRC/FSME/DWMEP T-8F5 S. Roberts, ORISE
T. Patterson, NRC/FSME/TWFN 8D42 T. Vitkus, ORISE
File 2009

Distribution approval and concurrence :	Initials
Technical Review	TAV
Quality Review	WPI

TABLE 1

**SAMPLE IDENTIFICATIONS
AND COLLECTION INFORMATION
NASA PLUM BROOK
SANDUSKY, OHIO**

ORISE Sample ID	NRC Region III Sample ID	Collection Date	Collection Time
2009S0001	NPB-3-01	12/2/09	1100
2009S0002	NPB-3-02	12/2/09	1115
2009S0003	NPB-3-03	12/2/09	1125
2009S0004	NPB-3-04	12/2/09	1345
2009S0005	NPB-3-05	12/2/09	1350

TABLE 2

CONCENTRATIONS OF COBALT-60 AND CESIUM-137
 IN SOIL SAMPLES
 BY GAMMA SPECTROSCOPY CP1, REVISION 17
 NASA PLUM BROOK
 SANDUSKY, OHIO

ORISE Sample ID	NRC Region III Sample ID	Radionuclide Concentrations, TPU, and MDCs ^a (pCi/g)	
		Co-60	Cs-137
2009S0001	NRC-1	0.01 ± 0.06 ^b , 0.10	0.02 ± 0.04 , 0.07
2009S0002	NRC-2	0.04 ± 0.06 , 0.11	3.98 ± 0.36 , 0.06
2009S0003	NRC-3	-0.01 ± 0.04 , 0.07	-0.02 ± 0.03 , 0.05
2009S0004	NRC-4	0.02 ± 0.04 , 0.07	0.01 ± 0.03 , 0.05
2009S0005	NRC-5	-0.04 ± 0.05 , 0.08	0.00 ^c ± 0.03 , 0.06

^aThe MDCs appear after the commas.

^bUncertainties represent the 95% confidence level, based on total propagated uncertainties.

^cZero value is due to rounding or equal sample and background counts.