



July 7, 2010

Ms. Yolande Norman  
Project Manager  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental Management Programs  
U.S. Nuclear Regulatory Commission  
Mail Stop T-8F5  
Rockville, Maryland 20852

**SUBJECT: ORISE CONTRACT NO. DE-AC05-06OR23100  
ANALYTICAL RESULTS FOR SEVEN SOIL SAMPLES ASSOCIATED WITH  
SHALLOW LAND DISPOSAL AREA IN PARKS TOWNSHIP, PENNSYLVANIA,  
(TAC# J00346) [RFTA NO. 10-001]  
DCN: 2020-LR-01-0**

Dear Ms. Norman:

The Oak Ridge Institute for Science and Education (ORISE) received seven soil samples on July 2, 2010 from the Shallow Land Disposal Area site in Parks Township, Pennsylvania. The "URGENT" analytical request included uranium (U) by gamma spectroscopy (GS), U isotopic by alpha spectroscopy (U iso), and gross alpha (GA) analyses. The samples arrived without the standard 303A form containing the sample identifications. We used the sample identification information on each sample to create the ORISE chain-of-custody.

You requested that the GS data be available within 48 hours of receipt of the samples. Because the samples arrived on Friday July 2<sup>nd</sup> and the ORISE holiday for July 4<sup>th</sup> fell on Monday July 5<sup>th</sup>, the requested 48 hours data deliverable was met by submitting the letter report today, July 7<sup>th</sup>. The data for U iso and GA were requested by July 9<sup>th</sup>. ORISE will make every attempt to meet this deadline request. The sample identifications are presented in Table 1. The GS data are in Table 2.

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:bf

c: T. Carter, NRC/FSME/DWMEP T-8F5  
T. Patterson, NRC/FSME/TWEN 8D4  
File 2020

S. Roberts, ORISE  
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Distribution approval and concurrence:	Initials
Technical Review	<i>TSW</i>
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**TABLE 1**

**SAMPLE IDENTIFICATIONS  
AND COLLECTION INFORMATION  
SHALLOW LAND DISPOSAL AREA  
PARKS TOWNSHIP, PENNSYLVANIA**

<b>ORISE Sample ID</b>	<b>NRC Sample ID</b>	<b>Collection Date</b>	<b>Collection Time</b>
2020S0001	NRC-1	6/30/10	15:00
2020S0002	NRC-2	6/30/10	15:00
2020S0003	NRC-3	6/30/10	15:00
2020S0004	NRC-4	6/30/10	16:00
2020S0005	NRC-5	6/30/10	16:00
2020S0006	NRC-6	6/30/10	16:00
2020S0007	NRC-7	6/30/10	16:30

**TABLE 2**

**CONCENTRATIONS OF URANIUM ISOTOPES**  
**IN SOIL SAMPLES**  
**BY GAMMA SPECTROSCOPY**  
**CP1, REVISION 17**  
**SHALLOW LAND DISPOSAL AREA**  
**PARKS TOWNSHIP, PENNSYLVANIA**

ORISE Sample ID	NRC Sample ID	Radionuclide Concentrations, TPU's, and MDCs <sup>a</sup> (pCi/g)		
		U-235	U-238	Total U <sup>b</sup>
2020S0001	NRC-1	0.14 ± 0.03 , 0.06	1.43 ± 0.42 , 1.10	4.61 ± 0.78
2020S0002	NRC-2	0.15 ± 0.02 , 0.05	1.16 ± 0.36 , 0.96	4.57 ± 0.56
2020S0003	NRC-3	0.15 ± 0.02 , 0.03	1.16 ± 0.26 , 0.64	4.57 ± 0.51
2020S0004	NRC-4	0.12 ± 0.02 , 0.05	1.18 ± 0.27 , 0.75	3.90 ± 0.51
2020S0005	NRC-5	0.17 ± 0.02 , 0.04	1.00 ± 0.33 , 1.00	4.86 ± 0.55
2020S0006	NRC-6	0.16 ± 0.02 , 0.04	1.34 ± 0.31 , 0.77	4.97 ± 0.53
2020S0007	NRC-7	0.18 ± 0.02 , 0.04	1.01 ± 0.32 , 1.00	5.10 ± 0.54

<sup>a</sup>The MDCs are after the comma.

<sup>b</sup>Total U is the sum of (U-235 \* 21.7) + U-235 + U-238.

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