

February 21, 2013

Docket 040-08027  
License SUB-1010

Mr. Robert Evans  
U.S. Nuclear Regulatory Commission, Region IV  
1600 East Lamar Boulevard  
Arlington, TX 76011

**SUBJECT: ORISE CONTRACT NO. DE-AC05-06OR23100  
LETTER REPORT FOR ANALYTICAL RESULTS FOR EIGHT SOIL  
SAMPLES ASSOCIATED WITH THE SEQUOYAH FUELS CORPORATION IN  
GORE, OKLAHOMA  
[INSPECTION REPORT NO. 040-08027/13-001] (RFTA NO. 13-001)  
DCN: 5206-LR-02-0**

Dear Mr. Evans:

Oak Ridge Associated Universities (ORAU), under the Oak Ridge Institute for Science and Education (ORISE) contract, received eight soil samples on February 8, 2013 from the Sequoyah Fuels Corporation in Gore, Oklahoma. The samples were analyzed for gamma emitting radionuclides by gamma spectroscopy. The samples were received with a NRC Form 303. The sample identification numbers are presented in Table 1 and the gamma spectroscopy data are presented in Table 2. The pertinent procedure reference is included with the data table.

ORAU'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 Forrest Smith at 865.574.9802 with any questions or comments.

Sincerely,

*Wade P. Ivey*  
Wade Ivey, Manager  
Laboratory  
WPI:WFS:km

Enclosures

- c: T. Carter, NRC/FSME/DWMEP T-8F5
- S. Nesmith, NRC/FSME/PBPA/TWFN 8A23
- L. Gersey, NRC

Electronic: S. Roberts, ORAU      T. Vitkus, ORAU      File 5206

Distribution approval and concurrence:	Initials
Technical Review	<i>WPI</i>
Quality Review	<i>WPI</i>
Group Manager Review	<i>WPI</i>

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**TABLE 1**

**SAMPLE IDENTIFICATIONS  
AND COLLECTION DATA  
SEQUOYAH FUELS CORPORATION  
GORE, OKLAHOMA**

<b>ORAU/ORISE Sample ID</b>	<b>NRC Sample ID</b>	<b>Collection Date</b>	<b>Collection Time</b>
5206S0008	NRC-A	02/06/13	1:45 PM
5206S0009	NRC-B	02/06/13	2:10 PM
5206S0010	NRC-C	02/06/13	2:15 PM
5206S0011	NRC-D	02/06/13	2:20 PM
5206S0012	NRC-E	02/07/13	9:40 AM
5206S0013	NRC-F	02/06/13	2:32 PM
5206S0014	NRC-G	02/06/13	2:45 PM
5206S0015	NRC-H	02/06/13	2:50 PM

TABLE 2

CONCENTRATIONS OF SELECTED GAMMA EMITTERS  
IN SOIL SAMPLES  
BY GAMMA SPECTROSCOPY  
CP1, REVISION 17  
SEQUOYAH FUELS CORPORATION  
GORE, OKLAHOMA

ORAU/ORISE Sample ID	NRC Sample ID	Radionuclide Concentrations, TPU <sup>a</sup> , and MDCs <sup>b</sup> (pCi/g)		Total U <sup>c</sup>
		U-238 by Th-234	U-235	
5206S0008	NRC-A	7.06 ± 0.65 , 0.86	0.40 ± 0.09 , 0.18	14.5 ± 1.3
5206S0009	NRC-B	20.3 ± 1.5 , 1.2	0.96 ± 0.12 , 0.20	41.6 ± 3.0
5206S0010	NRC-C	78.0 ± 5.1 , 1.4	4.07 ± 0.33 , 0.42	160.1 ± 10.2
5206S0011	NRC-D	1.18 ± 0.43 , 0.96	0.09 ± 0.08 , 0.18	2.45 ± 0.86
5206S0012	NRC-E	13.1 ± 1.0 , 0.8	0.54 ± 0.10 , 0.21	26.7 ± 2.0
5206S0013	NRC-F	1.41 ± 0.42 , 0.93	0.12 ± 0.08 , 0.17	2.94 ± 0.84
5206S0014	NRC-G	1.61 ± 0.37 , 0.77	0.04 ± 0.09 , 0.21	3.26 ± 0.75
5206S0015	NRC-H	1.58 ± 0.43 , 0.94	0.08 ± 0.08 , 0.18	3.24 ± 0.86

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

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

<sup>c</sup>Total uranium calculated by the formula: (2 \* U-238) + U-235.