

March 6, 2013

Mr. Gerald Schlapper
 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 SEVEN SOIL
 SAMPLES ASSOCIATED WITH THE CIMARRON CORPORATION IN
 CIMARRON, OKLAHOMA
 (RFTA NO. 12-001)
 DCN: 5199-LR-02-0**

Dear Mr. Schlapper:

Oak Ridge Associated Universities (ORAU), under the Oak Ridge Institute for Science and Education (ORISE) contract, received seven soil samples on February 19, 2013 from the Cimarron Corporation in Cimarron, Oklahoma. The samples were analyzed for uranium-235, uranium-238, and total uranium by gamma spectrometry as directed from email communication on February 20, 2013. The chain of custody that accompanied the samples were from the Environmental Properties Management laboratory. There was no NRC Form 303 or NRC Form 303A supplied with the samples. The sample identification numbers are presented in Table 1 and the uranium by gamma spectrometry 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 Ivey, Manager
 Laboratory
 WPI:WFS:km

Enclosures

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

Electronic: S. Roberts, ORAU T. Vitkus, ORAU File 5199

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

TABLE 1

**SAMPLE IDENTIFICATIONS
AND COLLECTION DATA
CIMARRON CORPORATION
CIMARRON, OKLAHOMA**

ORISE Sample ID	NRC Region IV Sample ID	Collection Date	Collection Time
5199S0001	CS-BA1-04-9'-10'-NRC	9/25/2012	2:32 PM
5199S0002	CS-BA1-01-5'-6'-NRC	9/26/2012	7:53 AM
5199S0003	CS-BA1-01-21'-22'-NRC	9/26/2012	8:50 AM
5199S0004	GE-BA1-01-9'-10'-NRC	9/26/2012	11:30 AM
5199S0005	GE-BA1-01-21'-22'-NRC	9/26/2012	12:00 PM
5199S0006	CS-BA1-02-13'-14'-NRC	9/26/2012	1:24 PM
5199S0007	CS-BA1-03-2'-3'-NRC	9/27/2012	3:58 PM

TABLE 2
CONCENTRATIONS OF SELECTED GAMMA EMITTERS
IN SOIL SAMPLES
BY GAMMA SPECTROMETRY
CP1, REVISION 17
CIMARRON CORPORATION
CIMARRON, OKLAHOMA

ORAU/ORISE Sample ID	NRC Region IV Sample ID	Radionuclide Concentrations, TPU ^a , and MDCs ^b (pCi/g)		
		U-238 by Th-234	U-235	Total U ^c
5199S0001	CS-BA1-04-9'-10'-NRC	1.29 ± 0.26 , 0.53	0.14 ± 0.06 , 0.13	2.72 ± 0.52
5199S0002	CS-BA1-01-5'-6'-NRC	1.05 ± 0.29 , 0.62	0.07 ± 0.06 , 0.15	2.17 ± 0.58
5199S0003	CS-BA1-01-21'-22'-NRC	1.35 ± 0.30 , 0.61	0.12 ± 0.06 , 0.13	2.82 ± 0.60
5199S0004	GE-BA1-01-9'-10'-NRC	3.87 ± 0.47 , 0.78	0.35 ± 0.07 , 0.14	8.09 ± 0.94
5199S0005	GE-BA1-01-21'-22'-NRC	2.62 ± 0.38 , 0.67	0.16 ± 0.07 , 0.17	5.40 ± 0.76
5199S0006	CS-BA1-02-13'-14'-NRC	5.14 ± 0.67 , 1.10	0.43 ± 0.12 , 0.24	10.7 ± 1.3
5199S0007	CS-BA1-03-2'-3'-NRC	0.71 ± 0.32 , 0.73	0.07 ± 0.06 , 0.14	1.49 ± 0.64

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

^bThe MDCs are after the comma.

^cTotal uranium calculated by the formula: (2 * U-238) + U-235.