



<b>NRC FORM 303</b> <small>(4-2004)</small>		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>			<b>LABORATORY USE ONLY</b>			
<b>REQUEST FOR ANALYSIS AND CHAIN OF CUSTODY</b> LABORATORY - ORISE					CONTROL NUMBER RFTA-18-001			
SAMPLE LOCATION (LICENSEE) Sequoyah Fuels Corporation, Gore, OK					LICENSE NO. SUB-1010	DOCKET NO. 040-08027		
SAMPLE SUBMITTED					DATE SAMPLES SUBMITTED 03/08/2018	PRIORITY <input checked="" type="checkbox"/> ROUTINE <input type="checkbox"/> URGENT		
# TOTAL	TYPE	VOLUME	WEIGHT	SAMPLE COLLECTION INTERVAL				
5	Soil			START	MONTH	DAY	YEAR	TIME
					3	8	2018	
INSPECTOR RESPONSIBLE				TELEPHONE NUMBER				
ANALYSIS TO BE PERFORMED			LIST DESIRED LLD (Optional)	OTHER TYPE OF ANALYSIS (Specify)			LIST DESIRED LLD (Optional)	
<input type="checkbox"/> GROSS ALPHA (GA)				<input type="checkbox"/>				
<input type="checkbox"/> GROSS BETA (GB)				<input type="checkbox"/>				
<input checked="" type="checkbox"/> GAMMA SPEC (GS)				<input type="checkbox"/>				
<input type="checkbox"/> TRITIUM (H3)				<input type="checkbox"/>				
<input type="checkbox"/> CARBON-14 (C14)				<input type="checkbox"/>				
<input type="checkbox"/> IODINE-125 (I125)				<input type="checkbox"/>				
RELINQUISHED BY	RECEIVED BY	DATE	TIME	REASON FOR CHANGE OF CUSTODY				
Robert Evans	FedEx	03/12/2018		Ship to ORAU Lab				
FedEx	ORAU <i>Scott Munson</i>	<i>3/13/18</i>	<i>1145</i>	<i>Analysis</i>				
FEE RECOVERABLE <input type="checkbox"/> NO <input checked="" type="checkbox"/> YES    IF YES TAC NUMBER <u>Rpt 040-08027/18-001</u>								
REMARKS  Radionuclides of concern are isotopes of uranium. Cleanup Level is 100 pCi/g natural uranium (total uranium)  If necessary, return samples to Sequoyah Fuels Corporation, Attn: Scott Munson, Highway 10 and Interstate 40 Gore, Oklahoma 74435, 918-489-5511 x223								
NOTE: SAMPLES WILL BE DISCARDED AFTER ANALYSIS UNLESS REASONS ARE NOTED IN REMARKS ABOVE.								



Page 1 of 1	<b>Project Name:</b> Sequoyah Fuels	<b>ORAU/ORISE Chain of Custody and Analytical Request</b>	ORAU/ORISE 1299 Bethel Valley Road, Bldg SC-200 Oak Ridge, TN 37831 Phone: (865) 574-9802 Fax: (865) 241-3248
<b>Project #:</b> 201213199	<b>COC # : 1803-003</b>		

<b>Client Name:</b> U.S. Nuclear Regulatory Commission	<b>Phone # :</b> 817.860.8234	<b>Fax # :</b>
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<b>Address:</b> 612 E. Lamar Blvd Suite 400	<b>Email :</b> Robert.Evans@NRC.GOV
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<b>Collected By:</b> Client	<b>Send Results To:</b> EvansRobert
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Client Sample ID	Date Collected (mm-dd-yy)	Time Collected (military)	Sample Matrix (1)	Field Filtered (2)	ORAU/ORISE Lab Sample ID (Lab Use Only)	Total # of containers	Sample Analysis Requested (3)	Comments
NRC-1	03/08/18	13:37	S	No	13199S0007	1	GAMMA SPEC	
NRC-2	03/08/18	13:49	S	No	13199S0008	1	GAMMA SPEC	
NRC-3	03/08/18	13:54	S	No	13199S0009	1	GAMMA SPEC	
NRC-4	03/08/18	14:38	S	No	13199S0010	1	GAMMA SPEC	
NRC-5	03/08/18	14:42	S	No	13199S0011	1	GAMMA SPEC	

**Gamma Isotopes:** AC228, AC228, BI212, BI214, BI214, BI214, K40, PA234, PB212, PB214, PB214, RA226, TH230, TH234, TH234, U235, U235, U235

**Alpha Isotopes:**

**LSA:**

<b>TAT Requested:</b> 28	<b>Rush:</b>	<b>Fax Results</b>	<b>Fax # :</b>
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Chain of Custody Signatures						Sample Shipping and Delivery Details	
Relinquished By (Signed)	Date	Time	Received By (Signed)	Date	Time		
Fed Ex	3/13/2018	11:45:00AM	SmithForrest	3/13/2018	11:45:00AM	ORAU/ORISE PM SmithWilliam	Phone #: 865-574-9802
						Method of Shipment:	Date Shipped
<b>EDD Required:</b>	<b>Report Type:</b>	<b>Received in Good Condition:</b> Yes				Airbill # :	
<b>PEMS Project ID :</b>	<b>PEMS SOW ID:</b>					Airbill # :	

- 1) Matrix Codes: **S**=Soil, **W**=Water, **M**=Miscellaneous, **A**=Air Filter, **R**=Smear/Wipe
- 2) Field Filtered: For liquid matrices, indicate **-Y-** for yes the sample was field filtered or **-N-** for sample was not field filtered.
- 3) If the integrity of the samples and/or sample packaging are in question, provide details in the CoC comment field.

**COC Comments:**

APPENDIX A

ORISE Sample Receipt Form				
OAK RIDGE INSTITUTE FOR SCIENCE AND EDUCATION				
Client/Task Name: <b>NRC - Sep Fuels</b>		Project/Task # <b>201213199 / 5206</b>		
Received by: <b>WFS</b>		Date Received: <b>3-13-18</b>		
Tracking # <b>NA</b>		Shipment Identified as foreign soil? (circle) YES / <b>NO</b> IF YES, notify the manager before proceeding.		
Estimated Activity Level (circle all that apply) <b>MA</b> MA / HA Mark any samples with MA or HA activity on the sample container.		Sample Delivery Group Number: <b>3</b>		
Sample Receipt Criteria	Yes	No	N/A	Comments / Qualifiers (Required if receipt criteria marked "No")
Shipping Containers received intact and sealed?	/			
Appropriate sample containers used?	/			
Are there any special holding times? Rad analysis hold time is 0 months	/			
Sufficient sample volume to perform the requested analysis?	/			
Individual sample containers securely sealed?	/			
Chain of custody forms included?	/			
Samples screened with hand-held instruments?	/			
Water Samples at proper pH?			/	As Received pH Preservative Matrix (circle) HNO <sub>3</sub> / HF / HCl
Did water sample require pH adjustment?			/	Amount of acid added Type of acid added (circle) HNO <sub>3</sub> /HCl/HF Final sample pH
Sample H <sub>2</sub> O from COC match container H <sub>2</sub> O?	/			
Date and Time from COC match container Date and Time?	/			
Number of containers received match the number indicated on the COC?	/			
Is the COC form properly signed in the requested by/received by section?	/			

Form filled by: JCar  
Date: 3-14-18

# Total Uranium



**Analyte:** U-Total  
**Project Name:** Sequoyah Fuels  
**Project #:** 201213199

**SOP (Rev. #):** CP1 (21)  
**SDG #:** 13199-3  
**Report Date:** 4/3/2018

Client Sample ID	Lab Sample ID	Result	TPU(2s)	Units	Enriched or	
					Natural	Batch #
NRC-1	13199S0007	3.31	0.86	pCi/g	Natural	GS0680
NRC-2	13199S0008	6.9	2.0	pCi/g	Natural	GS0680
NRC-3	13199S0009	2.9	1.0	pCi/g	Natural	GS0680
NRC-4	13199S0010	9.9	2.8	pCi/g	Natural	GS0680
NRC-5	13199S0011	7.6	1.9	pCi/g	Natural	GS0680

**Signed By:**

**Date:**

TPU= Total Propagated Uncertainty

# Gamma Spectrometry Summary Results By Analyte



Report Date: March 28, 2018

<b>Analyte:</b>	U-235	SOP (Rev. #)	CP1 (21)
Project Name:	Sequoyah Fuels	Energy Signature:	143.76 (KeV)
Project # :	201213199	SDG # :	201213199-3

Client Sample ID:	Lab Sample ID:	Result	TPU (2s)	MDC	Units	Qualifier Flag	Batch #
NRC-1	13199S0007	0.073	0.059	0.138	pCi/g	U	GS0680
	13199S0007Dup	0.23	0.12	0.29	pCi/g	U	GS0680
NRC-2	13199S0008	0.15	0.11	0.25	pCi/g	U	GS0680
NRC-3	13199S0009	0.097	0.089	0.206	pCi/g	U	GS0680
NRC-4	13199S0010	0.29	0.19	0.44	pCi/g	U	GS0680
NRC-5	13199S0011	0.142	0.076	0.169	pCi/g	U	GS0680

**Electronically Validated By:**

John Cox- 3/20/2018 07:35

**Electronically Approved By:**

William Smith 3/28/2018 13:34

**Qualifier Flags:**

U = Analyte not detected (< MDC)

TPU = Total Propagated Uncertainty

MDC = Minimum Detectable Concentration

# Gamma Spectrometry Summary Results By Analyte



Report Date: March 28, 2018

<b>Analyte:</b>	U-238 by Th-234	SOP (Rev. #)	CP1 (21)
Project Name:	Sequoyah Fuels	Energy Signature:	63.29 (KeV)
Project # :	201213199	SDG # :	201213199-3

Client Sample ID:	Lab Sample ID:	Result	TPU (2s)	MDC	Units	Qualifier Flag	Batch #
NRC-1	13199S0007	1.62	0.43	0.52	pCi/g		GS0680
	13199S0007Dup	1.86	0.54	0.76	pCi/g		GS0680
NRC-2	13199S0008	3.4	1.0	1.5	pCi/g		GS0680
NRC-3	13199S0009	1.39	0.50	0.87	pCi/g		GS0680
NRC-4	13199S0010	4.8	1.4	1.9	pCi/g		GS0680
NRC-5	13199S0011	3.73	0.93	0.93	pCi/g		GS0680

**Electronically Validated By:**

John Cox- 3/20/2018 07:35

**Electronically Approved By:**

William Smith 3/28/2018 13:34

**Qualifier Flags:**

U = Analyte not detected (< MDC)

TPU = Total Propagated Uncertainty

MDC = Minimum Detectable Concentration