



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 E. LAMAR BLVD.  
ARLINGTON, TX 76011-4511

October 17, 2016

Mr. John H. Ellis, President  
Sequoyah Fuels Corporation  
P.O. Box 610  
Gore, OK 74435

SUBJECT: NRC INSPECTION REPORT 040-08027/2016-001

Dear Mr. Ellis:

This letter refers to the U.S. Nuclear Regulatory Commission (NRC) inspection conducted July 18 and 19, 2016, at your Sequoyah Fuels Corporation site near Gore, Oklahoma. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The inspection included a review of the status of your onsite disposal cell and an inspection of areas routinely reviewed. The preliminary results of the inspection were presented to you and your staff at the conclusion of the onsite inspection. A final closeout of the inspection was conducted with your staff on October 11, 2016, following receipt of confirmatory soil sample results from Oak Ridge Associated Universities (ORAU). The enclosed report presents the results of this inspection. No violations were identified, and no response to this letter is required.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

J. Ellis

- 2 -

Should you have any questions concerning this inspection, please contact Dr. Gerald Schlapper, Health Physicist, at 817-200-1273, or the undersigned at 817-200-1197.

Sincerely,

/RA LEBrookhart Acting for/

Jack E. Whitten, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Docket No. 040-08027

License No. SUB-1010

Enclosure:

NRC Inspection Report 040-08027/2016-001

Attachment

Supplemental Information

cc w/encl:

A. Gutterman

R. Ware

A. Enstrom

W. Andrews

S. Hill

J. Harris

M. Broderick

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket: 040-08027

License: SUB-1010

Report: 040-08027/2016-001

Licensee: Sequoyah Fuels Corporation

Location: P.O. Box 610, Gore, Oklahoma

Dates: July 18-19, 2016

Inspectors: Gerald Schlapper, Ph.D., C.H.P., Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Donald Stearns, Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Accompanied by: Jack E. Whitten, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Richard Kaiser, Health Physicist  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Approved by: Jack E. Whitten, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety  
Region IV

Enclosure

## **EXECUTIVE SUMMARY**

### **Sequoyah Fuels Corporation NRC Inspection Report 040-08027/2016-001**

This U.S. Nuclear Regulatory Commission (NRC) inspection was a routine, announced inspection of decommissioning activities being conducted at the Sequoyah Fuels Corporation site near Gore, Oklahoma. The inspectors concluded that Sequoyah Fuels Corporation (the licensee) was conducting decommissioning activities in accordance with regulatory and license requirements.

#### **Management Organization and Controls**

- The licensee had sufficient staff for the work in progress. The licensee conducted its technical reviews and Reclamation Plan changes in accordance with the performance based license requirements. (Section 1.2)

#### **Radiation Protection/Maintenance and Surveillance Testing**

- The licensee conducted its radiation protection program in accordance with the requirements of 10 CFR Part 20 and the license. (Section 2.2)

#### **Emergency Preparedness/Fire Protection**

- The licensee maintained emergency response programs that included instructions for responding to individuals who become injured at the facility. Hazards were communicated to responding organizations. (Section 3.2)

#### **Environmental Protection**

- The licensee's effluent and environmental monitoring programs were conducted in accordance with license and regulatory requirements. Monitoring results for liquid and gaseous releases indicated that radioactive effluent releases were less than regulatory limits. Elevated concentrations of radioactive material continue to be identified by the licensee in a limited number of groundwater monitoring wells. The licensee continued implementation of a groundwater corrective action program. The licensee implemented a fertilizer distribution program in accordance with license requirements. (Section 4.2)

## Report Details

### Summary of Plant Status

NRC Source Materials License SUB-1010, License Condition 51 requires the licensee to conduct decommissioning in accordance with the Reclamation Plan dated July 2008, as amended. The licensee commenced with site decommissioning activities in April 2009. To decommission the site, the licensee planned to dismantle and remove systems and equipment, demolish structures, treat sludges and sediments, remediate contaminated soils, and treat wastewater. Most of the residual waste material will be placed in an onsite cell for permanent disposal.

The licensee continued to remediate the site and continued to construct the onsite disposal cell. The licensee finished construction of the majority of the Phase III portion of the disposal cell and is waiting on licensing actions as discussed below that will drive a decision on disposal of bags of raffinate.

The licensee possessed approximately 11,000 tons of bagged raffinate sludge, material previously removed from the clarifier basins. The licensee also possessed approximately 850 bags of sediments removed from the emergency basin, north ditch, and sanitary lagoon. The licensee continued to store the bagged sludge and sediment material under cover for possible transfer to an out-of-state uranium mill for use as alternate feed material. If the licensee is unable to transfer the material to the mill, the license allows the licensee to dispose of this material in the onsite disposal cell. If the material is to be placed in the cell, this must be done while appropriate locations are still available within the cell.

## **1 Management Organization and Controls. (88005)**

### **1.1 Inspection Scope**

The inspectors assessed site staffing to determine if the licensee had adequate staff for the work underway. The inspectors reviewed the licensee's decommissioning activities to determine if these activities were being conducted in accordance with Reclamation Plan requirements.

### **1.2 Observations and Findings**

The licensee's organizational structure is presented in Section 2.2 and Figure 2-1 of the license application. The organizational requirements for reclamation are also provided in Section 1.0 of the Quality Assurance (QA) Plan. The licensee's onsite staff consisted of four individuals who are Sequoyah Fuels employees. The licensee used contractors for QA oversight, geotechnical support, cell construction, radiation safety support and miscellaneous site maintenance activities as needed. The number of contractors varied, depending on the work in progress but normally is around a total of 30 contractors. At the time of inspection, all management-level positions were filled with experienced staff. The inspectors concluded that the licensee had sufficient staff to ensure compliance with license and regulatory requirements.

The inspectors reviewed the controlled document master list of Standard Operating Procedures (SOP). The list indicated that there were currently 42 procedures in use.

Procedure A-201, "Standard Operating Procedures" requires that procedures be reviewed with a periodicity of 2 years. The inspectors noted that listed procedures had review dates that ranged from January through June of 2016 and thus all procedures were current in accordance with Procedure A-201 and that the Master List of Procedures had been updated. The inspectors also noted that the Controlled Document List recorded 45 Operating Instructions that are specific in nature to certain activities. Operating Instructions have no requirement for periodic review. At the time of the inspection there were four active Temporary Operating Procedures (TOP). The licensee's procedure, TOP 12-002 which was approved on October 10, 2012, allowed conditional release of an inflatable pipe plug, pump and other equipment without continuous oversight and control. The licensee's procedure, TOP 14-001 which was approved on July 25, 2014, allowed conditional release of a barge and pump to the unrestricted area (Pond 3) to allow for transfer of water from Pond 3 to Pond 5 without continuous control. The licensee's procedure, TOP 15-004 which was approved on June 17, 2015, allowed release of a float to the Storm Water Reservoir, outside the restricted area, without a requirement for continuous controls. To allow for treatment of water at Pond 5, the licensee's procedure, TOP 15-006, approved on June 8, 2016, allowed for conditional release of an eductor valve to an unrestricted area without a requirement for continuous controls. This TOP was the only one issued since the last inspection performed by NRC.

Sections 2.2 and 2.8 of the Reclamation Plan require routine corporate oversight inspections. The inspectors reviewed inspections conducted by the parent company, General Atomics, during the fourth quarter of 2015 and the first quarter of 2016. Inspections were conducted by Mr. Paul Pater on December 8 and 9, 2015, and Mr. Kim Moore on March 9 and 10, 2016. The corporate overview for the second quarter of 2016 was conducted on June 28 and 29, 2016, and the report for this visit was in preparation at the time of the NRC inspection. The corporate oversight inspections included a review of current operations, reclamation plan requirements and numerous records. The report of the last quarter of 2015 noted that revision dates for several procedures had not been updated on the master list and that one procedure had not undergone timely review. The licensee took immediate corrective action and as noted in the first quarter report for 2016 the corrective actions were effective. The inspectors concluded that the corporate reviews met regulatory requirements.

NRC Source Materials License SUB-1010, License Condition 51 requires the licensee to conduct site decommissioning in accordance with the NRC-approved Reclamation Plan. License Condition 54 authorizes the licensee to make changes to Reclamation Plan under certain conditions, delegating additional regulatory authority to SFC for various aspects of license activities. Determinations concerning the performance based license are made by the Plant Review Committee (PRC). The licensee furnished an annual report, submitted to the NRC on January 22, 2016 (ML16041A426) that provided a description of changes made during calendar year 2015. The inspectors reviewed the licensee's implementation of its performance base license for 2015 and 2016 up to the date of the inspection.

NRC Source Materials License SUB-1010, License Condition 54 also requires that the licensee may make changes in the facility as described in the license application without obtaining a license amendment from the NRC. The inspectors reviewed changes to the license that were made following the last inspection. The first change, designated

as CL015, provided additional technical detail for the cover system of the disposal cell. A contracted engineering firm supplied additional technical analysis of the minor modifications to the cell that had been made to accommodate field conditions during disposal cell construction. The changes involved replacement of specific drawings related to the placement of the clay liner, changes to the synthetic liner cover and subsoil zone material testing. The Plant Review Committee (PRC) reviewed the firm's comments as part of its evaluation of the changes and concluded that the changes to be consistent with the Safety Evaluation Report of April 20, 2009, (ML090260323) and the Environmental Impact Statement (NUREG-1888, May 2008 (ML081300103). The inspectors noted PRC membership approval of the changes through signatures dated October 30, 2015, November 2, 2015, and November 3, 2015. The inspectors agreed with the conclusion of the PRC that no amendment was required.

The second change, designated as CL016, provided additional technical detail regarding placement of material in a designated location in the disposal cell. The licensee continued to store the bagged raffinate material at the former yellowcake storage pad while considering its options for disposal of this material. The Reclamation Plan allows the licensee to dispose of this material in the disposal cell. The licensee's engineering contractor had reviewed the cell design and determined the best area within the cell for placement of the material. Other material already placed in the Phase III portion of the cell was relocated to other areas in the cell to accommodate the disposal of the bagged material. The PRC determined that the changes were consistent with NRC requirements and provided its approval through signatures of PRC members on April 4, 2016. The inspectors agreed with the conclusion of the PRC that no amendment was required.

The licensee produced daily surveillance reports as part of the quality assurance (QA) program. The daily QA reports summarize activities on site and discuss the general conditions of the site and the disposal cell. The reports outlined areas needing attention, such as work activities performed by the various contractors, any quality assurance testing and surveying, ongoing discussions and any key decisions, important communications and minor design modifications. The NRC inspector reviewed a sampling of the daily QA reports generated and noted that the reports which are signed by the quality assurance manager were informative of ongoing work at the site.

As noted earlier, the licensee plans to make a final decision about the disposal of the raffinate sludge and pond sediment material later in 2016. The inspectors will review the licensee's efforts in this program area during a future inspection.

### 1.3 Conclusions

The licensee had sufficient staff for work in progress. The licensee conducted its technical reviews and Reclamation Plan changes in accordance with the performance based license requirements.

## **2 Radiation Protection/Maintenance and Surveillance Testing (83822/88025)**

### **2.1 Inspection Scope**

The inspectors examined the licensee's radiation protection and maintenance and surveillance programs for compliance with license and 10 CFR Part 20 requirements.

### **2.2 Observations and Findings**

The inspectors conducted site tours to observe the storage of radioactive material and to conduct independent surveys within the radiologically controlled area. Radiation levels were measured using a micro-Roentgen instrument, Thermo Scientific Model RadEye B20, Serial Number 12400, with a calibration due date of October 28, 2016. Areas were found to be posted to indicate existing radiological conditions. In addition, the inspectors surveyed unrestricted areas at the site. The exposure rates in unrestricted areas ranged from 10 to 15  $\mu\text{R/hr}$ , compared to a normal background rate of approximately 8-12  $\mu\text{Roentgens per hour}$  ( $\mu\text{R/hr}$ ).

The licensee conducted monitoring of site workers for internal and external exposure to radioactive materials. The licensee's procedure H-401, "Personnel Radiation Exposure Monitoring", dated May 30, 2016, detailed worker monitoring. External exposure with Optically Stimulated Luminescent (OSL) dosimeters was limited to those individuals who are authorized to utilize the x-ray fluorescence system. Since the last inspection of this data there were no significant exposures noted from external sources. Internal exposure monitoring was based on analysis of breathing zone label samplers and bioassay measurements. The licensee's procedure H-402, "Bioassay Program," dated May 31, 2016, outlined the bioassay program at the site. The NRC inspectors reviewed the bioassay data for the period January 4, 2016 through July 5, 2016 and determined that the maximum uranium content in any bioassay sample was 2.58 micrograms of uranium per liter of urine, which is well below any regulatory limit and within the ALARA goal limit of 10 micrograms per liter. Based on 812 samples analyzed, 25 exceeded the detection limit of 1.00 microgram per liter, which is below the site's ALARA goal of less than 5 percent.

The Hazardous Work Permit (HWP) as described in licensee procedure H-204, "Hazardous Work Permit," dated April 29, 2016, served as a radiation work permit but also identified other existing or potential safety and health hazards. The procedure provided means to eliminate the hazards or supply protection to the worker. The HWP may be used independently or may be utilized when health and safety controls are not addressed in an operating procedure. The NRC inspectors reviewed the procedure and concluded that the procedure incorporated protective actions to establish a safe work environment, personnel protective equipment and clothing, sampling and survey requirements and any special instructions related to control of all hazards. At the time of inspection there were 10 active HWPs.

During an NRC inspection conducted in April 2013 (ML13184A136), the inspectors concluded that the licensee had failed to maintain documentation demonstrating that only properly calibrated and maintained radiological survey meters were being used during decommissioning. In response, the licensee and its instrument calibration contractor implemented various corrective actions as described in the licensee's letter



dated July 31, 2013 (ML13221A179). During this inspection, the inspectors reviewed the licensee's program for maintenance and calibration of radiation survey instruments and verified that the licensee continued to comply with license requirements and approved procedures.

Portable radiation survey instruments were calibrated on a 6-month frequency with most instruments forwarded to the parent company, General Atomics (GA) for calibration. General Atomics is licensed for calibration services by the State of California, License Number 0145-37, Amendment 187, Item 24. For those instruments not calibrated by the parent company, recognized and licensed commercial suppliers were utilized. The licensee maintains a data base of instruments and calibration due dates. The inspectors verified that instruments with past due calibrations were removed from use and placed in a dedicated storage location while awaiting shipment for calibration. The inspectors performed a spot check of instruments in the field and found that all were within the calibration due dates and working properly. The inspectors noted that instruments with capability to measure alpha, beta, and gamma radiation were available.

The inspectors reviewed the calibration certificates for 15 portable survey instruments and two low background counting instruments. Calibration includes the selection of a proper operating voltage and efficiency determination. The low background counting systems are calibrated on a quarterly frequency and the inspectors determined that the calibrations were current.

## 2.3 Conclusions

The licensee conducted its radiation protection and maintenance and surveillance programs in accordance with the requirements of 10 CFR Part 20 and the license.

## 3 **Emergency Preparedness/Fire Protection (88050)**

### 3.1 Inspection Scope

The purpose of this portion of the inspection was to ensure that the licensee was maintaining emergency preparedness and fire protection programs during decommissioning in accordance with regulatory and license requirements and was prepared for emergency events.

### 3.2 Observations and Findings

The licensee's emergency response instructions are outlined in licensee Procedure X-100, "Emergency Response," dated June 29, 2016. The procedure acknowledged that no process lines were currently in operation at the site. Thus the events of concern are those common to the construction Industry to include slips, trips and falls, fire and severe weather events. However, at this site, radioactive material may be involved as a contaminant. The procedure notes that the senior Sequoyah Fuels Corporation employee will function as the emergency coordinator. The procedure discussed safety precautions, training requirements, equipment availability, facilities to be utilized, and emergency coordinator duties. The procedure clearly specified that the presence of radioactive material would not influence response to fire or personnel injury. Attachment 1 of the procedure presented an emergency response site map that detailed

locations of hazardous materials. The list of hazards is updated annually through a report sent electronically to the Oklahoma Department of Environmental Quality (OKDEQ), who forwards the report to local agencies. Attachment 2 of the procedure provided contact information for emergency services supporting the site. The NRC inspectors verified the information listed was current. Attachment 3 to the procedure contained a bullet list of information in the form of a notice to emergency response personnel. Corporate compliance inspections conducted in January and April 2016, verified the availability of fire extinguishers across the site. The NRC inspectors verified the current inspection data for a random selection of extinguishers across the site.

### 3.3 Conclusion

The licensee maintained emergency response programs that included instructions for responding to individuals who become injured at the facility.

## 4 **Environmental Protection (88045)**

### 4.1 Inspection Scope

The inspectors reviewed the licensee's environmental protection program for compliance with regulatory and license requirements.

### 4.2 Observations and Findings

License Condition 49 of License SUB-1010 specifies that the licensee implement a groundwater compliance monitoring program. Groundwater monitoring wells were located at various depths to monitor different groundwater units. License conditions also specify groundwater protection standards in the form of maximum contaminant levels for various elements. Results of the groundwater monitoring program were presented in the 2015 Annual Groundwater Monitoring Report submitted to the NRC on March 29, 2016 (ML16110A180). The licensee's results indicated that uranium continued to be detected above the maximum contaminant limit of 30 micrograms per liter in a limited number of samples. The minimum detectable concentration for uranium was 1.0 micrograms per liter. The various samples ranged from less than 1 microgram per liter up to 9,525 micrograms per liter. The high level was found in a monitoring well located south of the main process building. The licensee continued to implement the groundwater compliance monitoring program in accordance with regulatory requirements and license conditions.

The NRC inspectors reviewed the Semi-Annual Effluent Reports for the second half of 2015, submitted on February 11, 2016 (ML16055A036) and the first half of 2016, submitted on July 11, 2016 (ML16210A055). These reports satisfied the requirements of 10 CFR 40.65. The reports stated that there were no airborne releases for either reporting period. Liquid releases for the reporting periods were less than two percent of the allowed liquid effluent concentration levels. For the third quarter of 2015, there were 8.84E+07 liters of liquid released. Concentration in micro-curies per milliliter of natural uranium (U) was 2.32E-09, Thorium-230 (Th-230) at 2.25E-10, and Radium-226 (Ra-226) at 8.14E-06. Similarly for the fourth quarter of 2015, released liquid volume was 3.41E+07 liters with isotopic concentrations presented in the same order of 3.94E-09 (U), 7.34E-10 (Th-230) and 9.06E-06 (Ra-226) micro-curies per milliliter.

For the first quarter of 2016, there were  $1.98\text{E}+08$  liters of liquid released with isotopic concentrations of  $5.54\text{E}-09$  (U),  $1.95\text{E}-10$  (Th-230), and  $3.15\text{E}-10$  (Ra-226) micro-curies per milliliter. Data for the second quarter of 2016, indicated that  $2.31\text{E}+07$  liters were released with concentrations of  $5.84\text{E}-09$  (U),  $1.48\text{E}-10$  (Th-230) and  $4.26\text{E}-10$  (Ra-226) micro-curies per milliliter. The NRC inspectors determined that the results showed compliance with regulatory and license requirements.

During July 2015 the licensee decided to remove sediments from the fluoride holding basin Number 2 to speed up the soil and sediment drying process. This was an area that through licensee surveys and NRC verification surveys had been found to meet cleanup limits (NRC Inspection Report 040-08027/2015-003, ML 16025A109). The licensee did not expect the sediments to contain uranium. The licensee chose to place this material in the north burial area, a location previously surveyed and verified by the NRC to meet cleanup levels. The contractors conducting the excavation accidentally removed more material than just pond sediments. The additional material that was located below the sediments was found to contain uranium in excess of the cleanup level. Through surveys the licensee discovered the error in August 2015, and remaining material from the fluoride holding basin Number 2 was moved directly to the disposal cell. After the material that had been placed in the north burial area dried, it was removed and transported to the disposal cell. The transfer of basin sediments and contaminated soil to the disposal cell was completed in October 2015. As a corrective action the licensee proposed to repeat the final status survey in the north burial area. The licensee took soil samples and conducted a walkover of the area.

During the inspection, NRC inspectors conducted independent walkover gamma surveys using a micro-Roentgen instrument, Thermo Scientific Model RadEye B20, Serial Number 12400, with a calibration due date of October 28, 2016, and collected soil samples that were split with the licensee for verification of the licensee's results. The surveys were conducted at a location north of the Phase 1 disposal cell, a potentially impacted area, and also along the fence line north of the fluoride holding basin Number 2. Prior to conducting the gamma scans, the NRC inspectors measured ambient background levels outside of the restricted area at a location near the administration building to establish action levels for each survey meter. For consistency the NRC's action level was set at three times the background level, equal to that used by the licensee during its surveys. NRC inspectors gamma walkovers of the area indicated no levels above background.

Following collection of the split samples, the licensee conducted x-ray fluorescence (XRF) measurements of the licensee and NRC split soil samples to provide preliminary estimates of uranium content. Indicated uranium levels from the XRF analysis were less than 10 micrograms per gram total uranium. For detailed quantitative analysis the soil samples were forwarded by the inspectors to Oak Ridge Associated University, an NRC contracted laboratory for gamma and alpha spectra analysis.

The following table presents the results of analysis of the split samples for total uranium concentrations.

NRC Sample	Licensee Sample	Sample Location	NRC (pCi/g)	Licensee* (pCi/g)
NRC-1	HA2082	North of Phase 1	2.97	1.755
NRC-2	HA2083	North of Phase 1	1.60	2.01
NRC-3	HA2084	Burial Area 2	2.89	1.695
NRC-4	HA2085	Burial Area 2	10.55	9.514
NRC-5	HA2086	Burial Area 2	8.63	6.35
NRC-6	HA2087	Burial Area 2	3.28	2.117
NRC-7	HA2088	Burial Area 2	4.32	2.70
NRC-8	HA2089	North Fence	2.93	0.67
NRC-9	HA 2090	North Fence	5.91	1.675
NRC-10	HA2091	North Fence	5.19	1.3735

The inspectors compared the total uranium concentrations in the samples to the NRC approved cleanup level of 100 pCi/g for total uranium. All samples were well below the cleanup limit. There was no evidence of the presence of other isotopes such as Th-230 in the samples based on the alpha spectrometry analysis. The NRC inspectors noted that the sample results obtained by ORAU were similar to the licensee's sample results confirming good correlation between the two laboratories. NRC inspectors and licensee staff ensured that field samples were well mixed and thus variations in sample results can be assigned to different laboratory protocols. Based on the survey results, the licensee had taken adequate corrective actions to address the excess sediment removed in July 2015.

NRC source material license SUB-1010, License Condition 9.1 authorizes the licensee to apply fertilizer onto licensee-owned or controlled lands. Crops produced on the land cannot be used directly as human food but are allowed to be utilized by cattle for grazing and for production of hay or seed materials. The license specifies that the licensee monitor a control plot in order to implement program controls and comply with requirements for best agricultural practices. Representatives of the Oklahoma State University Extension Service continued to provide oversight of the land application program. The activity must also comply with requirements of the licensee's Oklahoma Pollution Discharge Eliminations System Permit (OPDES), effective October 1, 2015. The license requires an annual report summarizing fertilizer distribution activities during the previous year. The required annual report describing the program for 2015 was submitted to the NRC on April 26, 2016 (ML16137A115). Based on review, the NRC inspectors determined that the submittal complied with license requirements.

#### 4.3 Conclusion

The effluent and environmental monitoring programs were implemented in accordance with license and regulatory requirements. The sample results indicated that liquid and gaseous radioactive effluent releases were less than regulatory limits. The licensee continued to implement a groundwater corrective action program. Elevated concentrations of radioactive material continued to be identified by the licensee in

some groundwater monitoring wells. The licensee continued to use ammonium nitrate solution as a fertilizer on land used to produce hay. The licensee implemented the fertilizer distribution program in accordance with license requirements.

## **5 Exit Meeting**

The inspectors reviewed the inspection scope and preliminary results during an exit meeting conducted at the conclusion of the onsite inspection on July 19, 2016. A final closeout of the inspection was conducted by telephone on October 11, 2016. During the inspection, the licensee did not identify any information reviewed by the inspectors as proprietary.

## **SUPPLEMENTAL INFORMATION**

### **PARTIAL LIST OF PERSONS CONTACTED**

#### Sequoyah Fuels Corporation

J. Ellis, President  
M. Fair, Contractor, Shanks  
R. Miller, Contractor, RMA  
S. Munson, Manager, Health, Safety and Environment  
B. Reid, Director, Decommissioning, RMA  
K. Schlag, Manager, Quality Assurance, RMA

### **INSPECTION PROCEDURES USED**

IP 83822	Radiation Protection
IP 88005	Management Organization and Controls
IP 88025	Maintenance and Surveillance of Safety Controls
IP 88045	Effluent Control and Environmental Protection
IP 88050	Emergency Preparedness

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

#### Opened

None

#### Closed

None

#### Discussed

None

### **LIST OF ACRONYMS**

ADAMS	Agencywide Documents Access and Management System
CFR	Code of Federal Regulations
cpm	counts per minute
HWP	Hazardous Work Permit
IP	Inspection Procedure
μR/hr	microRoentgens per hour
NRC	U.S. Nuclear Regulatory Commission
OKDEQ	Oklahoma Department of Environmental Quality
OPDES	Oklahoma Pollution Discharge Elimination System
pCi/g	picocuries per gram
PRC	Plant Review Committee
SOP	Standard Operating Procedure
TOP	Temporary Operating Procedure
QA	Quality Assurance

J. Ellis

- 2 -

Should you have any questions concerning this inspection, please contact Dr. Gerald Schlapper, Health Physicist, at 817-200-1273, or the undersigned at 817-200-1197.

Sincerely,

Jack E. Whitten, Chief  
Fuel Cycle and Decommissioning Branch  
Division of Nuclear Materials Safety

Docket No. 040-08027  
License No. SUB-1010

Enclosure:  
NRC Inspection Report 040-08027/2016-001

Attachment  
Supplemental Information

cc w/encl:  
A. Gutterman  
R. Ware  
A. Enstrom  
W. Andrews  
S. Hill  
J Harris  
M. Broderick

Distribution  
See next page

DOCUMENT NAME: IR 040-08027/2016-001 Sequoyah Fuels **ML16285A216**

<input checked="" type="checkbox"/> SUNSI Review By: GAS	ADAMS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available	<input checked="" type="checkbox"/> Non-Sensitive <input type="checkbox"/> Sensitive	Keyword: NRC-002
OFFICE	RIV:DNMS/FCDB	DNMS/FCDB	C:DNMS/FCDB	
NAME	GASchlapper	DLStearns	JEWhitten	
SIGNATURE	/RA/	/RA/	/RA LEBrookhart Acting for/	
DATE	10/13/16	10/13/16		

**OFFICIAL RECORD COPY**

Letter to John H. Ellis from Jack E. Whitten dated October 17, 2016

SUBJECT: NRC INSPECTION REPORT 040-08027/2016-001, Sequoyah Fuels

Distribution

Kriss.Kennedy@nrc.gov  
Scott.Morris@nrc.gov  
Mark.Shaffer@nrc.gov  
Linda.Howell@nrc.gov  
Jack.Whitten@nrc.gov,  
Robert.Evans@nrc.gov  
Gerald.Schlapper@nrc.gov  
Don.Stearns@nrc.gov  
Richard.Kaiser@nrc.gov  
Rachel.Browder@nrc.gov  
Kenneth.Kalman@nrc.gov  
Matthew.Meyer@nrc.gov  
Marisa.Herrera@nrc.gov

Alvin H. Gutterman  
Morgan, Lewis, Bockius LLP  
1111 Pennsylvania Avenue, NW  
Washington, DC 20004

Rita Ware, RCRA Enforcement Branch  
Compliance Assurance & Enforcement Div.  
U.S. EPA, Region VI  
1445 Ross Avenue, Mail Stop 6EN-HX  
Dallas, TX 75202-2733

Ann-Charlotte Engstrom, Vice President,  
General Counsel & Secretary  
General Atomics  
P.O. Box 85608  
San Diego, CA 92186-5608

Mike Broderick, Administrator  
Oklahoma Department of Environmental Quality  
Waste Management Division  
Radiation Management Section  
P.O. Box 1677  
Oklahoma City, OK 73101-1677

William Andrews, Supervisory Hydrologist  
U.S. Geological Survey  
202 N.W. 66<sup>th</sup> Street  
Oklahoma City, OK 73116

Sara Hill, Esq.  
Assistant Attorney General  
Cherokee Nation  
Office of Attorney General  
P.O. Box 948  
Tahlequah, OK 74465

Jim Harris  
U. S. Army Corps of Engineers  
1645 South 101<sup>st</sup> East Avenue  
Tulsa, OK 74128-4629