



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

March 9, 2006

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

SUBJECT: NRC INSPECTION REPORT 040-08027/06-001

Dear Mr. Ellis:

This refers to the inspection conducted on February 16-17, 2006, at the Sequoyah Fuels Corporation site in Gore, Oklahoma. The inspection findings were discussed with members of your staff during the exit briefing conducted on February 17, 2006, at the conclusion of the onsite inspection. The enclosed report presents the scope and results of the inspection.

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 determined that you have conducted licensed activities at your former uranium conversion facility in a safe and effective manner and in compliance with regulatory and license requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document 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.

Should you have any questions concerning this inspection, please contact Ms. Beth Schlapper at (817) 860-8169, Mr. Robert Evans at (817) 860-8234, or the undersigned at (817) 860-8191.

Sincerely,

/RA/

D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle & Decommissioning Branch

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

Enclosure:
NRC Inspection Report 040-08027/06-001

Sequoyah Fuels Corp.

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Sequoyah Fuels Corp.

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket No.: 040-08027

License No.: SUB-1010

Report No.: 040-08027/06-001

Licensee: Sequoyah Fuels Corporation

Location: P.O. Box 610
Gore, Oklahoma

Date: February 16-17, 2006

Inspectors: Beth Schlapper, Health Physicist
Fuel Cycle & Decommissioning Branch

Robert Evans, P.E., C.H.P., Senior Health Physicist
Fuel Cycle & Decommissioning Branch

Approved by: D. Blair Spitzberg, Ph.D., Chief
Fuel Cycle & Decommissioning Branch

Attachment: Supplemental Inspection Information

EXECUTIVE SUMMARY

Sequoyah Fuels Uranium Conversion Facility NRC Inspection Report 040-08027/06-001

The inspection included a review of facility status, radiation protection, transportation activities, management organization and controls, maintenance and surveillance testing, training, radioactive waste management, environmental protection, emergency preparedness and followup of a previous NRC inspection finding. Overall, the licensee's limited decommissioning activities were being conducted in accordance with license and regulatory requirements.

Radiation Protection

- The licensee conducted its radiation protection program in accordance with the requirements of 10 CFR Part 20 and the license. Occupational exposures were well below regulatory limits. No bioassay sample result exceeded the action level suggesting that no worker had experienced a significant intake of uranium during raffinate sludge dewatering operations (Section 1).

Inspection of Transportation Activities

- The licensee had effectively implemented the regulatory and license requirements related to the shipment of licensed radioactive material (Section 2).

Management Organization and Controls

- The organizational structure was in agreement with license application requirements. Sufficient management-level staff were available for decommissioning activities in progress. The licensee also had a functioning As Low As Reasonably Achievable program as required by the license (Section 3).

Maintenance and Surveillance Testing

- The licensee was conducting daily inspections in accordance with license requirements. Surveillances were being used to monitor critical work activities. The licensee was effectively using Condition Reports to document problems that may impact quality (Section 4).

Operator Training/Retraining

- The licensee's training program was implemented in accordance with license and regulatory requirements (Section 5).

Radioactive Waste Management

- The licensee had effectively maintained and implemented a program for monitoring and securing solid waste storage and retention pond areas as required by the license (Section 6).

Environmental Protection

- The environmental and effluent monitoring programs were conducted in accordance with license and regulatory requirements. The licensee collected all samples as required, and the sample results indicate that offsite releases were below regulatory limits (Section 7).
- Elevated concentrations of radioactive material continued to be identified in selected groundwater monitoring wells located in the restricted area. The licensee was in the process of installing new recovery wells as required by the recently approved Groundwater Monitoring Program (Section 7).

Emergency Preparedness

- The license maintained an emergency preparedness program that included sufficient instructions and equipment for responding to contamination spills and injured contaminated individuals (Section 8).

Followup

- During a previous inspection, the inspectors noted that some monitoring well samples had not been analyzed for fluoride and radium 226 as required by the license. The licensee entered the problem into their corrective action program and determined steps to prevent recurrence. The corrective actions were reviewed during this inspection, and Violation 0408027/0401-01 was closed (Section 9).

Report Details

Summary of Site Status

Sequoyah Fuels Corporation operated its uranium conversion facility near Gore, Oklahoma, between 1970 and 1993. The license currently authorizes the possession of up to 20 million metric tons of 11e.(2) byproduct material. The site also contains residual, low-level radioactive contamination in buildings, plant equipment, and plant debris. The licensee did not have yellowcake or uranium hexafluoride (UF₆) material remaining onsite with the possible exception of residual material that may remain inside plant processing equipment.

By letter dated November 3, 2003, the licensee requested NRC approval to dewater the raffinate sludge. Raffinate sludge is the precipitated metals and clay that resulted from neutralization of raffinate with anhydrous ammonia during plant operations. The licensee planned to remove excess moisture from the sludge to consolidate the material prior to final disposal. The NRC approved the licensee's request through Amendment 30 of the license.

Full-scale raffinate sludge dewatering operations commenced in April 2005 and were completed in September 2005. The licensee bagged 11,104 2-ton super-sacks totaling about 21 million pounds of sludge material. The licensee also collected 31 bags of debris. The super-sacks were being temporarily staged on the former yellowcake ore storage pad. In the near future, the licensee plans to ship the raffinate sludge to an out-of-state facility as alternate feed material.

Also in the near future, the licensee plans to recover the residual raffinate sludge from the clarifier ponds. The licensee then plans to repair the plastic pond liners which were damaged during the sludge removal process. Leaching of additional contamination into the groundwater is not anticipated because the clay pond liners were apparently not breached during raffinate sludge removal operations.

Other work completed included the disassembly, decontamination, and free-release of the dewatering equipment such as the filter presses. The licensee recently installed ten additional monitoring wells, and was in the process of installing seven additional recovery wells. Planned future work includes inspection and repackaging, as necessary, drums of depleted uranium tetrafluoride (DU₄) for possible shipment to an offsite disposal facility.

1 Radiation Protection (83822)

1.1 Inspection Scope

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

1.2 Observations and Findings

Personnel monitoring records for 2004 and 2005 were reviewed. Exposure monitoring includes both internal and external exposures to radioactive material.

Thermoluminescent dosimeters were assigned to site workers for monitoring external exposures. During 2004 and the first quarter of 2005, no external exposures were measured.

Because of sludge dewatering activities, individuals received external doses during the second and third quarters of 2005. During this time frame, 38 individuals were monitored. The highest external dose for an individual during these two quarters was 92 millirems. The collective dose for all 38 site workers was 1078 millirems. The work was completed in September 2005. As a result, no individual received a measurable external dose during the fourth quarter of 2005.

Internal doses were assigned to workers based on air sample results. Internal doses totaled 2000 derived air concentration-hours, or 5000 millirems, for 33 individuals. The highest internal dose was 664 millirems for the raffinate sludge filter press operator.

Total effective dose equivalents, the combination of the internal and external doses, were being tabulated by the licensee during the inspection. Based on a review of the preliminary information, no individual exceeded the annual regulatory limit of 5000 millirems per person.

During the performance of the raffinate sludge dewatering project, the licensee became concerned about housekeeping and contamination control inside of the controlled access area where the work was being conducted. During the latter stages of the project, housekeeping appeared to degrade. However, there was no evidence of contamination being spread outside the controlled access area or ingestion of radioactive material inside of the controlled access area. Although there were slight increases in radon and airborne radioactivity in the locations closest to sludge processing and storage areas, liquid effluents and fence line airborne sample results remained below regulatory effluent concentration limits.

The licensee conducted urine bioassay sampling to determine if any worker had received an intake of soluble uranium. The licensee collected slightly over 500 bioassay samples in 2005. Two samples contained detectable amounts of uranium, but no sample exceeded the lowest action level of 5 micrograms of uranium per liter of urine. These sample results suggested that no individual experienced a significant uptake of uranium during raffinate sludge dewatering operations.

The hazardous work permit requirements are described in Section 3.2.1 of the license application. The licensee utilized hazardous work permits to control hazardous work activities and work with radioactive material where a significant potential for personnel exposures existed. The inspectors reviewed the permits issued during 2004-2006. Two permits were issued in 2004, nine permits were issued in 2005, and three permits were issued in 2006. The hazardous work permits provided personnel protective equipment requirements for both radiological and non-radiological hazards. The inspectors concluded that the licensee's hazardous work permit program was effectively incorporated into the site decontamination and decommissioning work.

License application Section 3.3.3 requires that instrumentation be calibrated at least every six months. The inspectors observed several of the licensee's radiological survey meters that were in use during the inspection. All meters were fully functional. No out-of-calibration meter was observed in use by the licensee during the plant tour.

1.3 Conclusion

The licensee conducted its radiation protection program in accordance with the requirements of 10 CFR Part 20 and the license. Occupational exposures were well below regulatory limits. No bioassay sample result exceeded the action level suggesting that no worker had experienced a significant intake of uranium during raffinate sludge dewatering operations.

2 Inspection of Transportation Activities (86740)

2.1 Inspection Scope

The inspectors reviewed applicable records to determine whether the transportation of licensed materials was in compliance with the license and applicable NRC and U.S. Department of Transportation regulations.

2.2 Observations and Findings

The licensee made two shipments of radioactive material during 2005. During May 2005, the licensee shipped 58 pounds of raffinate sludge to a mill in Colorado. During August 2005, the licensee shipped 33 pounds of raffinate sludge to a disposal site in Utah. The inspectors reviewed shipping papers and survey results associated with the radioactive waste shipments. In both instances, the licensee shipped the material in 5-gallon buckets that were over-packed in 10-gallon steel drums. The drums were certified as Type 7A shipping containers. Records of material transfers were included in the licensee's files. All required forms were complete and contained all relevant information.

2.3 Conclusions

The licensee had effectively implemented the regulatory and license requirements related to the shipment of licensed radioactive material.

3 Management Organization and Controls (88005)

3.1 Inspection Scope

The licensee's management organization and controls were reviewed to determine the effectiveness of these controls.

3.2 Observation and Findings

The organizational structure is described in Section 11.1 and Figure 2-1 of the license application. At the time of the inspection, the plant staff consisted of six individuals; the president, director of regulatory affairs, environmental manager, health physics supervisor, instrumentation & electrical/project supervisor, and administrative assistant. These were the same staff members that were present during the previous inspection. The executive vice president-controller position was eliminated as a stand-alone position. The duties of the controller were assumed by the president. Contract laborers provided miscellaneous site support as needed. In addition, a security guard provided facility oversight during nights, weekends, and holidays. The inspectors concluded that the licensee had sufficient staff to ensure compliance with license and regulatory requirements.

The requirements for the As Low As Reasonably Achievable (ALARA) committee are provided in Section 3.2.2 of the license application. The ALARA committee met in December 2005. The committee meeting included the corporate health physicist. Trends were discussed including increases in occupational exposures, onsite air sampling results, and selected fenceline air sample results. These trends were a direct result of the raffinate sludge dewatering operations. The ALARA goals for 2006 include contamination control of items stored on the yellowcake storage pad, startup of the waste water treatment system to filter recovered groundwater prior to discharge, and removal and dewatering of the residual sludges from an onsite ditch, basin and lagoon.

3.3 Conclusions

The organizational structure was in agreement with license application requirements. Sufficient management-level staff were available for decommissioning activities in progress. The licensee also had a functioning ALARA program as required by the license.

4 Maintenance and Surveillance Testing (88025)

4.1 Inspection Scope

The inspectors determined whether general maintenance operations, surveillance tests and calibrations were being conducted in accordance with license requirements and approved procedures.

4.2 Observations and Findings

License Condition 46 states that the licensee shall perform and document daily inspections of tailings and waste retention systems during normally scheduled workdays. The licensee maintained extensive logbook entries of daily inspections of the clarifier ponds and emergency basin, the areas considered to be tailings and waste retention systems. No degradations of the retention systems have been identified by the licensee in recent years.

Surveillances were conducted in accordance with Facility Operating Procedure QA-102, Revision 4, "Surveillance Performance." Surveillances on record included reviews of the raffinate sludge dewatering project. One observation, one recommendation, and several comments were noted during these surveillances. No findings or other serious deficiencies were identified. In general, the surveillances confirmed that the raffinate sludge dewatering work was being conducted in compliance with program requirements.

4.3 Conclusions

The licensee was conducting daily inspections in accordance with license requirements. Surveillances were being used to monitor critical work activities. The licensee was effectively using Condition Reports to document problems that may impact quality.

5 Operator Training/Retraining (88010)

5.1 Inspection Scope

The inspectors reviewed the licensee's training records and interviewed personnel to determine whether the licensee was complying with regulatory and license requirements for training of site personnel.

5.2 Observations and Findings

The training program requirements are provided in Sections 2.6 and 11.4 of the license application. Full scale operations of raffinate sludge dewatering commenced during April 2005. The work was conducted by about 30 contract workers. The training of these workers was reviewed. The training requirements include general employee training and project specific training. Records document that the workers received general safety and radiation worker training. General employee training included a written examination. Current hazardous waste operations and emergency response training records were on file. In addition, for permanent plant personnel, general employee refresher training was completed in late 2005.

5.3 Conclusions

The licensee's training program was implemented in accordance with license and regulatory requirements.

6 Radioactive Waste Management (88035)

6.1 Inspection Scope

The inspectors interviewed cognizant licensee representatives, toured the site, and reviewed applicable records to determine if the licensee had established and maintained an effective program for management of wastes.

6.2 Observations and Findings

Site tours were conducted, in part, to observe the licensee's handling and storage of radioactive waste material. The restricted area entrance was posted as a radioactive materials area in accordance with license application Section 1.8, "Posting Exception." Site security was adequate with fences and gates in good working order.

During 2003, approximately 1000 drums were moved to a new location onsite. Damaged drums were placed in overpacks or B-25 containers. Many drums used for waste storage were recycled 55-gallon drums. During site tours, the inspectors could not determine the contents of some drums based on the markings and labeling on the drums. The licensee was in the process of inspecting the drums, determining drum contents, and, if needed, repackaging the contents for shipment to an off-site low-level waste disposal facility.

During site tours, the inspectors conducted ambient gamma surveys using a Ludlum Model 2401-P meter (NRC No. 21190G, calibration due date of 9/23/06). Most areas of the plant were measured at background levels (0.01 millirems per hour). The DUF₄ drums measured up to 2-5 millirems per hour at 1-foot. The temporarily staged bags of dewatered raffinate sludge measured 1-4 millirems per hour at 1-foot, and temporarily staged bags of debris from the raffinate sludge dewatering measured 1-2 millirems per hour at 1-foot.

6.3 Conclusions

The licensee had effectively maintained and implemented a program for monitoring and securing solid waste storage and retention pond areas as required by the license.

7 Environmental Protection (88045)

7.1 Inspection Scope

The inspectors reviewed the licensee's environmental and effluent monitoring activities to determine compliance with applicable regulatory and license requirements.

7.2 Observations and Findings

a. Environmental Monitoring Program

The environmental and effluent monitoring program requirements are provided in Section 5.2 of the license application. The program included liquid effluent, fence line air sampling, groundwater, surface water, and impoundment leak detection. The inspectors examined the licensee's records and interviewed personnel to ensure that the program had been implemented as required by the license. In addition, the inspectors reviewed the results for samples collected during the last quarter of 2003, 2004 and 2005 and compared the sample results to the license and regulatory release limits. In summary,

the licensee collected the required number of samples and no sample result exceeded any license or regulatory release limit.

The licensee routinely discharged liquid effluents to the environment through the combination stream, Outfall 001. The liquid effluent was sampled for radium-226, thorium-230, uranium, fluoride, and nitrate concentrations on a monthly basis. During 2004 and 2005, radium-226 concentrations remained less than 1.5 picocuries per liter (pCi/l) with an action limit of 3 pCi/l. The annual effluent concentration limit for radium-226 per 10 CFR Part 20, Appendix B, Table II, is 60 pCi/l. Thorium-230 concentrations were less than 1 pCi/l with an action level of 200 pCi/l and an annual effluent concentration limit of 100 pCi/l. Uranium concentrations varied from 2.41 to 45.8 micrograms per liter (µg/l) in 2004 and from 2.83 to 54.7 µg/l in 2005 with an action level of 225 µg/l and an annual effluent concentration limit of 443 µg/l. Fluorides remained at or below 0.2 milligrams per liter (mg/l) with an action limit of 1.6 mg/l, while nitrates remained at or below 3.0 mg/l with an action limit of 20 mg/l.

In the near future, the licensee may plug the combination stream. This action should reduce the sampling requirements and reduce the total amount of uranium being released offsite. Water which collects behind the plug will be pumped to the new waste water treatment facility for processing.

Outfall 008 was used for storm water runoff. The licensee sampled this outfall following rain events. The sample results for Outfall 8 for 2003, 2004 and 2005 are shown in Table 1. Sample concentration were compared with the licensee's National Pollution Discharge Elimination System (NPDES) permit action level.

Table 1: Outfall 8 Rain Event Sampling

Year	No. of Rain Events	Radium-226 concentration (pCi/l)	Ra-226 NPDES Action Level (pCi/l)	Uranium concentration (µg/l)	Uranium NPDES Action Level (µg/l)
2003	17	#3	30	3.7 - 26.8	225
2004	30	#1	30	5.7 - 70.6	225
2005	13	#1	30	5.7 - 126	225

Airborne effluents were monitored at four environmental monitoring stations located at the restricted area fenceline. The air sampler filters were exchanged weekly and analyzed for gross alpha concentrations. The weekly samples varied from 19 to 34 percent of the annual effluent concentration limit for natural uranium in air during 2003, 19 to 31 percent during 2004, and 0 to 46 percent during the first three quarters of 2005. No weekly sample exceeded the action level of 50-percent of the annual effluent concentration limit (9 E-14 microcuries per milliliter). The filters were composited quarterly and analyzed for radium-226, thorium-230, and uranium content. Based on the sample results for the last quarter of 2003, 2004, and the first three quarters of 2005, airborne effluents did not exceed the site action levels or the respective annual effluent concentration limits specified in 10 CFR Part 20, Appendix B.

During October 2003, the licensee installed seven radon track etch monitors in selected locations around the site. Five were installed at the property fenceline and two were installed inside the restricted area. In May 2005, the licensee installed an eighth radon track etch monitor on the main gate fence. The licensee exchanged the radon monitors on a quarterly basis. The intent of the monitors was to measure the radon concentrations inside the radiologically restricted area and at the fenceline. The inspectors reviewed the radon monitor sample results from October 2003 through December 2005. The average radon concentration ranged from less than 0.3 pCi/l to 1.4 pCi/l. Based on the sample results from October 2003 through December 2005, radon levels were below the occupational worker limit of 30 pCi/l as specified in 10 CFR Part 20, Appendix B.

Surface water samples were collected annually at six locations in 2004. Although Section 5.2 of the license application requires annual sampling of Outfall 001, monthly samples are collected as discussed earlier in this section. The surface water samples were analyzed for radium-226 and uranium content. Radium-226 concentrations were less than 0.2 pCi/l with an action level of 3 pCi/l, while uranium concentrations were below 3 µg/l with an action level of 225 µg/l.

In August 2005, NRC approved the licensee's proposed Groundwater Monitoring Program (GWMP), which specifies four surface water sample locations for annual collection plus an additional three locations, including Outfall 001, as specified in Section 5.2 of the license application. Surface water samples were collected at all locations, excluding well 2209 which was dry in 2005. Radium-226 concentrations were less than 0.3 pCi/l with an action level of 3 pCi/l, while uranium concentrations were below 1 µg/l with an action level of 225 µg/l.

Sediment samples were required to be collected annually at three locations. The inspectors reviewed sample results for 2004 and 2005. The samples were analyzed for radium-226, thorium-230, and uranium content. Radium-226 and thorium-230 concentrations were below 2 pCi/g, while uranium concentrations were less than 5 µg/g. These sample results were comparable to previous sample results and were similar to background levels.

Per the license application, the under-drains of the lined impoundments were sampled and analyzed monthly for nitrates and uranium when enough fluid was present for a sample to be collected. Sample results varied by pond. The highest sample results were consistently obtained from underneath Clarifier 2A in the restricted area during 2004. These sample results ranged from 13.8 to 3460 µg/l of uranium. During 2005, the highest sample results were obtained from underneath Clarifier 2A during January to July. No samples were taken during August to October 2005 due to broken peristaltic pumps under the ponds.

The inspectors reviewed preliminary sample results from the under-drains during the period of November to December 2005 and noted that the highest sample results were now in Clarifier 1A and 4A. Due to raffinate sludge dewatering activities, sample results under Clarifiers 2A and 3A were lower than in previous years, and the high sample results under Clarifiers 1A and 4A were likely due to liner tears caused during sludge

removal activities. The licensee was in the process of planning repairs in the liners. Contamination of the groundwater was not likely because the clay liners underneath the ponds were determined by the licensee to be intact.

In accordance with the requirements of 10 CFR 40.65, the licensee submitted semi-annual effluent reports to the NRC for the second half of 2003, 2004 and 2005. Each report specified the radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation. The effluents were less than 10 percent of the respective effluent concentration limits.

b. Groundwater Monitoring Program

On August 22, 2005, NRC amended Sequoyah Fuel's license, SUB-1010, to authorize implementation of the GWMP dated February 25, 2005. The licensee conducts groundwater monitoring through a monitoring well network that includes corrective action, seep, drainage, surface water and groundwater monitoring. Ten new monitoring wells had been installed during 2005 and were placed into service. During the inspection, seven new recovery wells were in the process of being installed. Initial sampling of these wells is planned for 2006.

Amendment No. 31 of the license added a requirement (License Condition 49) to implement a groundwater compliance monitoring program. The condition includes groundwater protection standards, referred to as Maximum Contaminant Levels (MCL's), for the following constituents, depending on the well as outlined in the GWMP: antimony, arsenic, barium, beryllium, cadmium, chromium, fluoride, lead, mercury, molybdenum, nickel, nitrate, combined radium-226 and radium-228, selenium, silver, thallium, thorium-230 and uranium. These constituents are measured in 64 wells as shown in Table 4 of the GWMP on an annual sampling frequency.

Based on recent groundwater sampling results, uranium continues to be present in groundwater within the restricted area and continues to be detected above the MCL of 30 µg/l in the Terrace/Shale 1, Shale 2 and Shale 3 groundwater systems. Six wells in the Terrace/Shale 1 groundwater system, 2 wells in the Shale 2 groundwater system and 3 wells in the Shale 3 groundwater system were above the MCL for uranium in 2005.

The 2005 groundwater monitoring report was prepared after the approval of the new GWMP, so some of the monitoring required by the new plan is not scheduled for implementation until 2006. Monitoring completed in 2005 was grouped by the type of sampling that was conducted and included: background quality monitoring, compliance groundwater monitoring, corrective action monitoring, seep and drainage monitoring and surface water monitoring. Some of the groundwater monitoring wells, drainage and other sample locations were dry in 2005 when sampling was attempted by the licensee, so samples from these locations could not be obtained.

7.3 Conclusions

The environmental and effluent monitoring programs were conducted in accordance with license and regulatory requirements. The licensee collected all samples as required, and the sample results indicate that offsite releases were below regulatory limits.

Elevated concentrations of radioactive material continued to be identified in selected groundwater monitoring wells located in the restricted area. The licensee was in the process of installing new recovery wells as required by the recently approved Groundwater Monitoring Program.

8 Emergency Preparedness (88050)

8.1 Inspection Scope

The inspectors ascertained whether the licensee's emergency preparedness program was being maintained in a state of operational readiness.

8.2 Observations and Findings

The licensee maintained emergency response capabilities for two classes of incidents, spills of dry uranium and injury of personnel. The licensee's spill response activities were provided in Facility Operating Procedure E-105, Revision 9, "Spill of Dry Uranium Compound." Actions planned include area evacuation, isolation of the spill, decontamination of the spill area, and collection of bioassays. The inspector noted that the licensee maintained sufficient equipment including postings and boundaries, protective clothing, and radiological survey equipment for implementing emergency response actions. The actions taken in response to injuries are specified in Facility Operating Procedure E-202, Revision 16, "Injury." The procedure included guidance for injuries of radiologically contaminated individuals. The licensee also maintained a reporting requirements procedure, Facility Operating Procedure G-004, Revision 23, "Reporting Requirements for Abnormal Events," that includes the regulatory and license reporting requirements.

8.3 Conclusions

The license maintained an emergency preparedness program that included sufficient instructions and equipment for responding to contamination spills and injured contaminated individuals.

9 Followup (92701)

9.1 (Closed) Violation 040-08027/0401-01: Failure to Conduct Complete Analyses of Monitoring Well Samples In Accordance with License Requirements

During a previous inspection, the inspectors noted that some monitoring well samples had not been analyzed for fluoride and radium-226 as required by Table 5.2, "Environmental Monitoring Schedule," of the license application. Eight wells were sampled during the first half of 2003, but the samples were only analyzed for nitrates and uranium. The licensee's failure to implement the sampling and analyses program as required by Table 5-2 for the first half of 2003 was a violation of License Condition 9.1 (Violation 040-08027/0401-01).

The licensee entered the sampling oversight into its corrective action program and determined steps to prevent recurrence. The inspectors reviewed the proposed corrective actions and the 2004 and 2005 sampling results. During 2004 and 2005, all monitoring wells had complete sample results when there was a sufficient quantity of water present in the wells to perform the analysis, excluding one isolated incident discussed in Section 7.2.b above. Although not specifically noted in the annual groundwater report, the licensee was maintaining log book entries documenting when a well had insufficient quantity of water for sampling and analysis. The inspectors discussed with the licensee the advantages of documenting in future annual groundwater reports the reason why a sample is not collected.

10 Exit Meeting

The inspectors reviewed the scope and findings of the inspection during an exit meeting that was conducted at the conclusion of the onsite inspection on February 17, 2006. The licensee did not identify as proprietary any information provided to, or reviewed, by the inspectors.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

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C. Mooneyham, Project Supervisor
S. Munson, Environmental Manager
K. Simeroth, Health Physics Supervisor

INSPECTION PROCEDURES USED

IP 83822	Radiation Protection
IP 86740	Inspection of Transportation Activities
IP 88005	Management Organization and Controls
IP 88010	Operator Training/Retraining
IP 88035	Radioactive Waste Management
IP 88045	Environmental Protection
IP 88050	Emergency Preparedness
IP 92701	Followup

ITEMS OPENED, CLOSED, AND DISCUSSED

Open

None

Closed

040-08027/0401-01	VIO	Failure to Conduct Analyses of Monitoring Well Samples In Accordance with License Application Requirements
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Discussed

None

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
DUF ₄	depleted uranium tetrafluoride
GWMP	Groundwater Monitoring Program
IP	Inspection Procedure
MCLs	Maximum Contaminant Levels
µg/g	micrograms per gram
µg/l	micrograms per liter
mg/l	milligrams per liter
NPDES	National Pollution Discharge Elimination System
pCi/g	picocuries per gram
pCi/l	picocuries per liter
UF ₆	uranium hexafluoride
VIO	violation