



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

August 16, 2007

Mr. E. Jonathan Jackson, President  
FMRI, Inc.  
Number Ten Tantalum Place  
Muskogee, Oklahoma 74403-9296

SUBJECT: NRC INSPECTION REPORT 040-07580/07-002

Dear Mr. Jackson:

This refers to the inspection conducted on June 12-14, 2007, at FMRI's rare earth recovery facility in Muskogee, Oklahoma. A preliminary exit briefing was conducted with you and your staff at the conclusion of the inspection. A final exit briefing was provided to your staff on August 6, 2007, following receipt of split groundwater sample results on July 25, 2007. The enclosed report presents the results of that inspection.

The purpose of the inspection was to examine activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, conditions of your license, and the approved decommissioning plan. Within these areas, the inspection consisted of selected examination of procedures and representative records, site tours, and interviews with personnel. No cited violations were identified; therefore, no response to this letter is required.

In accordance with 10 CFR 2.390 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 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.: 040-07580  
License No.: SMB-911

FMRI, Inc.

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Enclosure:

NRC Inspection Report  
040-07580/07-002

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FMRI, Inc.

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U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 040-07580  
License No.: SMB-911  
Report No.: 040-07580/07-002  
Licensee: FMRI (a subsidiary of Reorganized Fansteel)  
Facility: Muskogee Plant  
Location: Muskogee, Oklahoma  
Inspection Dates: June 12-14, 2007  
Inspector: Robert J. Evans, PE, CHP, Senior Health Physicist  
Fuel Cycle & Decommissioning Branch  
Accompanied By: James C. Shepherd, Senior Project Manager  
Decommissioning and Uranium Recovery Licensing Directorate  
Division of Waste Management and Environmental Protection  
Office of Federal and State Materials and Environmental  
Management Programs  
Approved By: D. Blair Spitzberg, PhD, Chief  
Fuel Cycle & Decommissioning Branch  
Attachments: Groundwater Sample Results  
Supplemental Inspection Information

## EXECUTIVE SUMMARY

FMRI, Muskogee Plant  
NRC Inspection Report 040-07580/07-002

The inspection included a review of decommissioning activities, management organization and controls, radiation protection, environmental protection, low-level radioactive storage, radioactive waste management, onsite construction activities, and transportation activities. In addition, the inspector conducted a follow up review of a previous NRC inspection finding.

### Decommissioning Inspection Procedure, Management Organization and Controls

- The licensee and its contracted workforce were conducting decommissioning activities in accordance with license and regulatory requirements. The licensee continued to conduct routine audits and self-assessments. A previously cited violation involving the licensee's failure to submit financial information to the NRC was closed (Section 1).

### Radiation Protection

- The licensee implemented a radiation protection program that was in compliance with 10 CFR Part 20 and the license. Occupational exposures for 2006 were below regulatory limits (Section 2).

### Environmental Protection

- The licensee continued to conduct environmental monitoring in accordance with license requirements. Monitor well MW-74 sample results continued to exceed the reportability limit, and the licensee continued to report these exceedances to the NRC (Section 3).

### Low-Level Radioactive Waste Storage, Radioactive Waste Management, Onsite Construction

- The licensee was staging radioactive material for shipment in accordance with previous commitments made to the NRC, pending final approval of a license amendment request in this program area (Section 4).

### Inspection of Transportation Activities

- The licensee was conducting transportation operations in accordance with U.S. Department of Transportation requirements, with one minor exception. The failure to list each radionuclide on the manifests was determined to be a minor violation of regulations (Section 5).

## Report Details

### Summary of Site Status

Decommissioning of the FMRI site was being conducted in discrete phases. At the time of the inspection, the licensee was conducting Phase I decommissioning in accordance with the NRC-approved Decommissioning Plan (DP) dated January 14, 2003. Phase 1 consists of removal of work-in-process (WIP) residue material from Ponds 2 and 3, and transfer of the material to an out-of-state uranium mill for use as alternate feed material. The licensee originally estimated that the two ponds contained about 18,800 tons of WIP material.

The licensee has excavated about 11,000 tons of WIP material from Pond 3 and has placed the material into approximately 6,000 2-ton super-sacks. About 4,000 tons of WIP material has been shipped, and the remaining 7,000 tons of material was staged for shipment. The licensee estimates that about 1,500 tons of WIP material remain in Pond 3.

Work conducted by the licensee in recent months includes the free-release of salvageable equipment from the former plant. The equipment released includes a filter press, boilers, and the former cooling tower and associated support equipment.

Excavation, drying and packaging operations in Pond 3 were temporarily suspended in late-2006 pending mobilization of a new work contractor. The contractor had been selected, and Pond 3 excavation operations recommenced during mid-July 2007. The licensee plans to finish the reclamation of Pond 3 by the end of 2007.

The licensee originally planned to commence with the reclamation of Pond 2 immediately after the completion of Pond 3. However, by letter to the NRC dated January 12, 2007, the licensee requested a revision to the Phase I decommissioning schedule. The licensee proposed that Pond 2 reclamation be deferred until late 2010 or 2011. At the close of the inspection, the NRC had not responded to the licensee's request for a revised decommissioning schedule.

### **1 Decommissioning Inspection Procedure; Management Organization and Controls (87104, 88005)**

#### 1.1 Inspection Scope

The inspector evaluated whether the licensee and its contracted workforce were conducting decommissioning activities in accordance with license and regulatory requirements.

#### 1.2 Observations and Findings

##### a. Site Tours

Site tours were conducted to observe activities in progress and equipment in operation. The activities in progress were compared to the commitments made in the NRC-

approved DP and Part B, "General License Information," to the license. Overall, site operations were being conducted in accordance with license requirements.

Intermodal containers were being loaded with bagged WIP material during the inspection. The water collection systems were in service including the french drain system around Pond 3 and the intercept trench system around the site. In addition, the licensee occasionally operated a sump pump in Pond 3, pumping residual water from the pond directly to the onsite waste water treatment system for processing. The waste water treatment system continued to process potentially contaminated water. The treated water was being stored in onsite ponds. After measuring the required constituents, the licensee released the stored fluid in batch modes to the environment through outfall 001. This outfall was permitted by the State of Oklahoma through issuance of a National Pollutant Discharge Elimination System (NPDES) permit.

The inspector conducted a confirmatory radiological survey during site tours using a Ludlum Model 2401-P survey meter (NRC No. 21190G, calibration due date of 9/25/07). With a background of about 0.01 millirems per hour, the radiation exposure rates at the edge of Pond 3 measured about 0.05 millirems per hour, while the edge of Pond 2 measured about 0.07 millirems per hour. The bagged WIP material ranged from about 0.5 to 1.0 millirems per hour at one foot from the material. All exposure rate measurements were below the criteria for a radiation area (5 millirems per hour).

b. Licensee Audits

Self-assessment audits included routine Radiation Safety Committee reviews and annual radiation protection program reviews.

License Condition 14 and Section 2.1.2 of Part B to the license discuss the Radiation Safety Committee requirements. The committee was required to meet quarterly. The inspector reviewed the committee minutes for meetings held during 2006-2007. The committee discussed trends in the radiation protection program. Trends were mostly attributable to the starting and stopping of onsite work activities.

Regulation 10 CFR 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation. The annual program review for 2006 was conducted during February 2007 by a third-party contractor. Further, an annual review of the respiratory protection program was conducted during January 2007. The respiratory protection program audit included verification of training requirements.

c. (Closed) Notice of Violation 040-07580/0501-01: Failure to Submit Financial Information to NRC as Required by License Condition 45

This Notice of Violation was issued on July 26, 2005, involving the licensee's failure to provide an updated Table 15-12 to the NRC by the March 31, 2005, deadline specified in License Condition 45. By letter dated December 4, 2006, the licensee provided the NRC with an updated Table 15-12. Since the licensee has provided the required information, this violation is closed.

### 1.3 Conclusions

The licensee and its contracted workforce were conducting decommissioning activities in accordance with license and regulatory requirements. The licensee continued to conduct routine audits and self-assessments. A previously cited violation involving the licensee's failure to submit financial information to the NRC was closed.

## **2 Radiation Protection (83822)**

### 2.1 Inspection Scope

The inspector reviewed the licensee's implementation of its radiation protection program to ensure compliance with 10 CFR Part 20 and the license.

### 2.2 Observations and Findings

#### a. Occupational Exposures

Occupational exposure monitoring requirements were specified in Section 3 of Part B to the license and in Section 10 of the DP. To monitor for external radiation, the licensee assigned thermoluminescent dosimeters to site workers. The dosimeter results for 2006 were reviewed. The external exposures ranged up to 107 millirems per quarter. No individual exceeded the quarterly action level of 125 millirems. The maximum external radiation exposure for calendar year 2006 was 254 millirems to a contractor who worked with WIP material. The regulatory limit is 5,000 millirems per year.

The licensee monitored selected workers for internal exposures. Internal exposures were calculated from portable air sample results. The highest sample result for 2006 was 40-derived air concentration-hours with an annual regulatory limit of 2000 derived air concentration-hours. This worker was also a contractor who worked with WIP material.

The inspector observed that most air sample results were less than zero because of a calculation error. The licensee unintentionally subtracted the background value twice, once through the programming of the sample counter and a second time through the use of a spreadsheet. The inspector determined that the calculation error had low safety significance because the air sample results for 2006 were generally low and because there was no evidence that any individual dose came close to exceeding the regulatory limit. In response to the inspector's finding, the licensee issued a Condition Report to investigate the error and to formulate corrective actions. Based on the results of its preliminary review, the licensee determined that the subtraction error resulted in a miscalculation of less than 2 millirems of dose per individual for 2006.

#### b. Radon Monitoring

Radon monitoring requirements are provided in Section 3.5.4 of Part B to the license. The licensee conducted radon monitoring in areas where source material was handled and stored. During the first quarter of 2006, the licensee monitored radon in 16

locations including seven positions for routine plant sampling and nine positions for the temporary processing and packaging areas adjacent to Pond 3. The licensee added a 17<sup>th</sup> monitor during the second quarter of 2006.

The inspector reviewed the radon sampling results for 2006 and the first quarter of 2007. The sodium reduction building continued to exceed the 30 picocuries per liter (pCi/L) action level. The radon in this building ranged from 13.2 to 46.7 pCi/L. This building was used for storage of bagged radioactive pond material. The building was posted as an airborne radiation area.

The radon concentration in the thermite building exceeded the action level during the fourth quarter of 2006. The radon concentration was 124.6 pCi/L. The source of the radon was WIP material that was being temporarily stored in this building. Although the building was not normally occupied, the building was posted as an airborne radiation area, and fans were installed to provide additional ventilation. The WIP material has since been removed from the building and shipped offsite; therefore, the source of the radon has been eliminated.

As a result of low sample results at a number of locations, the licensee reduced the number of radon sampling points from 17 to nine during the second quarter of 2007.

c. Respiratory Protection Program

As allowed by 10 CFR Part 20, the licensee issued respiratory protection equipment to site workers to limit internal intakes of airborne radioactive materials. The respiratory protection program requirements were provided in Section 10.2 of DP. The inspector compared the licensee's program to the requirements of the DP and regulatory requirements.

The licensee used air-purifying, negative-pressure, full-face respirators. These respirators have a protection factor of 100, if used with a filter cartridge that is at least 99-percent efficient. The inspector noted that the licensee used high efficiency particulate air filters that were rated at 99.97-percent efficient. Therefore, the licensee could use a protection factor of 100 in its internal dose assessment calculations.

Site procedures, including the Policy and Program Manual, state that all employees who are required to wear respirators shall successfully complete a fit test. The licensee conducted qualitative fit testing for site employees. The qualitative fit testing methodology used by the licensee was a pass/fail test that assessed the adequacy of respirator fit and relied on the individual's response to a test agent.

Occupational Safety and Health Administration regulation 29 CFR 1910.134, Appendix A, provided the fit test protocols which had been incorporated into licensee procedure HSDI-301, "Fit Testing." The inspector compared the licensee's procedure guidance to the qualitative fit test protocols provided in Appendix A to 29 CFR 1910.134. The inspector confirmed that the licensee's fit test procedures followed the protocols provided in regulations.

d. Contamination Control

Contamination control techniques included surveys of plant areas, equipment, trash, and laundry. The contamination control requirements were provided in Section 3.5 of Part B to the license and License Condition 33.

Area surveys included weekly surface surveys and biweekly swipe surveys for alpha contamination. Records indicated that the surveys were conducted weekly during 2006-2007. Action levels were occasionally exceeded in work areas as a result of minor incidences such as spills. The areas were remediated and re-surveyed as required.

Equipment was surveyed prior to release from the restricted area. The licensee maintained extensive records of equipment releases. The inspector randomly reviewed the equipment release records. Based on these records, no equipment was released with contamination greater than the action level.

Surveys of plant trash were conducted to ensure that the material did not leave the site with contamination greater than the action level. In addition, uniform surveys were conducted to verify the clothing was not contaminated prior to release for offsite cleaning. Records for 2006-2007 indicated that no trash or uniforms were released with contamination greater than the respective action levels.

e. Training

Training requirements were provided in Section 3.1 of Part B to the license. General employee training was provided annually to site workers during 2006-2007. Further, hazardous material transportation training was provided during October-November 2006 to meet U.S. Department of Transportation (DOT) requirements.

2.3 Conclusions

The licensee implemented a radiation protection program that was in compliance with 10 CFR Part 20 and the license. Occupational exposures for 2006 were below regulatory limits.

**3 Environmental Protection (88045)**

3.1 Inspection Scope

The inspector reviewed the licensee's environmental monitoring program for compliance with regulatory and license requirements. The inspector also conducted a followup review of recent monitoring well exceedances that were reported to the NRC.

3.2 Observations and Findings

Environmental monitoring program requirements were provided in Section 3.5 of Part B to the license. The licensee monitored the groundwater, effluent releases, and airborne

particulates at perimeter sampling stations. The inspector reviewed the sample results for 2006-2007.

Plant liquid effluents were discharged from Pond 6 to the Arkansas River through outfall 001. All other outfalls were used for the discharge of storm water runoff. Liquids were released through outfall 001 in batch modes. Water samples were collected during each batch release. Selected water samples contained slightly elevated beta particulate radioactivity, but none of the sample results exceeded the reportability limit specified in Part B to the license. Further, the licensee reported the water sample results to the State of Oklahoma in accordance with NPDES permit requirements.

The licensee sampled for airborne alpha particulate activity at six locations including four perimeter stations, one background station, and one offsite station. Based on the 2006-2007 records, no sample result exceeded the administrative action level for gross alpha activity. As noted in Section 2.2.a above, the inspector noted that the licensee was unintentionally subtracting background values twice from the measured air sample results. As a result, the calculated concentrations were slightly lower than actual concentrations. The inspector determined that this calculation error had low safety significance because the perimeter sample results were consistently low. The licensee issued a Condition Report to review, to recalculate, and to correct previous sample results as necessary.

The licensee's groundwater monitoring program consisted of sampling 19 monitoring wells and 4 sumps. The wells and sumps were sampled quarterly. As noted in previous inspection reports, the uranium concentrations in samples collected from MW-74 have exceeded the reporting level since March 2006. This well is located down-gradient from Pond 3 but up-gradient of the intercept trench that runs parallel to the Arkansas River. The licensee's results for samples collected from MW-74 since March 2006 are provided in Appendix 1, Table 1 to this inspection report. The sample results suggest that the uranium concentrations in the groundwater has stabilized, and no upward trend is apparent.

The licensee previously concluded that subsurface contaminant disturbance caused by the reclamation of Pond 3 was the most likely reason for elevated uranium concentrations in MW-74. Phase I decommissioning commenced in June 2005, and a negative trend was first identified in MW-74 samples during September 2005. No other monitoring well appeared to be impacted by the reclamation of Pond 3. Pond 3 reclamation is expected to be completed in late-2007. The uranium concentrations in groundwater samples collected from MW-74 are expected to trend downward after reclamation of Pond 3 has been completed.

The NRC collected four split water samples with the licensee for analysis by the NRC's contractor, Oak Ridge Institute for Science and Education (ORISE). The purposes of the split samples were to confirm the licensee's sample results against the reportability limit and to compare the two sets of sample results for consistency between the two laboratories. Three samples were collected from wells MW-74, MW-72, and MW-67. Monitor well MW-72 was located adjacent to Pond 3, while MW-67 was located down-gradient of the former plant. The fourth sample was a split sample collected from MW-74 as a quality control check for comparison to the laboratory's results for the first

sample. The NRC's and licensee's groundwater sample results are provided in Attachment 1, Tables 2-4, to this inspection report.

Although the licensee's isotopic sample results were not available at the end of the inspection period, the gross alpha and gross beta particulate sample results from ORISE were comparable to the licensee's sample results. The licensee's laboratory initially analyzes and reports the gross alpha and gross beta results. The licensee then determines which samples require isotopic re-analysis, resulting in a delay in final laboratory results. A comparison of the isotopic sample results will be conducted during a future inspection.

### 3.3 Conclusions

The licensee continued to conduct environmental monitoring in accordance with license requirements. Monitor well MW-74 sample results continued to exceed the reportability limit, and the licensee continued to report these exceedances to the NRC.

## **4 Low-Level Radioactive Waste Storage, Radioactive Waste Management, and Onsite Construction (84900, 88035, 88001)**

### 4.1 Inspection Scope

The inspector conducted a review of onsite handling and storage of radioactive wastes to ensure compliance with license requirements.

### 4.2 Observations and Findings

License Condition 25 provided the requirements for storage of radioactive material in outdoor areas. By letter dated July 6, 2006, the licensee requested an amendment to License Condition 25 to allow staging of source material in preparation for shipment to an out-of-state mill. The NRC requested additional information from the licensee by letters dated November 6, 2006, and April 5, 2007. The licensee responded with additional information by letters dated December 22, 2006, and May 24, 2007, respectively. As of the date of the onsite inspection, the NRC had not completed this licensing action; however, in its letter dated April 5, 2007, the NRC granted the licensee a temporary exemption from the existing license requirement until final staff action on the requested changes.

The inspector conducted a review of onsite staging operations. The licensee had excavated about 11,000 tons of WIP material from Pond 3. About 7,000 tons of material was still staged for shipment in 2-ton super-sacks. The licensee had established several outdoor staging areas, locations where the sacks were being temporarily stored. Some of the staging areas were covered, but bags about to be loaded for shipment remained uncovered. All bags were located in areas that were lined for containment of rainwater.

#### 4.3 Conclusions

The licensee was staging radioactive material for shipment in accordance with the license, pending final approval of a license amendment request in this program area.

### **5 Inspection of Transportation Activities (86740)**

#### 5.1 Inspection Scope

The inspector reviewed the licensee's program for packaging, shipping and transporting radioactive material.

#### 5.2 Observations and Findings

In accordance with License Condition 37, the licensee was required to develop work plans for remediating the contamination at the site. Revision 2 to the Phase I Transportation Work Plan was submitted to the NRC by letter dated February 6, 2007. The inspector compared the licensee's actual shipping operations to the instructions provided in the Transportation Work Plan. The areas reviewed included preparation of manifests and radiological surveying of the loaded intermodal containers.

Recent manifests were compared to the requirements of the Work Plan and DOT regulations. The inspector questioned the licensee's methodology for calculating the total radioactivity of each shipment. Specifically, the licensee was using the radioactivity of uranium-238 in lieu of natural uranium and the radioactivity of thorium-232 in lieu of natural thorium. This methodology underestimated the true radioactivity by not taking the activity of the progeny radionuclides into consideration.

Regulation 10 CFR 71.5(a) states, in part, that each licensee who transports licensed material shall comply with the applicable requirements of the DOT regulations. The DOT regulation, 49 CFR 172.202(d)(3), states, in part, that the shipping description of a hazardous material on the shipping paper must include the activity contained in each package of the shipment. (Each intermodal container was considered one package.) The licensee's failure to accurately document the activity contained in each intermodal container on shipping manifests was a violation of 10 CFR 71.5(a), although this failure constitutes a violation of minor significance and is not subject to formal enforcement action. The inspector concluded that this failure was not safety significant because the understatement of the radioactivity of the package had no impact on the proper shipping name, hazard classification, or marking requirements. As a result, an incorrect listing of total radioactivity on the manifest would not have altered the required emergency response actions or incident reporting requirements. In response to this finding, the licensee issued a Condition Report to verify the accuracy of the total radioactivity entries on the shipping papers and to formulate corrective actions.

The inspector observed the licensee conducting radiological surveys of a fully loaded intermodal. The surveys included swipe testing and ambient gamma exposure rate measurements. The surveys were recorded on Radiological Survey Forms, an attachment to the Phase I Transportation Work Plan. The licensee also verified that the

markings of the package were consistent with DOT requirements. The inspector determined that the radiological surveys met DOT requirements, and the intermodals were properly marked for shipment.

### 5.3 Conclusions

The licensee was conducting transportation operations in accordance with DOT requirements, with one minor exception. The failure to list each radionuclide on the manifests was determined to be a minor violation of regulations.

## 6 **Exit Meeting Summary**

The inspector reviewed the scope and findings of the inspection during an exit meeting conducted at the conclusion of the onsite inspection on June 14, 2007. A final exit briefing was conducted telephonically on August 6, 2007, following receipt of water sample results. The licensee did not identify any documents or other information provided to, or reviewed by, the inspector as proprietary.

**GROUNDWATER SAMPLE RESULTS**

**Table 1: Licensee's Monitoring Well MW-74 Sample Results (pCi/L)**

Sample Date	Uranium-238	Uranium-235	Uranium-234	Reporting Level
March 15, 2006	5460	Not Detected	4740	3000
June 28, 2006	9040	Not Detected	8620	3000
July 14, 2006	3800	Not Detected	3360	3000
July 28, 2006	4100	Not Detected	4180	3000
August 10, 2006	8240	Not Detected	7890	3000
August 24, 2006	6080	Not Detected	5240	3000
September 20, 2006	11,300	Not Detected	10,300	3000
October 25, 2006	4610	83	4280	3000
November 15, 2006	9110	121	8320	3000
December 14, 2006	9660	2.4	8660	3000
March 23, 2007	8320	39	7160	3000

**Table 2: Split Sample Results - Gross Alpha and Gross Beta (pCi/L)**

Sample	Gross Alpha	Gross Beta
MW-74, NRC	13,700 ± 3,300	7900 ± 1,900
MW-74, NRC Duplicate	13,000 ± 3,100	7800 ± 1,900
MW-74, FMRI	10,300 ± 117	7230 ± 62.7
MW-72, NRC	9.7 ± 5.8	15.4 ± 5.8
MW-72, FMRI	4.39 ± 2.68	14.9 ± 3.13
MW-67, NRC	460 ± 30	204 ± 19
MW-67, FMRI	375 ± 8.19	290 ± 6.12

**Table 3: Split Sample Results - Isotopic Thorium (pCi/L)**

Sample	Thorium-228	Thorium-230	Thorium-232	Reporting Levels <sup>1</sup>
MW-74, NRC	4.6 ± 2.8	8.1 ± 2.6	-0.53 ± 0.61	300
MW-74, NRC Duplicate	0.9 ± 2.3	7.9 ± 2.5	0.7 ± 1.0	300
MW-74, FMRI	Not Available	Not Available	Not Available	300
MW-72, NRC	0.24 ± 0.25	0.48 ± 0.19	0.00 ± 0.05	300
MW-72, FMRI	Not Available	Not Available	Not Available	300
MW-67, NRC	0.55 ± 0.22	0.54 ± 0.22	0.08 ± 0.08	300
MW-67, FMRI	Not Available	Not Available	Not Available	300

1. Reporting Levels: 2000 pCi/L for thorium-228, 1000 pCi/L for thorium-230, and 300 pCi/L for thorium-232

**Table 4: Split Sample Results - Isotopic Uranium (pCi/L)**

Sample	Uranium-238	Uranium-235	Uranium-234	Reporting Level
MW-74, NRC	6,670 ± 590	310 ± 40	6,600 ± 590	3000
MW-74, NRC Duplicate	6,970 ± 630	373 ± 45	6,810 ± 610	3000
MW-74, FMRI	Not Available	Not Available	Not Available	3000
MW-72, NRC	1.01 ± 0.28	0.02 ± 0.04	0.91 ± 0.27	3000
MW-72, FMRI	Not Available	Not Available	Not Available	3000
MW-67, NRC	353 ± 29	19.1 ± 2.4	360 ± 30	3000
MW-67, FMRI	Not Available	Not Available	Not Available	3000

**SUPPLEMENTAL INSPECTION INFORMATION**

**PARTIAL LIST OF PERSONS CONTACTED**

FMRI

J. Burgess, Manager, Site Operations  
J. Jackson, President

Contractors

S. Blauvelt, Vice President and Director of Regional Operations, Penn E&R  
J. Harrick, Regional Manager, Penn E&R  
R. Miller, Radiation Safety Officer, Omega Project Services LLC

**INSPECTION PROCEDURES USED**

IP 83822	Radiation Protection
IP 88045	Environmental Protection
IP 84900	Low-Level Radioactive Waste Storage
IP 88035	Radioactive Waste Management
IP 88001	Onsite Construction
IP 87104	Decommissioning Inspection Procedure for Materials Licensees
IP 88005	Management Organization and Controls
IP 86740	Inspection of Transportation Activities

**ITEMS OPENED, CLOSED AND DISCUSSED**

Opened

None

Closed

040-07580/0501-01 NOV      Failure to Submit Financial Information to NRC as Required by License Condition 45

Discussed

None

**LIST OF ACRONYMS USED**

DP	Decommissioning Plan
IP	Inspection Procedure
NPDES	National Pollutant Discharge Elimination System
NOV	Notice of Violation
ORISE	Oak Ridge Institute for Science and Education
pCi/L	picocuries per liter
DOT	U.S. Department of Transportation
WIP	work-in-process