



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

April 16, 2008

E. Jonathan Jackson, President
FMRI (a subsidiary of reorganized Fansteel)
Number 10 Tantalum Place
Muskogee, Oklahoma 74403

SUBJECT: NRC INSPECTION REPORT 040-0758/2008-001

Dear Mr. Jackson:

This refers to the inspection conducted on February 19-20, 2008, at the FMRI site in Muskogee, Oklahoma. The preliminary inspection findings were discussed with you and members of your staff during the exit briefing conducted at the conclusion of the onsite inspection. A final exit meeting was conducted telephonically with Mr. James Burgess on April 1, 2008.

This inspection was an examination of activities conducted under your license as they relate to radiation 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.

We recognize that there has been a delay between the date of the onsite inspection and the date of our final telephonic exit with you. This delay was due, in part, to discussion of the inspection findings with the NRC's Project Manager for your site.

Within the scope of this inspection, no violations or deviations were identified; therefore, no response to this letter or the enclosed report 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 you choose to provide one, 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 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 Mr. Robert Evans at (817) 860-8234, or the undersigned at (817) 860-8197.

Sincerely,

/RA/

Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

Docket No.: 040-07580

License No.: SMB-911

Enclosure:

NRC Inspection Report 040-07580/08-001

cc w/Enclosure:

Gary Tessitore

President

Fansteel, Inc.

570 Lake Cook Road, Suite 200

Deerfield, Illinois 60015

Walter Beckham

City Manager

City of Muskogee

229 West Okmulgee

Muskogee, Oklahoma

George Brozowski

Regional Health Physicist

U.S. Environmental Protection Agency, Region VI

1445 Ross Avenue

Mail Stop 6PDT

Dallas, Texas 75202

James L. Harris

Environmental Biologist

Operations Division

Tulsa District

U.S. Army Corps of Engineers

1645 South 101st East Avenue

Tulsa, Oklahoma 74128

Kelly Hunter Burch

Assistant Attorney General

Office of the Attorney General

313 NE 21st Street

Oklahoma City, Oklahoma 73105

Ed Dhrberg

Manager

Oklahoma Department of Environmental Quality

Industrial Permit Section

Water Quality Division

P.O. Box 1677

Oklahoma City, Oklahoma 73101-1677

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

John Flynn, PE
Environmental Engineer
Land Protection Division
Radiation Management Section
P.O. Box 1677
Oklahoma City, Oklahoma 73101-1677

Kim T. Winton
U.S. Geological Survey
202 NW 66th Street, Bldng. 7
Oklahoma City, Oklahoma 73116-8224

Richard Glastein
Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611

Scott Thompson
Director
Oklahoma Department of Environmental Quality
Land Protection Division
P.O. Box 1677
Oklahoma city, Oklahoma 73101-1677

James Curtiss, Esq.
Winston & Strawn LLP
1700 K Street NW
Washington, DC 20006-3817

Mark J. Wetterhahn
Partner
Winston & Strawn LLP
1700 K Street NW
Washington, DC 20006-3817

David Mullin
Cherokee nation
115 W. North Street
Tahlequah, Oklahoma 74464

bcc w/Enclosure (via ADAMS e-mail):

- LDWert
- CLCain
- JEWhitten
- JShepherd, FSME/DWMEP
- RJEvans
- LMGersey
- JFKatanic
- HRMS Coordinator
- NMSB-B

SUNSI Review Completed: JFK ADAMS: Yes No Initials: JFK
 Publicly Available Non-Sensitive

DOCUMENT NAME: s:\dnms\!nmib\ FMRI report 2008 001 .doc final r:\ dnms

RIV:DNMS:MSB-B	MSB-B	MSB-B	C:MSB-B
JFKatanic	LMGersey	RJEvans VIA T	JEWhitten
/RA/	/RA/	/RA JFK FOR/	/RA/
04/04/08	0415/08	04/04/08	04/16/08

OFFICIAL RECORD

T=Telephone

E=E-mail

F=Fax

**U.S. NUCLEAR REGULATORY COMMISSION
REGION IV**

Docket No.: 040-07580

License No.: SMB-911

Report No.: 2008-001

Licensee: FMRI (a subsidiary of reorganized Fansteel)

Facility: Muskogee Plant

Location: Muskogee, Oklahoma

Date: February 19-20, 2008

Inspectors: Robert Evans, PE, CHP, Senior Health Physicist
Nuclear Materials Safety Branch B

Janine F. Katanic, PhD, Health Physicist
Nuclear Materials Safety Branch B

Linda M. Gersey, Health Physicist
Nuclear Materials Safety Branch B

Accompanied by: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

John Flynn, PE, Environmental Engineer
Oklahoma Department of Environmental Quality
Radiation Management Section

Approved by: Jack E. Whitten, Chief
Nuclear Materials Safety Branch B

Attachment: Supplemental Inspection Information

ENCLOSURE

EXECUTIVE SUMMARY

FMRI (a subsidiary of reorganized Fansteel)
NRC Inspection Report 040-07580/2008-001

The inspection included a review of decommissioning activities, management organization and controls, radiation protection, environmental protection, radioactive waste management and storage, and transportation activities. Overall, decommissioning activities were being conducted in accordance with license and regulatory requirements.

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 of the radiation safety program content and implementation. (Section 1)

Radiation Protection

- The licensee implemented a radiation protection program that was in compliance with 10 CFR Part 20 and the license. (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, and Onsite Construction

- The licensee was staging radioactive material for shipment in accordance with the license. (Section 4)

Transportation Activities

- The licensee was conducting transportation operations in accordance with DOT requirements. (Section 5)

REPORTS 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 1 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. To support Phase 1 decommissioning activities, the licensee constructed two WIP material drying beds and three staging areas.

The licensee originally estimated that Ponds 2 and 3 contained about 18,800 tons of WIP material. At the time of the inspection, the licensee had excavated and shipped about 10,000 tons of WIP material from Pond 3. About 2,500 tons of excavated Pond 3 WIP material remained in temporary storage, awaiting shipment, and another 800 tons of WIP material was contained within Pond 3 awaiting excavation. The licensee planned to finish the reclamation of Pond 3 by July 2008.

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 provided a revision to the Phase 1 decommissioning schedule. The licensee proposed that Pond 2 reclamation be deferred until late 2010 or 2011. At the conclusion of the inspection, the NRC was in the process of reviewing the licensee's proposed revised decommissioning schedule.

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

1.1 Inspection Scope

The objective of this portion of the inspection was to determine 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. These activities were compared to the license conditions and to commitments made in the NRC-approved DP. Activities that were observed by the inspectors included bagging of dewatered WIP material into sacks and placing the sacks into intermodal containers. Site operations that were observed by the inspectors were found to be conducted in accordance with licensee requirements.

The inspectors also observed water collection systems that were in service, including the French drain system around Pond 3 and the intercept trench system around the site. The site tour also included observation of the water treatment system for potentially contaminated water. The inspectors also observed Outfall 001, which was permitted by the State of Oklahoma through the issuance of a National Pollutant Discharge

Elimination System (NPDES) permit. After the liquids were tested, Outfall 001 was used by the licensee to release the stored liquids in batch mode to the environment.

The inspectors performed independent radiological measurements during the inspection using a Ludlum Model 19 survey meter (NRC tag 015530, serial number 32888, calibration due 12/08/2008). The average background measurement was found to be 0.020 millirems per hour. The edge of Pond 3 was measured to be approximately 0.100 millirems per hour; WIP material Staging Area 3 was measured to be approximately 0.200 millirems per hour; Drying Bed A was measured to be approximately 0.080 millirems per hour; and the edge of Pond 2 was measured to be approximately 0.160 millirems per hour.

b. Licensee Audits

The inspectors reviewed the minutes for the licensee's Radiation Safety Committee meetings that were conducted during calendar year 2007. The meeting participants discussed trends and proposed changes to the radiation protection program. A comprehensive review of the radiation safety was performed in February 2007 by a contractor. The audit appeared effective in identifying areas for improvement. The licensee developed and implemented corrective actions as a result of the audit.

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 of the radiation safety program content and implementation.

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 Section 10 of the DP. To monitor for external radiation, the licensee assigned thermoluminescent dosimeters to site workers. Internal exposures were calculated from portable lapel air sample results. During 2007, 17 individuals were monitored.

The highest total effective dose equivalent was 243 millirems with a regulatory limit of 5,000 millirems per year. The individual with the highest dose received 27 millirems deep dose equivalent (external exposure) and 216 millirems committed effective dose equivalent (internal dose).

In addition to lapel samplers, the licensee conducted weekly air sampling in the plant in three locations in the Chem A and Chem C Buildings. The licensee also conducted

working level measurements in the Chem A laboratory and other areas required by special work permits (SWPs) such as entries into the Sodium Reduction Building. The licensee used these sample results for trending purposes only. These sample results were not used for determination of occupational exposures.

Effective January 2008, the licensee elected to discontinue use of thermoluminescent dosimeters to measure external doses. In accordance with NRC regulation 10 CFR 20.1502(a)(1), the licensee is required to provide occupational exposure monitoring if workers are likely to receive, in one year from sources external to the body, a dose in excess of 500 millirems. The licensee conducted a historical review and noted that the highest external dose from 1999-2006 was 254 millirems. This dose was measured for a worker conducting Phase I decommissioning activities during 2006. In the future, the licensee plans to conduct and document area radiation surveys, which should continue to provide a basis for not monitoring workers' external doses. Changes in work conditions, if identified in the future, may necessitate a change in the licensee's external exposure monitoring policy.

Effective January 31, 2008, the licensee implemented a new protocol for responding to selected airborne radioactivity exceedances. Previously, any lapel air sampler result that exceeded the action level resulted in an evaluation and the implementation of corrective actions, as appropriate, by the licensee. These corrective actions included notification of site management, shutdown of suspected equipment, inspection of equipment, and isolation of the sources of radioactivity.

During January 2008, the licensee elected to revise its policy regarding its response to Phase I work activities. This change was approved by the licensee's Radiation Safety Committee on February 27, 2008. Previously, the licensee responded to and evaluated each air sample exceedance for Phase I work, and the developed corrective actions resulted in the implementation of additional safety measures. However, although the licensee continues to experience some exceedances of the airborne radioactivity action level during Phase I work, the licensee concluded that the implementation of additional corrective actions were not cost effective and did not result in any added benefit.

The licensee will continue to review all air sample results, including Phase I activities, and will trend these sample results. In the judgment of the radiation safety officer, if an exceedance is unexpected or is deemed worthy of review, then the licensee will implement a formal review. If the exceedance involves Phase I work that is understood and predictable, then the licensee would no longer implement all of the corrective actions stipulated in the license application.

The NRC reviewed the licensee's new policy and noted that the policy was not detrimental to health and safety because of defense in depth. The licensee would still review all air sample results and would formally respond to unexpected and unanticipated action level exceedances. Any sample result that exceeds the action level involving activities other than Phase I activities would still be investigated. The licensee will continue to respond to any exceedance of the 12-derived air concentration hours per week action level, regardless of work activity. Further, this policy was applicable only to Phase I work. Finally, based on recent occupational monitoring sample results, radiation doses to site workers were under 5-percent of the regulatory limit during 2007.

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. In 2007, the licensee monitored radon in eight locations including a background area. Radon samples were analyzed quarterly by an outside vendor.

During the third quarter of 2007, the radon concentration for the Chem A laboratory was found to be 37.3 pCi/L, a value that exceeds the 30 pCi/L action level. A Condition Report was generated by the licensee to determine the cause, and monthly radon monitoring commenced in the Chem A laboratory until the radon concentration was below the action limit. The licensee found that a fan in the Chem A laboratory was inoperable, and WIP samples were openly stored in this area. After repairing the fan and disposing of the WIP samples, the radon concentration decreased to 1.3 pCi/L.

The inspectors reviewed the radon sampling results for 2007. The sodium reduction building continued to exceed the 30 pCi/L action level. The radon in this building ranged from 45 to 119 pCi/L. This building was used for storage of bagged radioactive material from the ponds. The licensee notified the NRC that as of January 1, 2008, it had discontinued radon monitoring in this building, as allowed by its license. The licensee felt that personnel monitoring and safety are adequately provided through the SWP process. An SWP was still required for entry into the building. The building continues to be posted as an airborne radioactivity area as required by 10 CFR 20.1902(d).

c. 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. 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.

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

d. Special Work Permits

In accordance with Section 3.2 of Part B to the license application, the licensee had a SWP program in place. The SWPs were used to describe specific or special worker protection requirements for activities involving radioactive material and not covered by a procedure. The inspectors reviewed the 15 SWPs generated in 2007, and one SWP for 2008, which were utilized mostly for Pond 3 or other WIP waste handling work. The SWPs listed both radiological and non-radiological safety hazards, personnel protective equipment requirements, and monitoring requirements. The inspectors concluded that the licensee had implemented the SWP program as required in the license application.

e. Training

Training requirements were provided in Section 3.3 of Part B to the license. General employee training was provided annually to site workers during 2007. New employee training was conducted for five contractors. Also, hazardous material transportation training was provided during July 2007 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.

3 Environmental Protection (88045)

3.1 Inspection Scope

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

3.2 Observations and Findings

a. Liquid Effluents

Facility liquid effluents were discharged from Pond 6 to the Arkansas River through Outfall 001. Three 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. Five water samples in 2007 contained slightly elevated beta 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 the NPDES permit requirements.

b. Environmental Air Sampling

The licensee sampled airborne alpha activity at six locations including four perimeter stations, one background station, and one offsite station. Airborne particulates were continuously collected and analyzed weekly. Based on the 2007 records, no sample result exceeded the administrative action level for gross alpha activity.

During the previous inspection, 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 licensee issued a Condition Report to review, recalculate, correct previous sample results as necessary. The inspectors observed the recalculated air monitoring results in the files.

c. Groundwater Monitoring

The licensee's groundwater monitoring program consisted of sampling 19 monitoring wells and 4 sumps. The wells and sumps were sampled quarterly. The inspectors

reviewed the sample results for 2007, with the exception of the fourth quarter sample results. The results for samples collected in December 2007 were not available during the inspection.

As noted in previous inspection reports, the uranium concentrations in samples collected from MW-74 have exceeded the reporting level specified in the license since March 2006. This well is located down-gradient of Pond 3 but up-gradient of the intercept trench that runs parallel to the Arkansas River. The 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 have stabilized, and no upward trend is apparent. In addition, the inspectors determined that the licensee continued to report the sample results for MW-74 to the NRC as stipulated in the license.

The licensee previously concluded that subsurface contaminant disturbance caused by the reclamation of Pond 3 was the most likely reason for the 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. The reclamation of Pond 3 is scheduled to be completed in July 2008. The uranium concentrations in samples collected from MW-74 are expected to trend downward after reclamation of Pond 3 has been completed.

During the July 2007 inspection, documented in NRC Inspection Report 040-07580/07-002 dated August 16, 2007, the inspector collected four split water samples with the licensee. The samples were submitted to the NRC's contractor, Oak Ridge Institute for Science and Education (ORISE), for analysis. 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 and 3, to this inspection report. The two sets of sample results are generally comparable with no significant differences in the individual results. The data confirmed that the uranium concentrations in monitoring well MW-74 were the only sample results above the reporting levels.

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

4.2 Observations and Findings

The requirements for the temporary storage of licensed materials are provided in License Condition 25. The inspectors conducted a review of the licensee's onsite radioactive waste staging operations.

About 2,500 tons of excavated Pond 3 WIP material was staged outdoors in supersacks for the purposes of temporary storage. Prior to shipment offsite for disposal, this material may need to be re-bagged for various reasons including additional dewatering/drying. The staging area was equipped with a high density polyethylene liner and had a collection sump to collect liquids, such as precipitation. Water that was collected was routed to the facility's wastewater treatment system. The majority of the bags of WIP material in the staging area were covered with a tarp. However, several bags were in the process of being moved for the purposes of re-drying the material and were therefore not covered by the tarp. Licensee personnel noted that they visually monitored the condition of the staging area on a weekly basis and made repairs, such as adjusting the tarp, as appropriate.

Approximately 300 tons of WIP material was temporarily stored in bags in Pond 3. This material will need to be re-bagged following additional dewatering/drying prior to disposal. In addition, the licensee estimated that 500 tons of WIP material were either in the process of being dried or still needed to be excavated from Pond 3.

4.3 Conclusions

The licensee was staging radioactive material for shipment in accordance with the license.

5 Inspection of Transportation Activities (86740)

5.1 Inspection Scope

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

5.2 Observations and Findings

During the inspection, the licensee was in the process of packaging radioactive materials (WIP residual materials) for transport. Specifically, the licensee was preparing intermodal IP-1 type containers for shipment to Denison Mines (formerly IUC-White Mesa Mill). The inspectors observed various portions of the licensee's transportation processes.

The inspectors observed empty intermodals staged at the licensee's facility. Licensee personnel demonstrated their process and procedure for inspecting the container for proper condition. The licensee's checklist included verification of the functionality of mechanical components such as lid and door hinges. The licensee also removed or obliterated the associated "Empty" labels from the container.

The inspectors also observed filled supersacks of WIP residual materials being placed inside of the intermodals. The inspectors reviewed the appropriateness of markings and labels on the intermodals. The licensee's shipping papers (bill of lading) were also reviewed for completeness and compliance with DOT regulatory requirements. Licensee personnel utilized a pre-shipment inspection form to re-verify container integrity, and to ascertain if the necessary documentation had been completed.

Licensee personnel utilized a radiological survey form to document radiation survey results and removable contamination levels. The inspectors performed independent radiation surveys of intermodals that were prepared for transport (Ludlum Model 19 survey meter: NRC tag 015530, serial number 32888, calibration due 12/08/2008). Radiation survey results were consistent with the licensee's documented radiation surveys.

5.3 Conclusions

The licensee was conducting transportation operations in accordance with DOT requirements.

6 **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 20, 2008. A final exit briefing was conducted with the licensee on April 1, 2008. The licensee did not identify as proprietary any information provided to, or reviewed, by the inspectors.

GROUNDWATER SAMPLE RESULTS

Table 1: Monitoring Well MW-74 Sample Results^a

Sample Date	Uranium-238 pCi/L	Uranium-235 pCi/L	Uranium-234 pCi/L
March 15, 2006	5,460	Not Detected	4,740
June 28, 2006	9,040	Not Detected	8,620
July 14, 2006	3,800	Not Detected	3,360
July 28, 2006	4,100	Not Detected	4,180
August 10, 2006	8,240	Not Detected	7,890
August 24, 2006	6,080	Not Detected	5,240
September 20, 2006	11,300	Not Detected	10,300
October 25, 2006	4,610	83	4,280
November 15, 2006	9,110	121	8,320
December 14, 2006	9,660	2.4	8,680
March 23, 2007	8,320	39	7,160
June 13, 2007	9,070	299	8,180
September 12, 2007	6,480	142	6,280

^a Reporting Level: 3000 pCi/L

Table 2: Split Sample Results - Isotopic Thorium^a

Sample	Thorium-228 pCi/L	Thorium-230 pCi/L	Thorium-232 pCi/L
MW-74, NRC	4.6 ± 2.8	8.1 ± 2.6	-0.53 ± 0.61
MW-74, NRC Duplicate	0.9 ± 2.3	7.9 ± 2.5	0.7 ± 1.0
MW-74, FMRI	0.328 ± 0.196	0.057 ± 0.238	0.434 ± 0.188
MW-72, NRC	0.24 ± 0.25	0.48 ± 0.19	0.00 ± 0.05
MW-72, FMRI	Not Available ^b	Not Available ^b	Not Available ^b
MW-67, NRC	0.55 ± 0.22	0.54 ± 0.22	0.08 ± 0.08
MW-67, FMRI	0.487 ± 0.156	0.384 ± 0.181	0.125 ± 0.078

- a. Reporting Levels: 2000 pCi/L for thorium-228, 1000 pCi/L for thorium-230, and 300 pCi/L for thorium-232
b. Sample collected from MW-72 was not isotopically analyzed by FMRI because the gross alpha and gross beta concentrations did not exceed the respective action levels.

Table 3: Split Sample Results - Isotopic Uranium

Sample	Uranium-238 pCi/L	Uranium-235 pCi/L	Uranium-234 pCi/L
MW-74, NRC	6,670 ± 590	310 ± 40	6,600 ± 590
MW-74, NRC Duplicate	6,970 ± 630	373 ± 45	6,810 ± 610
MW-74, FMRI	9,070 ± 144	299 ± 26.3	8,180 ± 137
MW-72, NRC	1.01 ± 0.28	0.02 ± 0.04	0.91 ± 0.27
MW-72, FMRI	Not Available ^b	Not Available ^b	Not Available ^b
MW-67, NRC	353 ± 29	19.1 ± 2.4	360 ± 30
MW-67, FMRI	379 ± 17.9	4.4 ± 2.58	367 ± 17.7

^a. Reporting Level: 3000 pCi/L

^b. Sample collected from MW-72 was not isotopically analyzed by FMRI because the gross alpha and gross beta concentrations did not exceed the respective action levels.

SUPPLEMENTAL INSPECTION INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

E. Jackson, President
J. Burgess, Plant Operations Manager
R. Miller, contract Radiation Safety Officer

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

Open

None

Closed

None

Discussed

None

LIST OF ACRONYMS AND ABBREVIATIONS USED

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
DOT	U.S. Department of Transportation
DP	Decommissioning Plan
IP	Inspection Procedure
NPDES	National Pollutant Discharge Elimination System
ORISE	Oak Ridge Institute for Science and Education
pCi/L	picocuries per liter
SWP	Special Work Permit
WIP	Work-in-Process