



**A & M ENGINEERING & ENVIRONMENTAL SERVICES, INC.**

10010 E. 16TH STREET  
TULSA, OK 74128-4813

ENGINEERING • ENVIRONMENTAL • CONSTRUCTION  
(918) 665-6575 • FAX (918) 665-6576  
EMAIL: aandm@aandmengineering.com

December 18, 2006

Mr. James Shepherd  
Project Manager  
United States Nuclear Regulatory Commission  
11545 Rockville Pike  
Two White Flint  
Rockville, Maryland 20852

**Re: Groundwater Impact at the FMRI, Inc. Facility, Muskogee, OK  
License SMB-911**

Dear Mr. Shepherd:

As you know, A&M Engineering and Environmental Services, Inc. (A&M) was contracted by FMRI, Inc. to implement the Phase I Remediation pursuant to the approved facility Decommissioning Plan on file with the U.S. Nuclear Regulatory Commission ("NRC"). The project requires the excavation, drying, bagging and storing of low level radioactive waste known as WIP (Work-In-Progress) material from Ponds No. 2 and 3 in accordance with the Work Plan approved under the facility Decommissioning Plan. The project started in June 2005 with the excavation of Pond No. 3.

Pond No. 3 has a French drain system (ultimately determined to be ineffective), which was apparently intended to keep the groundwater out of the pond. However, at the beginning of May 2006, it was confirmed that the groundwater was infiltrating Pond 3 and the WIP material in the pond. Due to the groundwater contamination by the WIP material, we believed that there was a reporting requirement to the NRC and also to the Oklahoma Department of Environmental Quality (ODEQ). A&M requested that FMRI evaluate the situation, and make the appropriate regulatory notifications.

A&M was unable to convince FMRI to report site conditions and the groundwater contamination to ODEQ or the NRC, and after several inquiries regarding the reporting, A&M unilaterally notified the NRC on July 7, 2006 and ODEQ on July 19, 2006 of the potential groundwater contamination. The telephone memorandums of the notifications are included in Attachment 1.

A&M has now received notice that FMRI is terminating A&M's contract, and A&M is hereby providing notice to NRC of this fact. However, A&M continues to have grave concerns about groundwater contamination, continued migration of the contamination from the site and FMRI's

failure to act on the removal of the contamination source as quickly as possible. This concern is well founded, as it was recently confirmed by a report by FMRI to the NRC dated October 24, 2006 posted on the NRC web site with regard to groundwater impact by radioactive material (see attachment 2). A & M concerns are based on the following conditions:

- 1- The French drain surrounding the Pond No. 3 is not operating properly and effectively. The groundwater elevation in the pond stays above 507.00 feet MSL elevation during the French drain pump operating and the groundwater elevation is much higher when French drain pump is off.
- 2- The WIP material is in direct contact with the groundwater.
- 3- The shale bedrock underlying the Pond No. 3 may have fractures and the groundwater flow in the shale section may vary in direction and depth. The on-site recovery trench along the Arkansas River bank may not be effective to capture the groundwater in shale section.

A&M proposed a double-bagging procedure in May 2006, which would have expedited removal of WIP from Pond No. 3 and eliminated the contact of the radioactive WIP material with the groundwater. It was declined by FMRI, which has had the effect of allowing further groundwater and soil contamination, and possibly allowing the migration of contamination to the Arkansas River.

A&M is currently in litigation with FMRI, and does not seek to have the NRC or any other agency involved in the litigation. However, the ineffective French drain system, the resultant migration of the contamination from the pond, and the close proximity of the Arkansas River, causes A&M to again voice its concern that nothing is being done, and FMRI is not taking any corrective action to our knowledge, to prevent groundwater contamination or migration, except to attempt to assign the blame on A&M (which A&M unqualifiedly denies, and which is an issue that will be decided in the litigation).

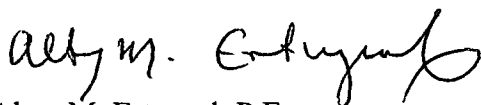
In addition, A&M has become aware that FMRI has made certain representations to the NRC regarding A&M that are not accurate. FMRI apparently advised the NRC that A&M stopped working in June 2006 in Pond No. 3 because of "perceived difficulties in excavation near the center of the pond." See attachment 3. This is not accurate. A&M stopped work in June temporarily due to several factors, including the fact that the work could not continue because of an irreconcilable conflict in the contract documents, as well as the fact that there was no competent storage area for the bagged WIP material. This is not an exhaustive list, but suffice it to say that the work stoppage was clearly not due to "perceived difficulties" in excavation. However, then, as now, groundwater contamination was a prominent concern of A&M, which ultimately reported it to the NRC and the ODEQ, as discussed above.

Mr. James Shepherd  
United States Nuclear Regulatory Commission  
Page 3

There may be other erroneous information provided to the NRC of which we are not aware. Please feel free to contact us if you have any questions or need additional information regarding any of the foregoing, or any representations, which have been made by FMRI to you regarding A&M.

A&M Engineering will continue to until December 20, 2006, which is the date FMRI will unilaterally and wrongfully terminate the contract. During this period A&M will continue to try and implement the Work Plan despite the restrictions placed by FMRI since May 2006, which has prevented A&M from implementing the NRC reviewed Work Plan in full.

Very truly yours,



Altay M. Ertugrul, P.E.  
President

Attachments

- cc: Mr. D. Blair Spitzberg, U.S. NRC  
Mr. Robert Evans, U.S. NRC  
Mr. Scott Thompson, ODEQ  
Dr. Saba Tahmassebi, ODEQ  
Mr. Ed Dibrberg, Water Quality, ODEQ  
Ms. Pamela Bishop, ODEQ  
Mr. Drew Edmondson, Attorney General of Oklahoma  
Ms. Jeannine Hale, Cherokee Nation  
Mr. Timothy Hartsfield, US Army Corps of Engineer  
Mr. Richard Greene, Regional Administrator, U.S. EPA - Region 6

**ATTACHMENT 1**

**NOTIFICATIONS TO REGULATORY AGENCIES**

**NRC Notification – July 7, 2006**

**ODEQ Notification – July 19, 2006**

**Date:** 7/13/2006  
**To:** Beth Schlapper  
**Cc:** Turgay Ertugrul, Irfan Taner, James Shepherd, Claudia Craig  
**From:** Daniel Baker  
**RE:** 7/12/2006 Teleconference

---

Main topics for discussion:

Excavation depth

Groundwater

Additional topics:

Storage capacity

Project progression

A & M opened meeting describing current site conditions and providing a timeline of events that has leading up to the site status as it is today.

A & M expressed its concern with the groundwater infiltration in the material, insufficient area for storage of the bagged material, current status of the depth of excavation and the conflicting documents, and A & M 's prior request for A & M and the owner to have a meeting with the regulators to aid in settling the concerns. The requests have not been acted on, and thus A & M initiated this call by contacting you on Friday July 7<sup>th</sup> 2006.

James Shepherd of the NRC replied to our request for advisement believing that most of our concerns seemed to be technical issues that are outside of the realm of the NRC to address. However, the NRC provided A & M with the following observations:

It was the agencies opinion that so long as groundwater was being treated in accordance with the facilities NPDES permit and not being released directly

*Teleconference*

into the environment that the facility is in compliance and therefore not a regulatory issue. However, if there is a known release of contaminants to the groundwater not intercepted and released then it should be reported to the ODEQ.

As far as the excavation depth, it is the agencies understanding that any drawings are approximations and that for the Phase I Activities the facility is required by their license to remove all WIP and WIP like material from Ponds 2 and 3 as well as any WIP or WIP like material that may have migrated from or under the ponds.

On funding issues, the trust is a stand-by trust and in that case the regulators have no access to the money unless the company would no longer be a functioning organization. Additionally the request for funds is made 30 days in advance and an exact account of the expenditures is not known or required.

With regard to the projection of progress for completion of site activities, the agency commented that holding the facility to the current schedule is difficult to enforce at times because of how the schedule was put together. However, there would be a site inspection as soon as transportation activities were underway.

This concluded the teleconference.

If you have any questions, comments, or discrepancies please feel free to forward them so that these minutes can be corrected.

DB

## PHONE CONVERSATION RECORD

Date of Conversation: July 19, 2006 (Tuesday)

Time of Conversation: Approximately 11:00 a.m. to 11:30 a.m.

Participants:

*Call Initiated By:* Mr. Turgay M. Ertugrul  
Vice President  
A & M Engineering and Environmental Services, Inc.  
*And*  
Mr. Jeff Elbert  
Project Manager  
A & M Engineering and Environmental Services, Inc.

*Call Received By:* Mr. Paul Johnson  
Water Quality Division  
Oklahoma Department OF Environmental Quality (ODEQ)

Project Of Discussion: FMRI Phase I Remediation Project

FMRI  
10 Tantalum Place  
Muskogee, Oklahoma

Subject of Conversation: Pond #3 residual material / WIP (Material) sitting in groundwater within the pond. Bagged Material storage and transportation issues.

**Turgay M. Ertugrul (TME)** Identifies with Paul Johnson (PJ) by indicating that the Fansteel project is similar to the Kaiser project in which they were both previously involved in together.

**PJ** Confirms that he has visited the Fansteel facility in Muskogee, Oklahoma.

**TME** Provides a summary of the project including the following information:

- Started project in June of 2005.
- FMRI and their Engineer confirmed that water was recharging within Pond #3 during May 2006. They also confirmed the groundwater

Phone Conversation Record  
Fansteel – Muskogee, Ok  
July 19, 2006 Page 2 of 5

elevation at 507 feet. On a number of occasions since December 2005 we indicated to FMRI that the water in Pond #3 was groundwater.

- Nuclear Regulatory Commission (NRC) approved Decommissioning Plan (Plan) and related Work Plan that described the removal of the WIP material, Pond #3 liner, and sludge like WIP material directly beneath the liner.
- Two drawings in the Contract Documents indicate to excavate to the 508 feet elevation, which is in conflict with the Work Plan.
- A & M Engineering (we) has been following the Work Plan approved by the NRC. However, the 508 feet elevation stated on the drawings was not brought to our attention by FMRI until May 2006 when they indicated that we were below the 508 feet elevation.
- To date we have removed approximately 80% of the Material from Pond # 3 and stored inside lined containment areas on-site.
- We stopped work from May 2-21, 2006 when we learned we were in the groundwater and told FMRI that the groundwater issue should be reported to the NRC and ODEQ.
- After May 22, 2006 we went back to work with the assurance of FMRI and Penn E & R and commenced to remove the Material above the 508 feet elevation within Pond #3. This work resulted in the bagging of enough Material that all of the lined temporary staging areas were filled.
- We have been on standby since June 9, 2006 since FMRI has not provided any additional room for temporary storage and the Transportation Contract was not initiated by FMRI in time so that the bagged Material could be transported to IUC for recycling. Approval of the IUC Permit Modification by the Utah Radiation Board did not happen until July 12<sup>th</sup> or 13<sup>th</sup> of 2006.
- A & M Engineering contacted the NRC on July 7, 2006 and indicated the WIP material in Pond No. 3 is exposed and sitting in the groundwater and requested direction on how to proceed. The actual groundwater is kept artificially low with an existing under drain system but still the WIP material is in the groundwater. Potentially the groundwater level will fluctuate with seasonal impact, power or equipment failure. On May 3,



Phone Conversation Record  
Fansteel – Muskogee, Ok  
July 19, 2006 Page 3 of 5

2006 the pump failure resulted in the rise of groundwater level above the 508 feet elevation for about a week until the pump was replaced.

- NRC's indication was if the groundwater is contained with the under drain system and pumped water is treated by the on-site wastewater system and there is no NPDES related issues then there is no violation. This issue should be discussed with the ODEQ.
- The other issue was these bagged materials have been stored in the temporary staging areas as long as ten months without shipment. Would this condition violate any regulatory requirements?

**PJ** Asks if any letter was sent to FMRI from A & M Engineering stating that the NRC and ODEQ should be notified?

**TME** Yes, we have correspondence to FMRI with no response.

**TME** Indicates that we have contacted the NRC.

**PJ** Which lagoon is being excavated?

**TME** Confirms that we are talking about Pond #3.

**PJ** How much is the project complete?

**TME** Clarifies that approximately 1,200 bags (2 tons each) short of finished with Pond #3. This would be about 2,400-2,500 tons left if we excavate to the 508 feet elevation. However, if we go below the 508 feet elevation to the bottom of Pond #3 we would expect all together 1,500 to 2,000 bags, equal to 3,000 to 4,000 tons.

**PJ** Is the Material sitting in groundwater now?

**TME** They have dropped the water level farther down to the 507 feet elevation and A & M continuously pumping the pond water. .

**PJ** Clarifies that A & M Engineering thought Fansteel would contact ODEQ?

**TME** A & M recommended to FMRI.

**TME** 10 month old bags of Material are stored on-site. We never expected to store the bags this long and have no idea what affect the Material will have on the bags integrity over time with the pH at <1 and what regulatory implication may have.

Phone Conversation Record  
Fansteel – Muskogee, Ok  
July 19, 2006 Page 4 of 5

**PJ** How soon should the bagged Material would be shipped?

**TME** April 27, 2006 the Transportation Contract expired without initiation. Under the contract the shipping window as from September 2005 to March 2006.

**PJ** Who are you working with?

**TME** Penn E & R (the Engineer) and FMRI is the owner.

**PJ** What is your phone number? So, your concerns are with the Material sitting in groundwater within Pond #3 and delays in the Transportation Contract.

**TME** NRC says if the Material is contained within the sub drain system with no release then it is ok.

**PJ** That is assuming the system is functioning properly. So, the NRC knows that the Material is setting in groundwater.

**TME** Yes

**PJ** Is the under drain system working properly?

**TME** We don't know for certain. However, we know May 3, 2006 the pump failed and it was replace within a weeks time frame.

**PJ** I don't what to tell you guys. My boss and some of my co-workers are out of town. Thanks for calling I will check around and get back with you. I assume you need to know something ASAP?

**TME** Yes, we are on standby.

**PJ** Standby?

**TME** Yes, we don't have anywhere to store additional bagged Material.

**PJ** What would it take for them to start moving the stuff?

**TME** We have told them to tell us where to put the bags. We must have additional storage space to continue.

Phone Conversation Record  
Fansteel – Muskogee, Ok  
July 19, 2006 Page 5 of 5

**PJ** So, the stored bagged Material can't be shipped to Utah because there is no contract in place.

**TME** Exactly

**PJ** Does Fansteel need to get you more storage space and a Transportation Contract to continue?

**TME** Yes

**PJ** Let me clarify. The main three issues are the need for more storage and a transportation contract, potential groundwater impact, long term on-site storage of bagged material, and FMRI's failure to contact ODEQ?

**TME** Yes

**TME** Last December (December 2005) on about December 12, 2005 in the morning after a cold night (below freezing) without precipitation we arrived to discover Pond #3 full of water. FMRI still has not provided us an explanation for this event and says it is still under investigation.

**PJ** How long has the WIP been in the water table?

**TME** The measurement and groundwater level determination was made May 2, 2006.

**PJ** So, two months or so?

**TME** Yes, since formally notified on May 2, 2006. However, we knew the condition and have suspected since May 2, 2006.

**PJ** I understand your concern and will talk to Glen and Mike in land then I will give you a call back either later today or tomorrow.

**TME** ODEQ and NRC understanding and terms in relation to the Decommissioning Plan (Plan) for the facility is not information we are privileged to. Regardless, we have stressed to them numerous times to notify the ODEQ about these issues. At present we are obligated to notify ODEQ and seek direction and procedures to work in groundwater.

**PJ** Thanks, it will take some time for me to get back with you. I believe there is a need to get the bagged Material off-site. If the under drain system is working properly it may be ok. But if it is not working properly then is a State issue.

## TELEPHONE MEMO

**TO:** Mr. Paul Johnson  
Water Quality Division  
Oklahoma Department of Environmental Quality (ODEQ)

**FROM:** Turgay M. Ertugrul

**DATE:** July 26, 2006

**SUBJECT:** FMRI Phase I Remediation Project

I called to find out the status of our phone conversation on July 19, 2006. Paul indicated that ODEQ internally discussed the issues and talked with Beth Schlapper of NRC. At this time they do not see any problems, as long as the ground water contamination is contained and pump to the WWTP. I indicated, I guess, ODEQ is OK with the bagged WIP material stored on site as long as ten months and there is no impact with the Bevill Amendment restrictions. Paul indicated he would look into.

At the conclusion, I indicated A&M has fulfilled our regulatory reporting obligation under our construction contract with FMRI and going forward it is the FMRI responsibility for regulatory reporting, as an owner of the facility.

On July 28, 2006, Paul called and indicated that he was instructed to prepare a memo and place it in the file. Due to his work load ODEQ will assign someone else to look at these matters at a later date.

**ATTACHMENT 2**

**FMRI's Report to NRC – October 24, 2006**



October 24, 2006

RECEIVED

OCT 27 2006

DNMS

United States Nuclear Regulatory Commission  
Regional Administrator Bruce Mallett  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

RE: License SMB-911, Docket #40-7580 – Report of concentrations of radioactive material exceeding a license limit. 10 CFR20.2203(a)(3)(ii)

Dear Mr. Mallett:

Please find attached a report issued in accordance with the requirements of 10 CFR20.2203(a)(3)(ii) and with respect to NRC Source Material License SMB-911.

Should you have any questions or comments regarding this matter, please contact Keyton Payne or me at (918) 687-6303.

Sincerely,

E. Jonathan Jackson  
President/CEO

Attachment

Copy to: James Shepherd – NRC Project Manager  
Beth Alferink – NRC Inspector  
Mike Broderick – ODEQ  
Keyton Payne - FMRI, Inc.  
File (NRC – 102406)

E. Jonathan Jackson, President, FMRI, Inc.  
#Ten Tantalum Place, Muskogee, OK 74403  
Phone (918) 687-6303 / Fax (918) 687-6112

**FMRI, Inc.**

Muskogee, Oklahoma  
U.S.NRC Materials License SMB-911

**Report of concentrations of radioactive material exceeding a license limit  
10CFR20.2203(a)(3)(ii)**

**(i) Estimate of each individual's dose;**

No individual received any dose as a result of exceeding the groundwater monitoring limit described in NRC Materials License SMB-911 at Section 3.5.6 "Groundwater Monitoring", item 3.

**(ii) The concentrations of radioactive material involved;**

The concentrations of radioactive material in Monitoring Well 74 were:

Radionuclide	10 CFR 20 Appendix B Table 2 Effluent Concentration $\mu\text{Ci/ml}$	FMRI, Inc. MW-74 Sample Concentration $\mu\text{Ci/ml}$	Sample Date	Date Reported
U-238	3.00E-07	9.04E-06	06/28/06	10/09/06
U-234	3.00E-07	0	06/28/06	10/09/06
U-235	3.00E-07	8.62E-06	06/28/06	10/09/06

**(iii) The cause of the concentrations;**

FMRI, Inc. collects samples of groundwater from monitoring locations on site. The monitoring is performed in accordance with NPDES Permit OK0001643 and NRC Materials License SMB-911, Section 3.5.6. The source material license includes concentration limits for these samples above which specific actions are required by the licensee.

Construction activities began on June 8, 2005 for Phase I decommissioning activities to remove WIP from Ponds 2 and 3. FMRI performs radiological sampling of its groundwater wells and interceptor trench once a quarter.

Trending analysis is reviewed by the Radiation Safety Committee once a quarter. The trending on this well has been increasing since September 2005. Currently, this is the only monitoring well that has been showing an upward trend from Phase I activities.

**(iv) Corrective steps taken or planned;**

Notification was made to Ms. Beth Alferink (NRC Region IV, Inspector) and Mr. James Sheperd (NRC Headquarters, Project Manager) of the condition.

A CR was issued by the PRSO for this incident on 9/12/06 when gross alpha and gross beta results were received. The CR addresses the elevated gross alpha/beta results and requests isotopic uranium and isotopic thorium analysis to be performed. The CR also states that if the isotopic result is 10x the limit specified in 10 CFR Part 20 Appendix B, Table II then it will submit a report to the Administrator, NRC Region IV, and the ODEQ within 30 days.

E. Jonathan Jackson, President, FMRI, Inc.  
#Ten Tantalum Place, Muskogee, OK 74403  
Phone (918) 687-6303 / Fax (918) 687-6112

Enhanced groundwater monitoring has been established to track and trend the monitoring wells around Pond 3. Samples are to be taken twice a month for two months and then go to a monthly review for three months. If no other wells are trending up then the facility will resume quarterly sampling according to facility requirements.

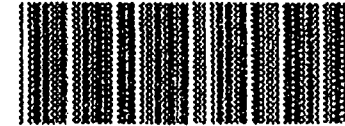
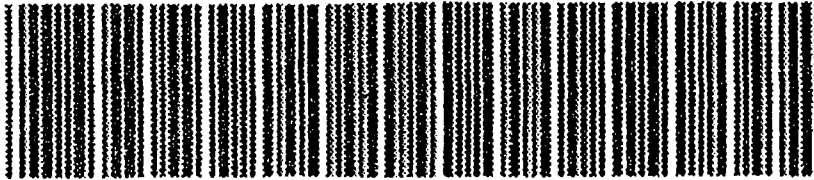
Monitoring Well 74 is directly upstream of the facility interceptor trench, and to the north east of Pond 2. This well discharges into the interceptor trench and is pumped to the facility wastewater treatment plant through Sump 1. The treated wastewater then discharges through the facility NPDES permitted outfall 001. No other monitoring wells in the enhanced monitoring program have been observed as being elevated.

E. Jonathan Jackson, President, FMRI, Inc.  
#Ten Tantalum Place, Muskogee, OK 74403  
Phone (918) 687-6303 / Fax (918) 687-6112



Waybill #: 18426599052

Origin: UGN  
Date Printed: 10/24/2006



(2L)US76011

Webship API 02.00 (01/2004)

<b>To:</b> U.S. Nuclear Regulatory Commission 611 Ryan Plaza Drive Suite 400 Arlington, TX 76011 UNITED STATES	<b>RECEIVED</b> OCT 27 2006 DNMS	<b>Service:</b> N
<b>Attention To:</b> Bruce Mallett <b>Phone #:</b> 817-860-8225		<b>Special Service:</b>
<b>Route:</b> <b>SBFI 2H</b>		



www.dhl.com



www.speedship.com

**From:**  
FANSTEEL  
570 LAKE COOK RD STE 200  
DEERFIELD, IL 60015  
UNITED STATES

**Sent By:** J. Jackson, FMRI  
**Phone #:** 847-689-4900

**Description:**  
**Weight (lbs.):** 1      **Dims:** 0 X 0 X 0  
**Pieces:** 1 of 1  
**Bill Shipment To:** Sender  
**Ship Ref:** 3514 FMRI

**ATTACHMENT 3**  
**NRC Report – Appendix C**  
**Site Summaries for Current Complex**  
**Decommissioning Sites**  
**Relating to FMRI (Fansteel) Inc.**

## **Appendix C**

### **Site Summaries for Current Complex Decommissioning Sites**

# FMRI (Fansteel), Inc.

## 1.0 Site Identification

Location: Muskogee, OK  
License No.: SMB-911  
Docket No.: 040-07580  
License Status: Expired  
Project Manager: Jim Shepherd

## 2.0 Site Status Summary

The Muskogee site originally comprised about 52 hectares (110 acres) on the Arkansas River (Mile 395). It is about 4 kilometers (2.5 miles) from the center of the City of Muskogee, between the river on the east, Highway US-62 on the south, and the Muskogee Turnpike on the west. In 1996, 14 hectares (35 acres) known as the Northwest Property was released from the license.

The Muskogee facility, owned and operated by Fansteel Inc., produced tantalum and columbium metals from 1957 until it ceased operations in 1990. The raw materials used for tantalum and columbium production contained uranium and thorium as naturally occurring trace constituents. These radioactive species were present in the process raw materials at an approximate concentration of 0.1 percent uranium oxide and 0.25 percent thorium oxide. This concentration is sufficient to cause the ores and slags to be classified as source materials and issued a license by the AEC in 1967. The radioactive residues from the process were placed in several sludge ponds north of the process building. Other liquid waste went to several ponds in the southern part of the site.

Radioactive contaminants at the site include natural uranium, natural thorium, and decay products. Chemical contamination are also present in the form of metals including tantalum, niobium, chromium, antimony, tin, barium, arsenic; ammonia fluoride and methyl isobutyl ketone. In 1993, the licensee performed a characterization survey to determine existing conditions site wide. Radiological survey activities were conducted over the interior and exterior of the site structures and the open land areas of the site. Buildings and equipment associated with the ore-processing activities include the Chemical "C" Building, the Chemical "A" Building, and the R&D Building. The Chemical "C" Building is contaminated throughout by radioactive ore residues. Isolated areas of radioactive contamination were also identified in some of the other site buildings. Characterization surveys also identified the highest concentrations of radiological contaminants in Pond Nos. 2 and 3. Survey data indicate that the Th-232 and U-238 are present with their radioactive progeny in secular equilibrium. The U-235 decay series is also present, because U-235 constitutes 0.7 percent by weight (approximately 2.3 percent by radioactivity) of naturally occurring uranium.

NRC granted Fansteel a license amendment dated March 25, 1997, to complete the reprocessing of ore residues (WIP), calcium fluoride residues, and wastewater treatment residues containing uranium and thorium, in various site impoundments. Fansteel also planned to place the residue of these operations into an on-site disposal cell in accordance with 10 CFR 20.1403; this cell never received NRC approval.

In November, 2001, Fansteel suspended all operations at the Muskogee site, and in January, 2002, filed for bankruptcy protection under Chapter 11. Subsequently, NRC drew on the financial assurance instruments and that money is now in a standby trust. The license expired in September, 2002. A request for renewal was denied because the licensee stated it had ceased operations and intended to remediate the site for unrestricted use. Conditions of the license related to material control remain in effect in accordance with 10 CFR 40.42(c).

In July, 2003, Fansteel submitted: i) its DP; ii) a request for exemption from financial assurance requirements; and iii) a request for authorization to transfer the site license to a subsidiary to be formed as part of the bankruptcy reorganization plan. In this DP, the licensee revised the cost estimate for decommissioning to approximately \$42 million from that in the bankruptcy filing of \$57 million. On November 17, 2003, the bankruptcy court approved Fansteel's corporate reorganization plan to divide the company into two parts, with the second part going to the commercial creditors. FMRI Inc. (FMRI), a new subsidiary of Reorganized Fansteel, would become the licensee for the Muskogee site.

On December 4, 2003, NRC approved the DP, the request for exemption to financial assurance requirements, and the license transfer authorization, subject to the bankruptcy reorganization plan becoming effective. The approved DP outlines a phased approach to remedial activities that focuses on the most risk-significant areas and accomplishes those activities first. The approval also authorized FMRI to draw up to \$2 million from the standby trust for remediation activities if it has insufficient funds from Fansteel to continue the work. This agreement was subsequently revised to authorize FMRI to draw additional monies from the fund for waste disposal as part of Phase 1 activities. The reorganization plan and NRC's approvals became effective on January 23, 2004.

Phase 1 of the DP states that the WIP in Ponds 2 and 3 will be removed from the site and sent to the White Mesa facility operated by International Uranium Corp. (IUC). Phase 1 was scheduled to commence in September, 2004. FMRI did not commence remediation activities until about June, 2005. In order for IUC to receive the material it must have a license amendment approved by the State of Utah. IUC submitted the application on April 8, 2005. On June 13, 2006, Utah issued the amendment authorizing receipt of FMRI material. In May, 2005 FMRI began a process of air drying and bagging the WIP in Pond 3 in preparation for shipment to IUC.

### **3.0 Major Technical or Regulatory Issues**

Fansteel has provided a total of about \$4.5 million in financial assurance. To date, FMRI has spent \$2 million from the trust fund to assist in paying for the start of remediation activities. The original cost estimate for off-site disposal of all wastes greater than 10pCi/g total was \$57 million. The revised cost estimate in the DP is about \$30 million for solid waste, based on dose criteria of 10 CFR 20.1402 using an industrial land use scenario with no drinking water pathway. Fansteel estimated approximately \$10 million additional for commitments for ground water remediation. Fansteel stated it is not able to provide additional financial assurance because of the bankruptcy proceeding. Instead, it signed unsecured promissory notes for the estimated costs. As of May, 2006, FMRI has made four withdrawals from the Trust, for a total of about \$2.2 million, and one deposit from an insurance settlement of about \$764 thousand. The remaining value of the fund is about \$3 million.

FMRI did not commence remediation by September 1, 2004, as required by license condition, but did commence excavation of Pond 3 in June, 2005. On April 13, 2005, NRC issued a Notice of Violation (NOV) (EA-04-188) for failure to commence remediation as required by Condition 26 of SMB-911. NRC determined not to pursue the apparent violation, but to focus on FMRI meeting its completion date.

FMRI did not provide updates to annual financial projections (Table 15-12 of the DP) as required by its license. On July 26, 2005, NRC issued a NOV for failure to submit information as required by its license. FMRI responded that Fansteel, its parent, did not provide the information (FMRI is not an operating company and has no other revenue source). NRC did not consider FMRI's responses to be adequate and FMRI agreed to submit a request for license amendment to resolve the issue. NRC rejected FMRI's request because it did not meet the intent of the original condition nor NRC's information needs. FMRI requested a meeting with NRC to discuss a course of action to resolve the on-going violation.

In June, 2006 FMRI's excavation contractor stopped work in Pond 3 because of perceived difficulties in excavation near the center of the pond. Also, the time limit on the existing transportation contract expired before authorization to ship to IUC was granted; FMRI is negotiating a new contract. FMRI has supersacks sitting on the ground per a temporary exemption to a license condition specifying storage conditions. Because it cannot ship the material before the exemption expires in September, 2006, FMRI must request further licensing action on this matter.

There is high public interest from the State of Oklahoma, the Cherokee Nation, and the Port of Muskogee.

#### **4.0 Estimated Date For Closure**

12/12/2023