



March 27, 2007

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.

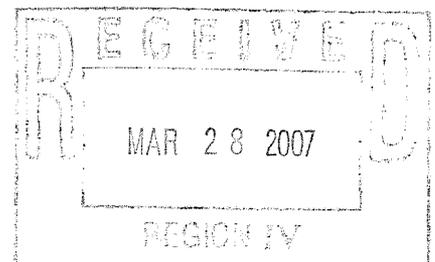
Sincerely,

A handwritten signature in black ink, appearing to read 'E. Jonathan Jackson'.

E. Jonathan Jackson  
President/CEO

Attachment

Copy to: James Shepherd – NRC Project Manager  
Bob Evans – NRC Inspector  
Mike Broderick – ODEQ  
Keyton Payne - FMRI, Inc.  
File (NRC – 032707)



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	4.61E-06	10/25/06	03/08/07
U-235	3.00E-07	8.3E-08	10/25/06	03/08/07
U-234	3.00E-07	4.28E-06	10/25/06	03/08/07

**(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 with Phase I activities.

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

Notification was made to Mr. Bob Evans (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 11/13/06 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.

The original results from the 10/25/06 sample was less than 10x the limit and was therefore not originally reported. However, based on further review of the sample it was determined by FMRI management that the sample be reanalysed as well as the 11/15/06 sample. The laboratory description of the sample error was determined to be either a sample volume recording error or an error in the amount of tracer added to the sample (laboratory description attached).

As detailed in earlier notices, an enhanced groundwater monitoring program was established to track and trend the monitoring wells around Pond 3. This sample was part of the 2nd monthly sample of the enhanced program. The program entailed samples 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 northeast 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.

Listed below is an update of the analysis results for each notification for the exceedance for Monitoring Well 74.

**Table: Monitoring Well MW-74 Sample Results**

Sample Date	Report Date	Uranium-238 Concentration	Uranium-235 Concentration	Uranium-234 Concentration	Reporting Level
March 15, 2006	July 18, 2006	5460 pCi/l	Not Detected	4740 pCi/l	3000 pCi/l
June 28, 2006	October 24, 2006	9040 pCi/l	Not Detected	8620 pCi/l	3000 pCi/l
July 14, 2006	October 13, 2006	3800 pCi/l	Not Detected	3360 pCi/l	3000 pCi/l
July 28, 2006	September 26, 2006	4100 pCi/l	Not Detected	4180 pCi/l	3000 pCi/l
August 10, 2006	October 13, 2006	8240 pCi/l	Not Detected	7890 pCi/l	3000 pCi/l
August 24, 2006	October 13, 2006	6080 pCi/l	Not Detected	5240 pCi/l	3000 pCi/l
September 20, 2006	October 24, 2006	11300 pCi/l	Not Detected	10300 pCi/l	3000 pCi/l
October 25, 2006	March 8, 2007	4610 pCi/l	83 pCi/l	4280 pCi/l	3000 pCi/l
November, 15, 2006	March 8, 2007	9110 pCi/l	121 pCi/l	8320 pCi/l	3000 pCi/l



**Outreach  
Laboratory**

311 North Aspen  
Broken Arrow, OK 74012  
(918) 251-2515  
FAX (918) 251-0008

March 8, 2007

Keyton Payne  
Fansteel Muskogee Remediation, Inc.  
10 Tantalum Place  
Muskogee, OK 74403

PROJECT NAME: Monitoring Wells & Sumps  
OUTREACH LAB ID: 20061046 and 20060945

Dear Mr. Payne:

Please find enclosed the amended analytical reports for your samples originally reported on 2/02/07.

At your request sample MW 74 for projects 20060945 and 20061046 was reanalyzed for Isotopic Uranium. The samples were reanalyzed in 1, 5 and 10 ml aliquots due to the elevated activity. MW74 on project 20060945 was reported incorrectly, we believe this was due to analyst error either recording sample volume or tracer added. The report was amended and the reanalysis results were used. MW74 on project 20061046 was amended with the reanalysis results, however we believe that due to the high sample uranium activity and the possibility of very finely suspended material the sample should be filtered prior to analysis. The filter can be either digested and added back to the sample, analyzed and reported separately or just report the soluble portion. The U235 has to be manually integrated due to the activity of U234 interfering with the baseline of the background. These two samples have been corrected and any samples in the future will be manually integrated for U-235.

If we filter and digest the filter for Uranium, it should be digested for Gross Alpha also.

Thank you for choosing Outreach Laboratory and if you have any questions feel free to call us at 918-251-2515.

Laboratory Director

ODEQ ID #9517  
NRC ODEQ LIC. #27522-01



CERT. ID #OK001  
See Certified  
Parameter List