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February 6, 2007

U.S. Nuclear Regulatory Commission  
ATTN: Mr. James Shepherd, Project Manager  
Decommissioning Branch, Division of Waste Management  
11545 Rockville Pike  
Two White Flint  
Rockville, Maryland 20852

*via overnight carrier*

Reference: License SMB-911; Docket No. 40-7580 – License Condition 37(a) -  
*Phase I Transportation Work Plan, Revision 2.01, February 6, 2007*

Dear Mr. Shepherd:

Pursuant to the requirements of Condition 37(a) of License SMB-911, FMRI submits the enclosed revised Transportation Plan for the Phase I Remediation Project (Revision 2.01) that has been updated to include additional transportation carriers.

Should you have any questions, please call either Keyton Payne or myself at (918) 687-6303.

Sincerely,  
FMRI, INC.

A handwritten signature in black ink, appearing to read 'E. Jonathan Jackson'. The signature is fluid and cursive, with a long horizontal stroke at the end.

E. Jonathan Jackson  
President

Enclosure

cc: w/enclosure

Blair Spitzber (NRC Region IV)  
Keyton Payne (FMRI)  
Dave Tourdot (Penn E&R)  
Document Control 020607-01

**TRANSPORTATION  
PLAN**

**FOR**

**FMRI, INC.**

**PHASE I REMEDIATION PROJECT  
MUSKOGEE, OKLAHOMA FACILITY**

**PREPARED BY: CEDAR MOUNTAIN ENVIRONMENTAL, INC.,  
GREENFIELD LOGISTICS, LLC,  
HERITAGE TRANSPORT, LLC, AND  
AMERICAN WASTE MANAGEMENT SERVICES,  
INC.**

**DATE: REVISION 2.01, FEBRUARY 6, 2007**

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## TRANSPORTATION PLAN

### I. PROJECT SUMMARY

Shipments of bagged work-in-progress (WIP) residual materials from the FMRI, Inc. (FMRI) Muskogee, Oklahoma Facility to the International Uranium Company's (IUC) White Mesa Facility in Blanding Utah will be consigned as exclusive use using intermodal containers, tractors with rolloff and chasses trailers, and 6 to 8 position railcars. Intermodal containers will be filled at the FMRI Muskogee, Oklahoma Facility with bagged WIP residual materials containing natural uranium and thorium constituents. The filled intermodal containers will then be loaded onto rolloff tractor trailers and transported to either the Frontier Terminal or Johnston Terminal, both located in Muskogee, Oklahoma. The intermodal containers will be placed onto the articulated bulk container rail cars and transported by rail to a local transload rail spur in either Albuquerque, New Mexico (from the Frontier Terminal) or Grand Junction, Colorado (from the Johnston Terminal) where they will be lifted onto tractor/trailers (chasses) for transport to the IUC White Mesa Facility.

The Shipper of Record will be FMRI. Cedar Mountain Environmental will provide the truck and rail transportation services as well as the transportation equipment.

The FMRI Muskogee Facility is located at:

- *10 Tantalum Place, Muskogee, Oklahoma 74403*

The IUC Mesa Facility is located at:

- *6425 South Highway 191, Blanding, Utah 84511*

The proper shipping name will be:

- *Radioactive material low specific activity (LSA-I), n.o.s., 7, UN2912, RQ (Th-nat)*

### II. TRANSPORTATION EQUIPMENT

Cedar Mountain Environmental will supply clean and serviceable trucks, Articulated Bulk Container (ABC) rail cars, and 25-cubic yard intermodal containers for transportation of the WIP residual materials from the FMRI Facility in Muskogee, Oklahoma to the IUC Facility in Blanding, Utah. Cedar Mountain will ensure that all equipment will have been decontaminated in accordance with the requirements of Nuclear Regulatory Commission Regulatory Guide 1.86 (Reg Guide 1.86) prior to initial use on this project and upon completion of use on the project, or prior to use on any other project. Cedar Mountain

Environmental will coordinate the delivery of the railcars and intermodal containers to meet the loading needs and project schedule. Cedar Mountain Environmental rail cars will be 177-ton ABC rail cars (with a net payload of 150 tons). Hence, depending on material density, six to eight intermodals can be loaded per rail car.

The intermodal containers shall be nominally 25.4 cubic yards each, with single piece metal retractable closing lids (meeting DOT IP-1 specifications). Cedar Mountain Environmental anticipates each intermodal to be loaded with 18 to 22 tons of bagged WIP residual materials. This is to meet highway weight requirements for the truck portion of the transportation.

The ABC rail cars will have a 150-ton net capacity and be able to carry up to 8 intermodals, depending on the center of gravity. FMRI will fill the intermodal containers. The intermodal containers will be transported to either the Frontier Terminal or Johnston Terminal and then loaded onto Cedar Mountain Environmental rail car equipment in accordance with Cedar Mountain Environmental-approved loading configuration. FMRI shall be responsible to ensure that containers are not loaded to greater than the 22-ton net weight limit.

Cedar Mountain Environmental shall deliver its rail and intermodal equipment to the Frontier Terminal or Johnston Terminal. AWMS shall then schedule the delivery of the intermodal equipment to the FMRI Muskogee Facility to meet loading schedules.

### **III. TRANSPORTERS**

The following transporters will conduct the transportation of the FMRI WIP residual materials from the FMRI Muskogee Facility to the IUC facility:

The trucking transporters will be:

FMRI Facility to Frontier Terminal or Johnston Terminal:

Smithy Environmental	Harley Hollan Rolloffs
7298 Charles Page Blvd.	5677 107 <sup>th</sup> East Avenue
Tulsa , OK 74127	Tulsa, OK 74146
(918) 245-1070	(918) 451-7777
(918) 245-4456 fax	(918) 451-6587 fax

Albuquerque, New Mexico or Grand Junction, Colorado Transloads to IUC:

Cosby Trucking	Landstar Trucking
601 S. 200 E.	12793 Collection Center Drive
Blanding, UT 84511	Chicago, IL 60693
(435) 678-2890	(815) 972-5457
(435) 678-3289 fax	(815) 975-0111 fax

The Rail Carriers will be:

Frontier Terminal to Albuquerque, New Mexico:  
Burlington Northern Santa Fe Railroad (BNSF)  
2650 Lou Menk Drive, 2<sup>nd</sup> Floor

P.O. Box 961057  
Fort Worth, TX 76161  
817-352-1000

Johnston Terminal to Grand Junction, Colorado:  
Union Pacific (UP)  
416 Dodge Street  
Omaha, NE 68179  
(800) 272-8777

The transportation of the FMRI WIP residual materials via truck from the FMRI's site to the Frontier Terminal transload facility in Muskogee, Oklahoma will be conducted by the following route:

1. Start at 10 TANTALUM PL, MUSKOGEE – go 0.1 mi
2. TANTALUM PL becomes N 43<sup>RD</sup> ST E. – go 0.6 mi
3. Turn LEFT on E. HARRIS RD – go 0.2 mi
4. Turn LEFT onto OK-165 SOUTH – go 2.8 mi
5. Take the CHANDLER RD/HANCOCK ST exit toward N 41<sup>ST</sup> ST E. – go 0.2 mi
6. Turn LEFT on N 41<sup>ST</sup> ST E. – go 0.1 mi
7. Turn LEFT on CHANDLER ST – go 0.2 mi
8. Turn RIGHT on S. 43<sup>RD</sup> ST E. – go 0.4 mi
9. Turn LEFT on CALLERY RD – go 0.1 mi
10. Arrive at 4511 CALLERY DR, MUSKOGEE, on the RIGHT

The transportation of the FMRI WIP residual materials via truck from the FMRI's site to the Johnston Terminal transload facility in Muskogee, Oklahoma will be conducted by the following route:

1. Start at 10 TANTALUM PL, MUSKOGEE – go 0.1 mi
2. TANTALUM PL becomes N 43<sup>RD</sup> ST E. – go 0.6 mi
3. Turn RIGHT onto E. HARRIS RD – go 0.6 mi
4. Arrive at 4601 HAROLD SCOGGINS DR, MUSKOGEE

The transportation of the FMRI WIP residual materials via truck from the transload facility in Albuquerque, New Mexico to the IUC White Mesa Facility in Blanding, Utah will be conducted by either of the following routes:

1. Begin going NORTHWEST on CENTRAL AVE SW/CENTRAL AVE NW toward 4TH ST NW. Continue to follow CENTRAL AVE SW. (1.45 miles)
2. Turn RIGHT onto RIO GRANDE BLVD NW/NM-194 N. (0.73 miles)
3. Merge onto I-40 W via the ramp on the LEFT. (135.85 miles)
4. Merge onto US-491 N/US-666 N via EXIT 20 toward NM-602/SHIPROCK/ZUNI. (7.47 miles)
5. US-491 N/US-666 N becomes ramp. (0.30 miles)
6. Merge onto US-491 N. (83.90 miles)
7. Turn LEFT onto US-64/NM-504 (Crossing into ARIZONA). (26.08 miles)
8. US-64/NM-504 becomes US-160. (28.24 miles)
9. Turn RIGHT onto US-191 (Crossing into UTAH). (26.45 miles)
10. Turn RIGHT onto US-191/UT-163. (4.13 miles)
11. Stay STRAIGHT to go onto S HIGHWAY 191/MAIN ST/S US-191. Continue to follow MAIN ST/S US-191. (0.62 miles)
12. MAIN ST/S US-191 becomes US-191. (18.37 miles)

13. End at [2972-3045] S Highway 191 Blanding, UT 84511 US
14. Option 1: County Line Rd, bear left on Montgomery Ave, turn right on E Philadelphia Ave, take left onto S Washington St to PRL Rail yard. (~1.5 miles)

The transportation of the FMRI WIP residual materials via truck from the transload facility in Grand Junction, Colorado to the IUC White Mesa Facility in Blanding, Utah will be conducted by either of the following route:

1. Start out going WEST on E ASPEN AVE toward N MAPLE ST (0.2 miles)
2. Enter next roundabout and take 2nd exit onto W ASPEN AVE.(0.1 miles)
3. Turn LEFT onto CO-340 E.(0.2 miles)
4. Merge onto I-70 W toward GREEN RIVER (Crossing into UTAH).(68.8 miles)
5. Take the US-191 exit- EXIT 182- toward CRESENT JCT / MOAB.(0.30 miles)
6. Turn LEFT onto US-191 / UT-128. Continue to follow US-191.(106.1 miles)
7. Turn LEFT onto S 100 EAST ST.(<0.1 miles)
8. Turn RIGHT onto E 100 SOUTH ST.(<0.1miles)
9. End at [2972-3045] S Highway 191 Blanding, UT 84511 US

#### IV. TRANSPORTATION SCHEDULE

Shipments in Muskogee will take place between 8AM and 4PM on the scheduled days (excluding holidays unless otherwise approved) to be determined prior to shipping. It is expected that from 7 to 40 intermodal shipments, one to five days each week will occur.

Shipments in Albuquerque, New Mexico and Grand Junction, Colorado will occur daily as the railcars arrive and are unloaded during normal working hours.

<u>Operation</u>	<u>Duration</u>	<u>Cumulative Duration</u>
1. Delivery of intermodals/cars to Muskogee	7 days	7 days
2. Loading, inspecting, manifesting, ship	3 days	10 days
3. Rail transportation to Albuquerque, NM or Grand Junction, CO	5 days	15 days
4. Unloading, transport to IUC, & return	2 days	17 days
5. Return Rail Transportation	7 days	24 days

Total turn time from Muskogee, Oklahoma to Muskogee, Oklahoma could range from 14-21 days.

#### V. SHIPPING DETAILS

##### A. Pre-Inspection of Containers

Cedar Mountain Environmental shall inspect all containers prior to mobilization to the FMRI Muskogee Facility. The inspection shall be conducted in accordance with the attached Intermodal Container Level 1 Inspection Form (GFLF-011). Cedar Mountain Environmental shall provide a copy of the completed inspection form(s) to FMRI prior to the initial mobilization of the container(s) at the FMRI Muskogee Facility.

## B. Loading/Unloading at FMRI Muskogee Facility

FMRI will be responsible for filling intermodals at the Muskogee Facility. FMRI shall provide equipment that has sufficient capacity and is suitable to safely handle the type of transportation equipment being provided by Cedar Mountain Environmental.

Prior to the loading of each container (upon return from the IUC White Mesa Facility), a QC inspection shall be conducted by FMRI to ensure that the container is in proper condition for loading of WIP residual materials. This inspection shall be conducted using the attached Intermodal Container Level 1 Inspection Form (GFLF-011).

The FMRI materials will be loaded by FMRI and unloaded at the IUC facility from the intermodal container in which originally loaded. FMRI and Cedar Mountain Environmental will ensure that there will not be any leakage of radioactive material from the intermodal container. The FMRI materials will be braced, if necessary, so as to prevent shifting of lading under conditions normally incident to transportation

## C. Manifesting, Marking, Placarding

FMRI shall be responsible for the appropriate manifesting, marking, and placarding of all intermodal container shipments, in accordance with the Radioactive Material Profile and determination of the following for proper completion of shipping papers:

- Shipping name, hazard class and UN/NA number for the material;
- Total quantity of manifested material;
- Surface, 2-meter, and 3-meter gamma survey results for each container;
- Dose reading in the cab of the transport vehicle;
- Alpha and beta/gamma swipe survey results for each container;
- Concentration and total Curie content of individual isotopes for each shipping container;
- Inspection of packaged containers prior to shipment to ensure compliance with 49 CFR Parts 171, 172, 173, and 177; and
- Determination of the total weight of each container shipment.

The attached Pre-Shipment Inspection Sheet (GFLF-012) may be used to perform the pre-shipment inspections to ensure compliance of each shipment with shipping and the receiving facility's guidelines.

As the FMRI materials are unconcentrated uranium ores that are being consigned as exclusive use, no marking, labeling or placarding will be required, other than:

- i. The outside of each intermodal container must be marked UN2912, in accordance with 49 CFR 173.422 and 172.101;
- ii. The exterior of each intermodal container must be stenciled or otherwise marked "RADIOACTIVE-LSA RQ", in accordance with 49 CFR 173.427(a)(6)(iv); and
- iii. Empty intermodal containers that have not been free released from the project in accordance with Reg Guide 1.86 must have affixed thereto an "Empty" label, in accordance with 49 CFR 173.428

Each intermodal container shall have a unique sequential project number assigned to it at the FMRI site. This number will be entered on the Bill of Lading ("BOL") and attached to the intermodal container prior to shipment from the FMRI site. Upon arrival at the IUC facility, the truck driver will turn in all of his/her paperwork to the scale house operator who will verify that the BOL number, intermodal container number and project number assigned to the shipment match on all copies of the BOL. The scale house operator will also verify that the actual intermodal container number matches the BOL intermodal container number. Only original paperwork will be accepted. The scale house operator will sign the BOL, acknowledging receipt of the material at the IUC facility, if all of the paperwork is in order.

#### D. Transportation Logistics

Once the intermodals have been approved as meeting DOT, local, state, and federal regulations for shipment of the WIP residual materials, Cedar Mountain Environmental shall complete the appropriate bills of lading and scheduling with the railroad for transportation of the WIP residual materials using either the Frontier Terminal transload facility or Johnston Terminal transload facility and commercial railways to the appropriate transload facility in either Albuquerque, New Mexico or Grand Junction, Colorado. Cedar Mountain Environmental will then receive the intermodal shipments in Albuquerque New Mexico or Grand Junction Colorado and transload the intermodals onto trucks and chassis for shipment to IUC in Blanding, Utah. Transportation Bills of Lading will again be completed by Cedar Mountain Environmental and provided to transportation qualified truck drivers (including emergency contact information).

#### E. Exclusive Use

The FMRI materials will be consigned as exclusive use, within the meaning of 49 CFR 173. All intermodal containers will be used solely for this project. All initial, intermediate, and final loading and unloading will be carried out in accordance with the directions of FMRI or Cedar Mountain Environmental. FMRI and the carrier will ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. FMRI will provide to the initial carrier specific written instructions for maintenance of exclusive use shipping controls, and include these instructions with the shipping paper information provided to the carrier by FMRI.

Once the intermodals have been emptied and released from the IUC White Mesa facility, they will be transported back to either the Albuquerque, New Mexico transload facility or Grand Junction, Colorado transload facility and loaded onto the rail cars for return shipment to either the Frontier Terminal or Johnston Terminal, Muskogee, Oklahoma. Each intermodal container will be shipped as Empty Class 7 (radioactive) materials in accordance with the requirements set out in 49 CFR 173.428, unless the intermodal container is being released from the project, in which case it will be decontaminated for free release in accordance with Reg Guide 1.86.

## APPENDIX A

### TRANSPORTATION EMERGENCY RESPONSE PLAN

#### I EMERGENCY RESPONDERS

In Albuquerque, New Mexico or Grand Junction, Colorado, the intermodals materials will be offloaded at the rail transload facility. Cedar Mountain Environmental maintains its corporate offices in Salt Lake City, Utah. Personnel from this location will respond to incidents in the Utah region.

For incidents that may arise during transport, Cedar Mountain Environmental will investigate and resolve any problems in conjunction with the local trucking contractor. For spills along the rail and highway routes, Cedar Mountain Environmental has an agreement with Chemtrec (800-424-9300) to respond should they be needed, day or night.

#### II. EMERGENCY RESPONSE INFORMATION

Drivers will have a copy of the required emergency response information available for use at all times the WIP residual material is in transport. The railroad will also be faxed all required emergency response information. The emergency response information, including a 24-hr emergency response telephone number is required by 49 CFR 172.600. The emergency response number will be included on the shipping papers as required by 49 CFR. Emergency response information shall include:

- a.) North American Emergency Response Guidebook Information
- b.) 24 hr phone notification contact
- c.) Exclusive Use Instructions

#### III. COMMUNICATIONS

All truck transporters shall be accessible via Nextel or cellular phones in the event of an emergency situation or incident. During rail transport, in the event of an emergency or incident, the rail carrier shall contact the Cedar Mountain Environmental home office as soon as applicable.

##### **Emergency Reporting**

- Upon learning of or becoming involved in an incident the driver should immediately stop the vehicle and assess the situation and the threat to human health and the environment. The term "incident" applies to but is not limited to an over-the-road accident, leaking transport vehicle, unintentionally getting lost, or encountering mechanical and/or natural problems that would keep the transportation unit from safely arriving on time at the assigned destination.
- For rail issues, the rail personnel shall follow the approved FRA guidelines and company procedures.

- In the event of a minor leak that poses no threat to human health or environment, take appropriate steps to control the leak.
- If there is a spill that requires State or Federal notification, Cedar Mountain Environmental drivers, or those representing Cedar Mountain Environmental, will immediately report the incident to Cedar Mountain Environmental and/or the designated site emergency coordinators who will contact the applicable emergency response teams and/or authorities.
- If the emergency is of such magnitude as to threaten human health and/or the environment, the drivers will report the incident directly to the emergency response authorities and contact the facilities emergency response coordinators.

#### **IV. EMERGENCY CONTACTS**

Cedar Mountain Environmental Office 801-942-3757

##### After Hours Contacts:

Bob Reding – Operations Manager Office (801) 942-3757  
Mobile (801) 556-6592

Shane Johanson – Chief Operating Officer Office (435) 656-8979  
Mobile (435) 669-6935

CHEMTREC (24 hr response number) 800-424-9300 (Cust #00120223)

National Response Center 800-424-8802

US DOT 800-467-4922

#### **V. INCIDENT REPORTING REQUIREMENTS**

Provide the following information about the incident when reporting it to Cedar Mountain Environmental, FMRI or emergency response authorities:

- Name of person reporting the incident.
- Phone number where reporting person can be contacted.
- Date, time and location of incident.
- Brief description of the incident.
- Volume of spill and source (if any).
- Extent of injury (if any).
- Type of vehicle involved.
- US DOT Number, License Number of transport vehicle, railcar number, etc.
- Weather conditions at spill site.
- Extent of any contamination to land, water, or air (if known).
- Actions taken so far.

## **VI. MANIFEST REPORTING REQUIREMENTS**

Report the following information from the Manifest/Bill of Lading:

- Shipping name, hazard class and UN/NA number for the material spilled.
- Name and ID Number of generator of the material; and
- The shipping name, hazard class, and UN/NA number of any other material carried on the same vehicle.
- Total quantity of shipped material.

Drivers / Rail Conductors shall not leave their vehicles/conveyances to make such notifications in sections VIII and IX unless there is no danger to the general public or unless the area is under guard by a responsible individual. If necessary, they are to have a responsible individual make such notification while they remain with the vehicle.

## **VII. GUIDELINES FOR REPORTING**

1. Generator (FMRI) – Cedar Mountain Environmental will notify AWMS and the generator (FMRI) whenever there has been a release or incident, which involves the WIP residual materials. This will be completed for any amount of acute or non-acute release of residual materials.
2. The National Response Center and Department of Transportation will be contacted if any of the following occur:
  - Someone is killed or receives injuries requiring hospitalization as a result of WIP residual materials.
  - Estimated property damage exceeds \$50,000.00.
  - An evacuation of the general public occurs, lasting one hour or more
  - One or more major transportation arteries or facilities are closed or shutdown for one hour or more
  - The operational flight pattern or routine of an aircraft is altered
  - The incident presents a continuing danger to human health or the environment
  - Accident/spill involves radioactive material or etiological agents
  - A reportable quantity (RQ) of WIP residual material released per 40CFR 302 and 355 (Uranium, 7CY or 18,000lbs; Thorium 5CY or 14,000 lbs).
3. In case the driver/carrier cannot reach the Cedar Mountain Environmental office by phone, the driver/carrier shall immediately contact the designated responder or local police and fire departments by cell phone.

## VIII. WRITTEN REPORT REQUIREMENTS

The Emergency Coordinator will prepare the following written reports after the incident:

1. Cedar Mountain Environmental shall report in writing, in duplicate, on DOT Form F5800.1 to the Department within 30 days of the date of discovery, each incident that occurs during the course of transportation (including loading, unloading and temporary storage) in which any circumstances set forth in Section X occurs.
2. If any quantity of WIP residual materials is released include the following with the 5800.1 Form:
  - a. A copy of the WIP residual materials manifest.
  - b. An estimate of the quantity of material removed from the scene, the name and address of the facility to which it was taken, and the manner of disposition of any removed WIP residual materials must be entered in Section IX;
  - c. A copy of the report shall be retained for a period of two years;
  - d. Forward forms 5800.1 to the following upon completion:

Information Systems Manager  
DHM-63  
Research and Special Programs Administration  
Department of Transportation  
Washington, D.C. 20590
  - e. State environmental agencies are sent copies of the DOT written report, with any additional information required by the state in which it occurred.
  - f. OSHA must be informed if anyone is killed or if five or more people are injured as to require medical care.

## IX. RESPONSE ACTIONS

### A. Fire and Explosion

1. Personnel at the scene immediately clear the area and summon the fire department regardless of how small the fire or explosion appears.
2. Cedar Mountain Environmental / Site Emergency Coordinators shall be informed immediately.
3. If the fire or explosion, or any subsequent release of hazardous and or radioactive materials could threaten human health or the environment, notify local authorities and help them determine whether surrounding areas should be evacuated.
4. ONLY if a fire is small and well contained will personnel wearing protective clothing attempt suppression with hand extinguishers.

5. Personnel will assist fire fighters with information (i.e. nature of materials and associated hazards). Only under the direction of the fire department will personnel become involved in fire suppression.
6. Run-off water or released wastes must be controlled (as for any other discharge) by use of dikes, berms or absorbents. All storm drains, sewers, streams or surface water must be protected if at all possible. These activities should be concurrent with fire suppression activities.
7. When the immediate problem of fire or explosion is controlled, clean up and decontamination activities will be conducted as for a discharge.

B. Personnel Protection

As dictated by the actual hazards present, the following precautions may be taken:

1. Response personnel don appropriate personal protective equipment.
2. Absorbents or impervious material, such as plastic sheeting is spread under the vehicle to prevent or minimize ground contamination.
3. Isolation of leaking containers from uninvolved personnel and other containers.
4. If ignitable materials are involved, fire extinguishers should be kept at the scene and the fire department that they may be needed.
5. Cordoning off the work area via ropes and/or warning signs with pre-designated spill kits.
6. Prevent smoking, sparks, and open flames in the vicinity of flammable or combustible materials.

C. Evacuation Guidelines

If the incident could threaten human health or the environment, notify local authorities and help them determine whether surrounding areas should be evacuated. Notify the applicable emergency coordinator so that the National Response Center or other agencies may be contacted if necessary.

D. Containment Procedures

Containment of discharged material should be accomplished by:

1. Attempt to stop leaks from containers using plugs, bolts, duct tape or harnesses as appropriate. The container may also be moved so that the leak is uppermost.
2. Diking or berming on firm or impervious surfaces using vermiculite, Oil Dry, and/or Soil or Hazard pillows, taking special care that materials do not escape to storm drains, sewers, streams or other surface water.
3. Ditching around discharges onto soil using shovels.
4. Leaking containers may be opened and inspected with the intent to find any free liquids and add absorbents to stop the leakage. All required precautions should first be met.

5. To the extent practicable, spills of radioactive materials should be covered immediately with a tarpaulin or the equivalent to prevent dispersion of particulate into the air.

E. Cleanup Guidelines

Cleanup operations may include, but are not limited to the following steps:

1. Free standing liquids absorbed and placed into a suitable container.
2. Solids, semisolids, absorbents, etc. shoveled or swept up should be placed in appropriate containers, and properly disposed of.
3. Residual materials on the ground may be removed by:
  - a. Digging up contaminated soils/pavement if necessary.
  - b. Neutralization, if appropriate, i.e.; acids or bases.

F. Decontamination Guidelines

1. Emergency coordinators will determine the extent of any potential pollution or contamination by sampling and analysis of soil, water, vegetation, etc. The sampling necessity may be determined by the nature of the incident, quantities involved, types of surface exposed and hazards associated with materials, including factors such as toxicity and environmental persistence.
2. All disposable contaminated items, such as: gloves, clothing, respirators and hand tools are placed in appropriate labeled shipping containers.
3. Non-disposable equipment is decontaminated using appropriate decontamination agents and techniques, and debris from this decontamination placed in appropriately labeled containers.

G. Spills into Waterways – Streams, Rivers, Lakes, Ponds, etc.

In the event that such spill occurs, it must be reported to Cedar Mountain Environmental and the appropriate authorities immediately.

H. Vehicle Inspection

Contaminated vehicle/railcar/container or area is checked for any damage, which may have been caused by the leak, such as corrosion.

I. Transport/Disposal Requirements

All drums or containers are manifested, sealed and labeled per state, EPA and DOT guidelines and transported to the appropriate receiving facility or returned to the generator.

**APPENDIX B**

**FMRI AND CEDAR MOUNTAIN ENVIRONMENTAL TRANSPORTATION  
SECURITY PLANS**



*Facility Hazmat Security Plan*  
*For*  
*Hazardous Materials*

Prepared by: \_\_\_\_\_  
Keyton Payne, Manager Regulatory Compliance

\_\_\_\_\_  
Date

Approved by: \_\_\_\_\_  
Jon Jackson, President, FMRI, Inc.

\_\_\_\_\_  
Date

# *Phase I Activities*

## **FMRI Phase I Remediation Project**

Muskogee, OK

### **Transportation Security Plan**

#### **Statement of Purpose:**

This security Plan was developed to meet the requirements of 49 CFR 172.800 and will be implemented when shipping a quantity of solid hazardous materials in a bulk packaging having a capacity equal to or greater than 468 cubic feet or any quantity of hazardous material requiring placarding under the provisions of 49 CFR 172.500.

All facility management, contractors, and personnel are committed to the safety and security of our employees and the public. We are vigilant in preventing or inhibiting the unauthorized access to or use of radioactive materials and wastes under our control.

**The Phase I Remediation Project residual materials to be shipped from this remediation project consist of low toxicity radioactive materials (Natural Uranium and Natural Thorium) presenting minimal security threat. These materials are considered as hazardous substance for transportation purposes only when in a quantity, in one package, which equals or exceeds the Reportable Quantity (RQ) values listed in column 2 of the Appendix to 49 CFR 172.101. Materials not packaged for transportation or packaged in quantities less than the RQ value are not considered hazardous for the purposes of transportation or this security plan.**

The following location is covered under this plan

FMRI, Inc.  
10 Tantalum Place  
Muskogee, OK 74403

#### **Employee Contacts:**

FMRI's Regulatory Compliance Manager is responsible for the maintenance of this security plan, and can be contacted at 918-687-6303.

The FMRI site Operations Manager is also responsible for security at the FMRI Facility, and can be contacted at 918-687-6303.

#### **Training:**

Each hazardous materials employee must be presented general security training as well as training on this security plan. Initial training will be provided to applicable project personnel prior to the commencement of transportation related hazardous materials handling. Project employees hired subsequent to the initial training, and who require

this training to perform transportation related functions at the FMRI Facility will be provided this training within 90 days of their project start date.

Recurrent security training will occur at least every two years or as required due to changes in the security plan.

The FMRI Regulatory Compliance Manager is responsible for providing transportation security training at the FMRI Facility addressed in this plan.

**Personnel Security:**

Due to the minimal security threat potential associated with the loaded remediation project materials, no project specific personnel security measures are mandated. The following measures may be taken by FMRI and the transportation contractor to confirm information provided by applicants (or new company employees) who are being considered for transportation related hazmat functions.

- Perform background checks as necessary and in accordance with their company's administrative guidance on all applicants and employees in transportation related hazmat positions.
- Check for prior criminal record consistent with their company's administrative guidance, Federal and State laws and individual privacy concerns.
- Contact previous employers and references.
- Investigate gaps in employment.

All employee information should be maintained in a confidential manner and in compliance with Federal and State regulations concerning employment practices and individual privacy.

**Unauthorized Access:**

When required, the following measures will be taken by project personnel to restrict access to areas where hazardous materials are present to authorized personnel:

- All visitors and vendors are required to sign in before entering the facility.
- All visitors and vendors are required to be escorted by a project employee at all times.
- Areas where hazardous materials are stored are restricted to authorized personnel.
- A single monitored personnel ingress/egress point shall be designated and maintained.

**In Route Security:**

The following measures will be taken by project transportation personnel to address assessed security risks of hazardous materials:

- In route security will be controlled in accordance with transporter security plans and/or procedures.
- The FMRI Regulatory Compliance Manager shall, if available, obtain a copy of the transporter's applicable security plan. If this security plan is not available for release, the FMRI Regulatory Compliance Manager may ascertain by review or letter of certification that an adequate transportation security plan is in place.

**Project Employees:**

For the purpose of this security plan, Project Employees are those company or contractor employees who are authorized unescorted access to the remediation and handling/loading areas.

- Project Employees should not discuss the type of hazardous materials stored or shipped from or through the facility with non-project related personnel.
- Project Employees should not discuss specific shipping routes with non-project related personnel.
- Project Employees with keys to sensitive areas should keep the keys secure at all times.

## **APPENDIX B**

### **TRANSPORTATION SECURITY PLAN CEDAR MOUNTAIN ENVIRONMENTAL**

#### Table of Contents

SECTION A:	Purpose and requirements of security plan from DOT
SECTION B:	Description of Cedar Mountain Environmental
SECTION C:	Applicability of security plan to specific services
SECTION D:	Human Resources
D. 1	Key personnel responsible for the security plan
D. 2	Personnel hiring practices for full time employees
D. 3	Personnel hiring practices for consultants and contractors
SECTION E:	Background investigations
SECTION F:	Controlling access to hazardous materials during pre-transportation functions
SECTION G:	Controlling access to hazardous materials during transportation
SECTION H:	Controlling access to hazardous materials during storage incident to transportation
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SECTION J:	Maintaining the security plan

## **APPENDIX C**

### **TRANSPORTATION DOCUMENTATION**

**I. Bill of Lading**

**II. Intermodal Container Level 1 Inspection Form (GFLF-011)**

**III. Pre-Shipment Inspection Sheet (GFLF-012)**

**Page 1: Bill of Lading LSA-I**

STRAIGHT BILL OF LADING – SHORT FORM – Original – Not Negotiable Shipper's No. 0901065500230Q  
Carrier's No. 0727065500660

Carrier 1:  
Carrier 2:  
Carrier 3:

Received, subject to the classification and tariffs in effect on the date of this Bill of Lading:

At (insert time) date: mm/dd/year from Muskogee, Oklahoma

The property described below, in apparent good order, except as noted (contents and conditions of packages unknown) marked, consigned, and destine as indicated below, which said carrier (the word carrier being understood throughout this contract as meaning any persons or corporation in possession of the property under this contract) agrees to carry to its place of delivery at said destination, if on its own water line, otherwise to deliver to another carrier on the route to said destination, and as to each party at any time interested in all or any of said property, that every service to be performed shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, (as specified in Uniform Domestic Straight Bill of Lading set forth in Uniform Freight Classification in effect on the date hereof) which are hereby agreed to by the shipper and himself and his assigns.

(Mail or street address of consignee – for notification)

TO: IUC 6425 South Highway 191 Blanding, UT 84511	FROM: FMRI, Inc. 10 Tantalum Place Muskogee, OK 74403
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Route:

1 <sup>st</sup> Tractor #	1 <sup>st</sup> Trailer #	1 <sup>st</sup> US DOT Hazmat Registration No.
2 <sup>nd</sup> Tractor #	2 <sup>nd</sup> Trailer #	2 <sup>nd</sup> US DOT Hazmat Registration No.

No. of Packages	HM	Description of Articles, Special Marks or Exceptions	Hazard Class	ID No.	PG	Weight (Subject to Correction)	Labels Required
1	X	<b>Exclusive Use Shipment</b> Radioactive material, low specific activity (LSA-I), n.o.s., RQ (64% Th-nat, 36% U-nat) MBq Th-nat      MBq U-nat mCi Th-nat      mCi U-nat Moisture Content (%)	7	UN2912		Gross  Net	Bulk Cargo UN2912 Containers to be stenciled "RADIOACTIVE -LSA RQ"

<b>Emergency Response Telephone Number:</b>  <b>800-424-9300</b> Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604)	Placards Required?  NO	Placards Supplied?  None required per 49CFR 173.427 (a) (6) (v)
---	------------------------------	---

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.  Shipper: FMRI, Inc  Per: _____ Date: _____	Transporter 1:  Per: _____ Date: _____
	Transporter 2:  Per: _____ Date: _____
	Transporter 3:  Per: _____ Date: _____

IUC Facility Owner or Operator: Certification of Receipt of material covered by this manifest  
 Signature: \_\_\_\_\_ Date: \_\_\_\_\_



**BILL OF LADING #**

**INSTRUCTIONS TO THE DRIVER  
FOR THE EXCLUSIVE USE SHIPMENT OF  
RADIOACTIVE MATERIAL LSA-I, N.O.S., 7, UN2912, RQ (Th-Nat)**

1. This shipment contains bulk quantities of radioactive uranium and thorium bearing ores and is being shipped as exclusive use in accordance with 49 CFR 173.427.
2. The driver shall maintain all seals, labels and markings while in transit.
3. The vehicle and intermodal container configuration shall not be altered in such a manner as to change radiation levels measured outside the vehicle or container.
4. The driver will not enter the sealed container under any circumstances.
5. The driver will not stop to load or unload cargo from sealed container during transit.
6. In the event of an emergency such as fire, leak, accident or loss of material, the driver will immediately telephone:

**24 Hour Emergency Telephone: 800-424-9300**

I have read and understand the instructions given above.

Transporter 1:  
Driver Signature:

Date:

Transporter 2:  
Driver Signature:

Date:

Transporter 3:  
Driver Signature

Date:

**CEDAR MOUNTAIN ENVIRONMENTAL, INC.  
GREENFIELD LOGISTICS, LLC  
INTERMODAL CONTAINER – LEVEL 1 INSPECTION  
FORM NO. GFLF-011**

1	MANUFACTURER:	2	INSPECTION DATE: _____/_____/_____
3	STYLE OF CONTAINER:	4	LOCATION OF CONTAINER
5	EQUIPMENT NUMBER:	6	MFR. SERIAL NUMBER

Note: Any reject item requires corrective action before container can be released. Enter corrective action under comments section.

	ITEM TO BE CHECKED	ACCEPT	REJECT	N/A	COMMENTS
7	Placard Mounts – Free of old placards				
8	Document Holders – Empty and in good shape				
9	Decals – look good and correct to specifications				
10	Equipment Serial Number – Legible and correct				
11	Interior Surfaces – Cleanliness				
12	Corner Castles – Integrity				
13	Structural Integrity – Check welds, inside and outside				
14	Structural Integrity – Metal surfaces intact w/ no penetrations				
15	Nose Rollers – Move freely				
16	Wheels – Not broken or bent				
17	Wheels – Up with pins in place				
18	Cable Hook – In good condition, check welds				
19	Door Ratchet Binders – Function correctly w/out binding				
20	Door Ratchet Binders – Adequate grease				
21	Door Grab Handles – Function correctly w/out binding				
22	Door Chains – Function correctly				
23	Door Hinges – Function correctly				
24	Door Gasket – check resilience and grease				
25	Metal Lids(s) – Welds or seams contiguous w/out gaps				
26	Metal Lids(s) – Good binders – move freely w/out binding				
27	Metal Lids(s) – Gasket quality				
28	Metal Lids(s) – Seal correctly				
29	Metal Lids(s) – Verify lid stops in place – both sides				
30	Metal Lids(s) – Open lid to both sides to assure stops work				
31	Tarp – Good quality w/out leaks				
34	Liner Holder Hooks – In good shape				
35	Incoming Survey performed and approved for filling by facility RSO.				
36	Reject items must be repaired or replaced – use this space for additional comments:				
37	Note: If reject conditions are noted above, red tag container and check the box below, then sign. <input type="checkbox"/> Rejection      Initial inspection by: _____				
38	Note: Check box below only after all repairs have been made, or if the container was found acceptable. <input type="checkbox"/> Acceptance      Final acceptance by: _____				

**CEDAR MOUNTAIN ENVIRONMENTAL, INC.  
 GREENFIELD LOGISTICS, LLC  
 INTERMODAL CONTAINER – PRE-SHIPMENT INSPECTION  
 FORM NO. GFLF-012**

<b>INSPECTOR:</b>		<b>INSPECTION DATE:</b>	
		____/____/____	
<b>NUMBER OF CONTAINERS:</b>		<b>EQUIPMENT NUMBER:</b>	

Note: Any rejected item requires corrective action before container can be released. Enter corrective action under comments section.

	ITEMS TO BE CHECKED PRIOR TO LOADING	ACCEPT	REJECT	N/A	COMMENTS
1	Any free liquids in the container?				
2	Is the swing door closed, secured, and sealed properly?				
3	Is the metal lid closed, secured, and sealed properly?				
4	Are all chains in place, tight, and ratchet handles secured?				
5	Are all applicable placards and labels in their proper placement?				
6	Are all corner castles in good condition?				
7	Is all shipping paperwork complete and accurate?				
8	Has a radiological survey been performed and approved by the Facility RSO (per DOT Regulations)?				
	ITEMS TO BE CHECKED AFTER LOADING ONTO TRUCK OR RAILCAR				
1	Are all iso-connectors in place and properly locked?				
2	Are all applicable placards and labels visible and intact?				
3	Any observable damage to container prior to loading? Log any damage at the bottom or on the back of this form.				
	CONTAINER NUMBERS:				
1					
2					
3					
4					
5					
6					
7					
8					
	Note: Check box below only after all inspections have been made and all are found acceptable. <input type="checkbox"/> Acceptance  Final acceptance by: _____				