

July 18, 2006

A  
030-35726

Attn: Materials Licensing Branch  
U.S. NRC, Region III  
2443 Warrenville Rd - Suite 210  
Lisle, IL 60532-4351

Subject: Request for Amendment to Nuclear Materials License No. 24-32318-01

Dear Mr. Mullauer:

On July 12<sup>th</sup> 2006, Pangea Group (Pangea) was the subject of an unannounced inspection by Ms. Deborah A. Piskura, of the Materials Inspection Branch. Over the course of the inspection, she noted that there were two items on our Nuclear Materials License, No. 24-32318-01, which required updating. This letter has been written in response to those observations; to update the license to correctly reflect the personnel and locations involved in its administration. Both observations made by Mr. Piskura have been identified and addressed below:

Observation 1

Section 10 indicates that byproduct material may be analyzed at 743 Spirit 40 Park Drive, Suite 232, Chesterfield, Missouri, but this is no longer the case.

Response

On July 19, 2004 Pangea submitted a request for amendment to its license in order to reflect the change in address of the corporate office. The address in section 2 was correctly changed to Pangea's new corporate address of 2604 S. Jefferson, St. Louis, MO 63118. Unfortunately, the address in section 10 was not also updated. This has been addressed by the enclosed Form 313.

Observation 2

Section 11(B) lists Daniel Hoffman as the Radiation Safety Officer for the license, but is no longer employed by Pangea. While you (Matt Cushman) are the acting as the interim RSO, the license needs to be amended to indicate the identity of the current RSO.

Response

This has been addressed by the enclosed Form 313. Matthew Cushman will be the Radiation Safety Officer for the License. His resume has been included and reflects the both his qualifications and his wide variety of experiences in administering a radiation safety program and it's associated license requirements.

REC'D JUL 18 2006

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The requested license amendment herein should address any concerns prompted by the recent inspection of Ms. Piskura. If any further information is needed, please do not hesitate to contact me at one of the numbers listed below.

Respectfully Submitted



Matthew Cushman.  
Director of Radiological Services  
Pangea Group  
314-333-0601 (direct)  
314-657-8182 (mobile)

Enclosures:  
Form 313  
Resume – Matthew Cushman

**APPLICATION FOR MATERIAL LICENSE**

**INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.**

**APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:**

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
 OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
 U.S. NUCLEAR REGULATORY COMMISSION  
 WASHINGTON, DC 20555-0001

**ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:**

**IF YOU ARE LOCATED IN:**

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM  
 DIVISION OF NUCLEAR MATERIALS SAFETY  
 U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
 475 ALLENDALE ROAD  
 KING OF PRUSSIA, PA 19406-1418

**IF YOU ARE LOCATED IN:**

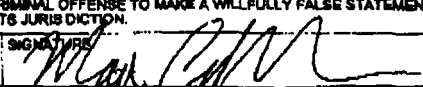
ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH  
 U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
 2442 WARRENVILLE ROAD, SUITE 210  
 LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH  
 U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
 611 RYAN PLAZA DRIVE, SUITE 400  
 ARLINGTON, TX 76011-4000

**PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.**

1. THIS IS AN APPLICATION FOR (Check appropriate item) <input type="checkbox"/> A. NEW LICENSE <input checked="" type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER <u>24-32318-01</u> <input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____		2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code) Pangea Group 2604 S. Jefferson St. Louis, MO 63118	
3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED Multiple locations. Radiological services may be performed at various temporary sites located in the United States.		4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION Matthew Cushman  TELEPHONE NUMBER (314) 333-0601	
SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.			
5. RADIOACTIVE MATERIAL a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.		6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.	
7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.		8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.	
9. FACILITIES AND EQUIPMENT.		10. RADIATION SAFETY PROGRAM.	
11. WASTE MANAGEMENT.		12. LICENSE FEES (See 10 CFR 170 and Section 170.31) FEE CATEGORY _____ AMOUNT ENCLOSED \$ 0.00	
13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.  THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.  WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 82 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.			
CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE Matthew Cushman, Director of Radiological Services		SIGNATURE 	DATE 7/18/06

**FOR NRC USE ONLY**

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
APPROVED BY				DATE	

July 18, 2006 Application for License Amendment

Pangea Group

**ITEM 5 - RADIOACTIVE MATERIAL**

No changes requested

**ITEM 6 - PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED**

No changes requested

**ITEM 7 - INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE**

Pangea requests that section 11.A. be changed to read:

“Decommissioning and commercial leak testing activities shall be performed by, or under the supervision of Matthew Cushman, Scott Rehner, Lachelle Telfair, or Chris Jarrel.”

Pangea requests that section 11.B. be changed to read:

“The Radiation Safety Officer for this license is Matthew Cushman.”

**ITEM 8 - TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS**

No changes requested

**ITEM 9 - FACILITIES AND EQUIPMENT**

Pangea requests that the final sentence of section 10 be changed to read:

“Licensed material listed in Subitem 6.B. may also be analyzed at the licensee’s facility located at 2604 S. Jefferson, St. Louis, Missouri.”

**ITEM 10 - RADIATION SAFETY PROGRAM**

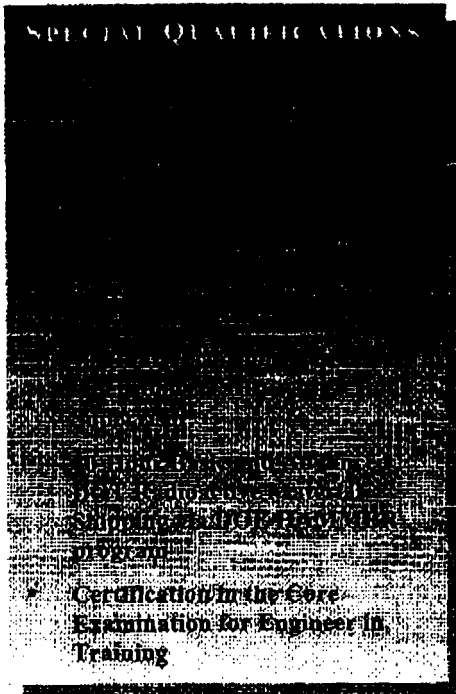
No changes requested

**ITEM 11 - WASTE MANAGEMENT**

No changes requested

# MATTHEW E. CUSHMAN

## DIRECTOR OF RADIOLOGICAL SERVICES



### Pangea Group – St. Louis, MO (March 2006 – Current)

#### Director of Radiological Services

Currently responsible for the management of 20+ service professionals in various health physics, environmental, and worker safety roles throughout Pangea, on contracts serving 6 states.

- Site Radiation Safety Officer / Project Manager for a Magnesium-Thorium remediation project in Madison, IL.
- Responsible for reviewing site-specific project plans and evaluating radiation safety, industrial safety, and HAZMAT transportation and disposal issues.
- Responsible for maintenance of Pangea radiological and industrial hygiene instrumentation program.

### K2 Environmental Services (May 2005 – March 2006)

#### Criticality Safety and Materials Control and Accountability Supervisor

- Responsible for maintaining compliance with the criticality and MC&A sections of the Westinghouse NRC license.
- Oversaw the development and implementation of multiple Nuclear Criticality Safety Evaluations.
- Responsible for maintaining and updating Criticality and MC&A procedures to support decommissioning activities while maintaining compliance with the requirements of all Westinghouse corporate programs.
- Supervised the execution of the annual MC&A inventory process.
- Developed a survey methodology to establish loading of fissile material

throughout the plant ventilation system.

- Responsible for performing daily criticality inspections and providing direct field support for decommissioning activities

### Pangea Group – St. Louis, MO (1998 – May 2005)

#### Radiological Engineer

Provided health physics and project supervision, radiological engineering, waste brokerage, regulatory compliance, and direct field support for various projects, including:

- Developed the plans for and supervised the completion of a MARRISM complaint scoping and characterization survey for decommissioning of a magnesium-thorium processing facility in Madison, IL.
- Radiation and Environmental Safety Officer for a former USAF site in Waco, TX. Project scope included removal, characterization, and disposal of burial cylinders and other Ra-226 bearing wastes.
- Project Manager for a removal, transportation, and disposal project at Weldon Spring Remedial Action Project. Wastes included uranium contaminated soil sediments, ion exchange resin, and other demolition and remediation generated wastes.
- Led a survey/sampling crew for characterization/verification at SLAPS and SLEDS FUSRAP sites and vicinity properties.
- Characterized legacy wastes and sources at Washington University in St. Louis, MO.
- Approved Waste Broker for Joint Munitions Command, Rock Island, IL.
- Characterized and coordinated transport and disposal of Mg-Th wastes from a St. Louis area equipment/salvage yard.
- Provided transportation and disposal for Ra-226 wastes for Michigan Department of Environmental Quality.
- Performed audits of radiological protection program at St. Louis area nuclear medicine facility.
- Performed Commercial 8-hr HAZWOPER (29 CFR1910.120) refresher training.
- Assistant Site Trainer for DOE Weldon Spring Remedial Action Project.

### Westinghouse Hematite Facility-Festus, MO

#### Waste Management Coordinator and Site RSO

- Responsible for coordinating air sampling program, determining and assigning radiological exposures to project personnel.
- Acting Pangea Superintendent, responsible for all on-site Pangea personnel and contract related expenditures.
- Project MT&E Administrator-Responsible for all project radiological, safety, and industrial hygiene instrumentation.
- Responsible for the design of MARSSIM compliant final status surveys and author of final status survey report.
- Responsible for coordinating radiological release surveys for segregated wastes and maintaining radiological waste inventories for Volumetric Clearance for Disposal (VCD).

**St. Louis FUSRAP HISS Pile Removal Project-Berkeley, MO**  
**Radiological Transportation/Disposal Coordinator**

- Served as liaison for USACE, rail carrier, disposal facilities for shipment of radiologically contaminated soils.
- Maintained compliance with DOT regulations and USACE guidelines for radiological shipments.
- Provided oversight for sampling of soils for radiological analysis and radiological surveys of gondola cars prior to shipment.
- Calculated and tracked activities, determined waste classifications, and generated waste manifests for radiological shipments.
- Maintained shipping records and waste manifest documentation via LOW-TRACK waste shipping software.

**Weldon Spring Site-St. Charles, MO**  
**Radiation and Environmental Safety and Health Technician**

- Coordinated offsite shipments of radiological soils, contaminated PPE and other low level radioactive and hazardous wastes, samples and surface contaminated objects.
- Conducted radiological sample screening and surveys for shipment of samples to on-site and off-site analytical laboratories.
- Responsible for the decontamination and release surveys of excess radiation instruments and worker protection equipment.

**Allied Technology Group (9/98 - 11/98)**  
**ES&H Technician**  
**Weldon Spring Site Remedial Action Project-St. Charles, MO**

- Monitoring, maintenance, calibration, and repair of portable radiological instrumentation.
- Responsible for field ES&H support, radiological surveys, and collection of radiological air and water samples.

**EDUCATION**

**University of Missouri-Rolla**  
Bachelor of Science in Nuclear Engineering - 1998  
Successfully Challenged the Engineer In Training Core Examination (Part 1 of 2 for the P.E.)