

June 17th, 2011

Nuclear Regulatory Commission, Region I
Attn: Licensing Assistant Team
Division of Nuclear Materials Safety
435 Allendale Rd
King of Prussia, PA 19406-1415

p-3

Subject: License Amendment Request US NRC RML 06-20775-01; Docket 03022060

Dear Ms / Sir:

EnergySolutions is requesting that the possession limits for Source Materials, License Condition 8B to our above reference NRC license, be increased from 5,000 kgs to 15,000 kgs and to add an additional authorized use to License Condition 9 as follows to allow EnergySolutions to handle uncontained materials (i.e., catalyst) for DOW to support their chemical manufacturing process.

9. (9) Handling of radioactive materials and media, other than waste, in support of client manufacturing processes.

As specified in our license, we are a service provider licensed to perform work at temporary job sites for clients that are unable to perform certain activities under their respective license such as D&D, materials handling and/or packaging for shipment and disposal.

EnergySolutions is working with DOW Chemical to assist them with the maintenance of their chemical reactors which use a Thoria catalyst (ThO₂). DOW maintains a possession only license and cannot directly handle the catalyst themselves; therefore, they have contacted EnergySolutions for assistance. DOW is planning on taking one of their existing chemical reactors off-line and replacing it with a new reactor which will need to be charged (i.e., loaded) with "new" catalyst. The catalyst bed within the reactor consists of approximately 13,500 lbs of material or about 5,400 kg of source material. EnergySolutions will handle the catalyst and charge the new reactor for DOW while the material remains in DOW's possession. The material is owned by DOW and EnergySolutions would provide the services to directly handle the catalyst during the loading of the chemical reactor under our US NRC radioactive materials license under reciprocity with the State of Texas.

EnergySolutions will perform all work under our existing Radiation Protection Program which will provide the necessary controls to safety handle these quantities and types of materials.

Additionally, EnergySolutions has demonstrated the safe handling of radioactive materials at multiple temporary job sites without any incident.

Prior to work, a baseline survey will be performed prior to any material handling in the work area. The new reactor will be staged adjacent to the chemical process line and the head of the reactor removed. Scaffolding will be erected around the reactor and “new” catalyst loaded in a controlled manner to minimize any potential spread of contamination and airborne activity. The reactor will be draped with plastic and the catalyst loaded through a hopper mechanism through a chute and into the reactor. HEPA ventilation will be applied to the reactor to ensure air flow into the reactor to help minimize any generation of airborne activity through the handling of the catalyst. All personnel at the top of the reactor in the area where the catalyst is handled will be wearing the proper PPE including respiratory protection. Air monitoring will be provided at the HEPA exhaust and at the top of the reactor in the general area of catalyst loading. Once loaded, all consumable materials such as the plastic and PPE will be disposed accordingly as radioactive waste and all support equipment decontaminated, surveyed and released as necessary. Once the chemical reactor is loaded and the head replaced, the reactor and work are will be surveyed for release.

Once loaded, the old reactor will be removed from the process line and replaced with the new reactor. All reactor penetration will be flanged to seal any penetration and the old reactor staged at the DOW facility for future use and/or repair.

As DOW wishes to coordinate this effort with their annual maintenance shutdown during the 2nd week of July, 2011 any efforts by the NRC to expedite this request would be appreciated. If you have any questions or require additional information please contact me at (865) 425-4587 or email me at mcarr@energysolutions.com.

Sincerely



Michael A. Carr, CHP
Radiation Safety Officer
Global Commercial Group
EnergySolutions

Attachments:

1. NRC Form 313; Amendment Request Form



cc Art Palmer,
Lori, Czyz
Thomas Magette



ENERGY*SOLUTIONS*

**Attachment 1
NRC Form 313**

NRC FORM 313
(4-2008)
10 CFR 30, 32, 33,
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2008

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIALS 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, 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 19406-1415

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
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, 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
612 E. LAMAR BOULEVARD, SUITE 400
ARLINGTON, TX 76011-4125

03022060

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)

- A. NEW LICENSE
 B. AMENDMENT TO LICENSE NUMBER 06-20775-01
 C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)

**100 Mill Plain Road, Second Floor
Mailbox 106
Danbury, CT 06811**

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Michael A. Carr, CHP, RSO

TELEPHONE NUMBER

(865) 425-4587

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 \$

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 62 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

Art Palmer, CHP, Director Health Physics and RE

SIGNATURE

Art Palmer

DATE

06/10/2011

FOR NRC USE ONLY

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