



The Chemical Company

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**CERTIFIED MAIL – RETURN RECEIPT REQUESTED:  
7005 1820 0003 4851 2057**

July 25, 2007

United States Nuclear Regulatory Commission  
Region III  
Nuclear Materials Licensing Branch  
2443 Warrenville Road, Suite 210  
Lisle, Illinois 60532-4352

**Subject: License Amendment Application**  
License No. 21-00627-02

To whom it may concern:

Please find enclosed the Application for the amendment of the BASF Wyandotte, Michigan Site Material License. This submittal contains NRC Form 313 and the required information for items 5 - 11. Listed below are the requested modifications:

- 1) Remove Mark McKinney as Radiation Safety Officer since he will no longer be able to perform these duties due to a change in position within the company.
- 2) Add Derek Hetes as the Radiation Safety Officer for the current license. The proposed RSOs qualifications are attached in item #7 below.

As per correspondence with NRC Staff, no amendment fee was included with this notification. If this is in error, please contact me at your earliest convenience. You can reach me at (734) 324-5282 or email me at [derek.hetes@basf.com](mailto:derek.hetes@basf.com). with any questions or concerns.

Sincerely,

Derek Hetes  
Radiation Safety Officer/ EHS Team Member  
BASF - Wyandotte Site

**RECEIVED JUL 30 2007**



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### Exhibit Items Addressing Parts 5 - 11 Of Material License Application (NRC Form 313)

#### 5) Radioactive Material:

Source	Element/Mass#	Form	Maximum amount possessed
A.	Nickel-63	Sealed sources (Hewlett-Packard Models G1223A & Agilent Model (US10144065)	3 sources not to exceed 15 mCi
B.	Cesium-137	Sealed source (Ohmart Model 2000)	1 source not to exceed 300 mCi

#### 6) Purpose(s) For Which The Licensed Material Will Be Used:

- a. All uses and storage are consistent with manufacturer instructions and NRC requirements.
  - i. Nickel-63 sources are housed in H-P and Agilent gas chromatographs used for analytical testing purposes.
  - ii. Cesium -137 source contained in an Ohmart Continuous Level Gauge on a Toluenediamine (TDA) storage tank for level measurements.

#### 7) Individual Responsible For Radiation Training Program & Experience

- a. The individual proposed for the current License is Derek Hetes.
- b. Derek Hetes' Qualifications:
  - Currently Site Industrial Hygienist, BASF Corporation, Wyandotte, MI facility.
  - 40-Hr. Radiation Safety Officer Training by Engelhardt & Assoc., meeting those requirements set forth in Section 8.7.1 of NUREG-1556, Vol. 4 dated Oct. 1998 (2007).
  - Radiation Safety Training by Nevada Technical Assoc. (2002).
  - M.S. in Industrial Hygiene from Wayne State University (2000).
  - M.S. included coursework in Ionizing Radiation and Radiological Health.

#### 8) Training

- a. Affected Unit maintenance and operations personnel attend radiation safety training sessions as required in the License. The topics covered include:
  - Biological effects of radiation
  - Type and quality of the radioactive source(s) in their work area
  - Detection of radiation
  - Exposure Limits
- b. Training records are maintained in the Unit Training Files.



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## 9) Facilities and Equipment

- a. Hewlett Packard Nickel-63 Electron Capture Detectors (ECDs)
  - i. ECDs are owned and operated by BASF's Analytical Chemistry and Chemical Engineering (ACCE).
  - ii. Group located at the Wyandotte, MI facility.
  - iii. Detectors are leak (wipe) checked by RSO twice per year.
  - iv. Wipe test results are retained in Site EHS Department in accordance with Corporate Retention Policies.
  - v. Training is conducted at the prescribed frequency by the ACCE Unit Ecology Coordinator.
  - vi. ECD maintenance is only performed by Agilent Technologies trained technicians (Agilent is the HP business unit that manufactures ECDs).
- b. Ohmart (300 mCi) Cesium-137 Source
  - i. The gauge is installed on a Toluenediamine (TDA) storage tank. See attachment 1 for the Polyol Plant and tank location. The Ohmart Cesium-137 site level gauge is located in the Polyols Plant. Plant Maintenance personnel are responsible for the operation and use of this gauge and were initially trained in the operation and use of the gauge by the licensed representative from Ohmart, Inc., 4241 Allendorf Drive, Cincinnati, Ohio 45209.
  - ii. The gauge is installed outdoors and is exposed to normal weather conditions. The gauge is not exposed to corrosive atmospheres or excessive vibration.
  - iii. There is no need for an external cooling system since temperatures do not exceed the maximum operations temperature specified by the manufacturer of 240 o F for the source housing.
  - iv. All maintenance, installation, removal and relocations will be contracted to Ohmart, Inc. 4241 Allendorf Drive, Cincinnati, Ohio 45209.
  - v. Shutter checks, wipes and source inventory are conducted at least every six months by BASF personnel.

## 10) Radiation Safety Program

- a. Leak test or wipe test on all gauges and ECDs will be conducted twice per year by RSO or designee trained to conduct leak tests. The limit considered acceptable for wipe tests results is less than 0.005 microcuries.



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- b. The kit used for leak testing is the National Leak Test Center Model NLTC-1 Leak Test Kit. This kit is returned to National Leak Test Center, P.O. Box 486, Tonawanda, NY 14120, License No. 2323-3164 for measurement of radioactivity.
- c. Safe Work Procedures - BASF "Lock, Tag and Try" and "Entering and Working Within Confined Spaces" Safety Standards are in effect for the Wyandotte Site Maintenance Department and plants where the gauges are located. The employees are trained on these procedures. These procedures are available to our employees in the Site Health & Safety Procedures Manual. Every vessel entry at the Wyandotte Site requires a "responsible, competent person" to ensure these procedures are followed.
- d. Performance of Services—Services will be performed by authorized manufacturer representatives. We do not request authorization to service the gauge ourselves.
- e. Emergency procedures to be followed in the event of accidents involving damage to the gauges or detectors:
  - Evacuate immediate area
  - Shut down operations in the immediate area and designate a "no access zone"
  - Survey area to determine the 5mR/hr. perimeter.
  - Contain the contamination at the site of the accident, with employees wearing protective equipment as necessary.
  - Wipe tests the gauge if damaged by fire and/or explosion.
  - Responsible individual will contact the NRC and applicable state authorities as necessary.
  - In cases of emergency a Victoreen Model 290 will be used by the responsible individual to determine if a high radiation area exists. This instrument is capable of detecting beta-gamma radiation and is used as a survey meter.
  - Contact the following responsible individual:

Derek Hetes (734) 324-5282

## 11) Waste Management

- a. Gauges identified for disposal will be properly packaged, surveyed, labeled and manifested for return to the manufacturer or commercial disposal firm licensed by the NRC or Agreement State.

**NRC FORM 313**  
(10-2005)  
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 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 19406-1415

**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, 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 76011-4005

**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 21-00627-02
- C. RENEWAL OF LICENSE NUMBER \_\_\_\_\_

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

**DEREK HETES**  
**1609 BIDDLE**  
**WYANDOTTE, MI 48192**

**3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED**

**BASF CORPORATION**  
**1609 BIDDLE**  
**WYANDOTTE, MI 48192**

**4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION**

**DEREK HETES**

**TELEPHONE NUMBER**

**734 324 5282**

**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 \$ **Ø**

**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**

**DEREK HETES / EHS TEAM MEMBER**

**SIGNATURE**

*[Handwritten Signature]*

**DATE**

**7/25/07**

**FOR NRC USE ONLY**

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

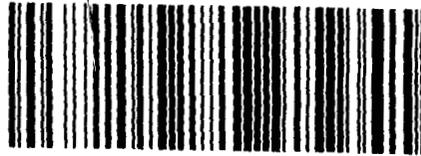
**APPROVED BY**

**DATE**

BASF Corporation  
1609 Biddle Avenue  
Wyandotte, MI 48192



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