

Sept 22<sup>nd</sup>, 2008

Patricia Pelke  
Materials Licensing Branch  
US Nuclear Regulatory Commission, Regions III  
2443 Warrenville Rd.  
Lisle, IL 60532-4351

RE: Material License Number 24-25817-01 - amendment #5

Dear Patricia Pelke:

We have completed the construction of the new Cargill Soybean Process facility in Kansas City, MO. The old plant has been shut down.

Per the above license we have three 50 millicurie sources: section 9A: Model 5180A, 9B: Model 5205 and 9C: Model 5205A).

On section 9A - Model 5180A - Serial #B488 source is no longer going to be used and has been returned to ThermoFisher Scientific for disposal. This is the only Model 5180A source we have ever possessed at this facility.

Please see the attached 5180A gauge inspection leak test certificate, acknowledgement of receipt of radioactive material from ThermoFisher and Material License 24-25817-01 amendment 5.

I am requesting to delete Model 5180A source from the above referenced license. See requested list of items below.

Delete: Model 5180A source from following sections:

6A. Cesium-137

7A. Sealed Source - Texas Nuclear dwg. No. 570-57157C

8A. One source not to exceed 50 millicuries.

9A. For use in TN Technologies Model 5180A source holder for continuous level measurement.

10A. Licensed Material in item 9A may be used at licensee's facility located at 2335 Rochester Ave.

If you have any further questions please contact Ralph Volk (facility RSO) at 816-245-0537 or Myself at 816-245-0531.

Regards,



James Alfieri  
Plant Manager  
Cargill  
2306 Rochester Ave.  
Kansas City, MO 64120  
P: 816-245-0531

## Gauge Inspection and Leak Test Certificate

### USER

Company : Cargill Inc  
Address : 2306 Rochester  
City : Kansas City  
State : MO Zip: 64120

### PRODUCT

Brand : Texas Nuclear  
Model : 5180A Serial: B488  
Location :  
Tag :  
Isotope :  Cs-137  Co-60  
 Am-241-Be

Activity : 50mCi Assay: 6/77

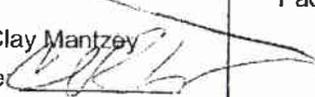
### SURVEY METER

(req'd for leak test certification only)  
Brand : TN Technologies  
Model : 200S Serial: B656Y  
Cal. Date : 12-Jan-08  
Backgnd : 0.02

### LEAK TEST

Not performed  Measured <0.005 uCi  
 Measured >0.005 uCi **CONTACT RSO**

### PERFORMED BY

Company : ThermoFisher Name : Clay Mantzoy  
Date : 8/14/08 Signature: 

## System Information

### APPLICATION

- point level  
 dual point level  
 continuous level  
 density  
 neutron backscatter  
 weigh scale  
 strip source  
 insertion source  
 analyzer

### STATUS

- in use  
 mounted but not in use  
 unlocked  
 locked off  
 in storage

### COMMENTS:

Packaged for disposal. RMA # 30863

## Five Point Safety Check

### (1) NAMEPLATE

okay

needs cleaning

needs to be replaced

### (2) ON/OFF INDICATOR

okay

needs cleaning

needs to be replaced

### (3) SHUTTER LOCK

okay

needs to be replaced

### (4) SHUTTER OPERATION

okay

needs cleaning

VERIFIED BY:

needs lubrication

survey

stuck on

response

stuck off

missing

### (5) OVERALL CONDITION

okay

mild to moderate corrosion

severe corrosion

needs to be replaced

## Thermo MeasureTech

1410 Gillingham Lane  
Sugar Land, Texas 77478  
800-437-7979 or 713-272-0404

Instructions: This form is/may be used to record the visual inspection and leak testing of a nuclear gauge. A preprinted inventory label may be placed over the user and product information blanks for convenience. When this form is used for leak test certification, the survey meter information must be completed. As you complete the inspection, check all of the blanks that apply. Use comments to document the findings and/or recommended corrective actions as needed.

This record is important and must be kept on file for inspection by the regulatory agency.  
©2006 Thermo Fisher Scientific  
24 hour Emergency 1-800-437-7979  
<http://www.thermo.com> NG-ILT v1.2

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## ACKNOWLEDGMENT OF RECEIPT OF RADIOACTIVE MATERIAL

September 10, 2008

Ralph Volk  
Cargill Inc.  
2306 Rochester  
Kansas City, MO 64120

RMA Number 30863

Attention Ralph Volk:

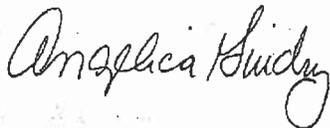
This is to certify that Thermo Fisher Scientific has received and accepted ownership of the radioactive material described below pursuant to applicable regulations and as authorized by our Texas Radioactive Material License L03524.

Manufacturer	Model	Serial	Isotope	Source	Activity Units	Assay
TN TECHNOLOGIES	5180A	B488	Cs-137	MA-3514	50 mCi	6/20/1977
Summary (1 source)					50 mCi	

This receipt should be retained in your files as a permanent record showing the disposition of this radioactive material. If you are not the Radiation Safety Officer or responsible for maintaining regulatory records for radioactive material, please forward this letter to the appropriate person.

If you have any questions or require additional assistance, please contact us at (800) 437-7979 or (713) 272-0404.

Sincerely,  
Thermo Fisher Scientific



Angelica Guidry  
Nuclear Services Specialist

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## U.S. NUCLEAR REGULATORY COMMISSION

**MATERIALS LICENSE**

Amendment No. 5

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

## Licensee

1. Cargill, Inc.
2. 2306 Rochester Avenue  
Kansas City, MO 64120

In accordance with the facsimile letter dated  
**June 3, 2008,**

3. License number 24-25817-01 is amended in its entirety to read as follows:

4. Expiration date October 31, 2012

5. Docket No. 030-30134  
Reference No.

- |   |   |   |
|---|---|---|
| <ol style="list-style-type: none"> <li>6. Byproduct, source, and/or special nuclear material</li> </ol>       | <ol style="list-style-type: none"> <li>7. Chemical and/or physical form</li> </ol>  | <ol style="list-style-type: none"> <li>8. Maximum amount that licensee may possess at any one time under this license</li> </ol>  |
| <ol style="list-style-type: none"> <li>A. Cesium-137</li> <li>B. Cesium-137</li> <li>C. Cesium-137</li> </ol> | <ol style="list-style-type: none"> <li>A. Sealed Source (Texas Nuclear Dwg. No. 570-57157c).</li> <li>B. Sealed Source (TN Technologies, Inc. Model 696894)</li> <li>C. Sealed Source (TN Technologies, Inc. Model 57157C)</li> </ol> | <ol style="list-style-type: none"> <li>A. One source not to exceed 50 millicuries.</li> <li>B. One source not to exceed 50 millicuries.</li> <li>C. One source not to exceed 50 millicuries.</li> </ol> |

## 9. Authorized use:

- A. For use in a Texas Nuclear Model 5180A source holder for continuous level measurements.
- B. For use in a TN Technologies Inc., Model 5205 source holder for continuous level measurements.
- C. For use in a TN Technologies Inc., Model 5205A source holder for continuous level measurements.

CONDITIONS

10. A. Licensed material in item 9A may be used at the licensee's facilities located at 2335 Rochester Avenue, Kansas City, Missouri.

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- B. Licensed material in item 9B may be used at the licensee's facilities located at 2111 Nicholson Avenue, Kansas City, Missouri.
- C. Licensed material in item 9C may be used at the licensee's facilities located at 2306 Rochester Avenue, Kansas City, Missouri.
11. Licensed material shall be used by, or under the supervision of individuals who have received the training described in the facsimile letter dated March 11, 2008. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.
12. A. The Radiation Safety Officer (RSO) for this license is Ralph Volk.
- B. Before assuming the duties and responsibilities as RSO for this license, future RSOs shall have successfully completed one of the training courses described in Criteria in Section 8.7.1 of NUREG-1556, Volume 4, dated October 1998.
13. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received

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14. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee, except as specifically authorized.
15. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
16. Installation, initial radiation survey, relocation, removal from service, maintenance, and repair of devices containing sealed sources shall be performed by Texas Nuclear or by persons specifically licensed by the Commission or an Agreement State to perform such services. Installation, replacement, and disposal of sealed sources shall be performed only by persons specifically licensed by the Commission or an Agreement State to perform such services.
17. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels in accessible areas around, above, and below the gauge with the shutter open. This survey shall be performed only by persons authorized to perform such services by the Commission or an Agreement State. A record of the results of this survey shall be maintained for the duration of the license.
18. The licensee shall operate each gauge within the manufacturer's specified temperature and/or environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.
19. The licensee shall assure that the shutter mechanism is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify as appropriate its "lock-out" procedures whenever a new gauge is obtained to incorporate the device manufacturer's recommendations.
20. A. Each gauge shall be tested for the proper operation of the on-off mechanism and indicator, if any, at no longer than 6-month intervals or at such longer intervals as specified by the manufacturer and approved by U.S. Nuclear Regulatory Commission.  
B. Notwithstanding the periodic on-off mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in a locked position. The gauges exempted from this periodic test shall be tested before use.
21. A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device containing byproduct material and that do not result in the potential for any portion of the body to come into contact with the primary beam or in increased radiation levels in accessible areas.

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- B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, or shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.
22. The licensee may initially mount a gauge if permitted by the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State and under the following conditions:
- the gauge must be mounted in accordance with written instructions provided by the manufacturer;
  - the gauge must be mounted in a location compatible with the "Conditions of Normal Use" and "Limitations and/or Other Considerations of Use" in the certificate of registration issued by the U.S. Nuclear Regulatory Commission or an Agreement State;
  - the on-off mechanism (shutter) must be locked in the off position, if applicable, or the source must be otherwise fully shielded;
  - the gauge must be received in good condition (i.e., package was not damaged); and
  - the gauge must not require any modification to fit in the proposed location.
- Mounting does not include electrical connection, activation or operation of the gauge. The source must remain fully shielded and the gauge may not be used until it is installed and made operational by a person specifically licensed by the U.S. Regulatory Commission or an Agreement State to perform such operations.
23. Except for maintaining labeling as required by 10 CFR Part 20, or 71, the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission before making any changes in the sealed source, device or source-device combination that would alter the description or specifications as indicated in the respective certificate of registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.
24. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

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25. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated August 29, 2002; and
  - B. Letter received October 18, 2002; and
  - C. The facsimile letters dated March 11, 2008 and June 3, 2008.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date JUL 10 2008

By *Loren J. Hueter*  
Loren J. Hueter  
Materials Licensing Branch  
Region III