

# ACCEPTANCE REVIEW MEMO (ARM)

**Licensee:** McLaury Engineering, Inc.      **License No.:** 40-27571-01  
**Docket No.:** 030-34578      **Mail Control No.:** 471210  
**Type of Action:** Term      **Date of Requested Action:** 12-12-06  
**Reviewer Assigned:**      **ARM reviewer(s):** Cook

Response	Deficiencies Noted During Acceptance Review
	[ ] Open ended possession limits. Limit possession. Submit inventory. [ ] Submit copies of most recent leak test results. [ ] Add - delete IC license condition. Add IC paragraph in cover letter. [ ] Split license from cover letter. Add SUNSI marking to license. [ ] Ask the licensee if they have any type-amount of EAct Material.

**Reviewer's Initials:** \_\_\_\_\_ **Date:** \_\_\_\_\_

<input type="checkbox"/> Yes <input type="checkbox"/> No	Unrestricted release Group 2 or >: Transfer memo to FCDB within 10 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Decommissioning notification should be completed within 30 days.
<input type="checkbox"/> Yes <input type="checkbox"/> No	Termination request < 90 days from date of expiration
<input type="checkbox"/> Yes <input type="checkbox"/> No	Expedite (medical emergency, no RSO, location of use/storage not on license, RAM in possession not on license, other)
<input type="checkbox"/> Yes <input type="checkbox"/> No	TAR needed to complete action.

**Branch Chief's and/or Sr. HP's Initials:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**SUNSI Screening according to RIS 2005-31**

Yes  No **Non-Publicly Available, Sensitive if any item below is checked**

General guidance:

- \_\_\_\_\_ RAM = or > than Category 3 (Table 1, RIS 2005-31), use Unity Rule
- \_\_\_\_\_ Exact location of RAM (whether = or > than Category 3 or not)
- \_\_\_\_\_ Design of structure and/or equipment (site specific)
- \_\_\_\_\_ Information on nearby facilities
- \_\_\_\_\_ Detailed design drawings and/or performance information
- \_\_\_\_\_ Emergency planning and/or fire protection systems

Specific guidance for medical, industrial and academic (above Category 3):

- \_\_\_\_\_ RAM quantities and inventory
- \_\_\_\_\_ Manufacturer's name and model number of sealed sources & devices
- \_\_\_\_\_ Site drawings with exact location of RAM, description of facility
- \_\_\_\_\_ RAM security program information (locks, alarms, etc.)
- \_\_\_\_\_ Emergency Plan specifics (routes to/from RAM, response to security events)
- \_\_\_\_\_ Vulnerability/security assessment/accident-safety analysis/risk assess
- \_\_\_\_\_ Mailing lists related to security response

**Branch Chief's and/or Sr. HP's Initials:** JAC **Date:** 1/11/07

ADAMS # ML070250128  
 Template \_\_\_\_\_  
 Date 1/25/07 QC'd by SM

## Pre-Licensing Screening

### Applicant Information:

Control No. 471210

Name: McLaury Engineering, Inc.	Type of Request: Term Program Code(s):	
Location: SD	License No.: 40-27571-01	Docket No.: 030-34578

### STEP 1—Radioactive Materials and Quantities Requested:

<b>Instructions for Step 1: Complete Step 1 for all applications.</b> If all your responses in Step 1 are "No" then do not complete Step 2 (Screening Criteria). Sign and date the completed step-sheet and add it as the sensitive and non-publicly available OAR in ADAMS. If a "yes" response is indicated for any item in Step 1, also complete Step 2. If the type of use is subject to a Security Order or the requirements for increased controls, complete Step 3 (Item A or Item B) without delay.	Yes or No
A. The request is from a new applicant.	N
B. NUREG-1556, Volume 20, Section 4.9 indicates a licensing site visit is needed for the requested type of use, e.g., (1) Type A broad scope license, (2) panoramic irradiator containing > 10000 curies, (3) manufacturers or distributors using unsealed radioactive material or significant quantities of sealed material, (4) radioactive waste brokers, (5) radioactive waste incinerators, (6) commercial nuclear laundries, and (7) any other application that in the judgement of the reviewer and cognizant supervisor involves complex technical issues, complex safety questions, or unprecedented issues that warrant a site visit.	N
C. The applicant requested certain radionuclides and quantities that equal or exceed the Risk Significant Quantity (TBq) values in the table, below, that have been "highlighted" by the reviewer	N

### Table of Risk Significant Quantities

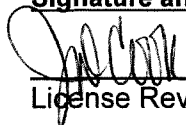
(Category 2 Quantities, IAEA Safety Guide No. RS-G-1.9, Categorization of Radioactive Sources, August 2005)

Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )	Radionuclide	Risk Significant Quantity (TBq <sup>1</sup> )	Risk Significant Quantity (Ci <sup>1</sup> )
Am-241	0.6	16	Pm-147	400	11,000
Am-241/Be	0.6	16	Pu-238	0.6	16
Cf-252	0.2	5.4	Pu-239/Be	0.6	16
Cm-244	0.5	14	Ra-226 <sup>2</sup>	0.4	11
Co-60	0.3	8.1	Se-75	2	54
Cs-137	1	27	Sr-90 (Y-90)	10	270
Gd-153	10	270	Tm-170	200	5,400
Ir-192	0.8	22	Yb-169	3	81

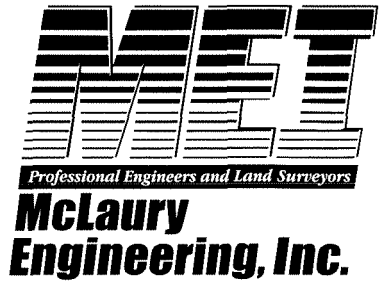
<sup>1</sup> The primary values are TBq. The curie (Ci) values are for informational purposes only.  
<sup>2</sup> The Atomic Energy Act, as amended by the Energy Policy Act of 2005, authorizes NRC to regulate Ra-226 and NRC is in the process of amending its regulations for discrete sources of Ra-226.

Calculations of the Total Activity or the Unity Rule are attached to document whether or not the screening criteria in Step 2 were also completed to evaluate the application. <b>NOTE—If an amendment of an existing license is being requested, the calculations will include the previously authorized quantities for the radionuclide(s).</b>	Yes, No, or Not Applicable (NA)
Total Activity—multiple activities are requested for a single radionuclide and the sum of the activities equals or exceeds the quantity of concern for the radionuclide	
Unity Rule—multiple radionuclides are requested and the sum of the ratios equals or exceeds unity, e.g., [(total activity for radionuclide A) ÷ (risk significant quantity for radionuclide A)] + [(total activity for radionuclide B) ÷ (risk significant quantity for radionuclide B)] ≥ 1.0.	

### Signature and Date for Step 1:


4/11/07  
 License Reviewer and Date

*ML*



RECEIVED  
DEC 19 2006  
DNMS

December 12, 2006

U.S. Nuclear Regulatory Commission  
Attn: Materials & Licensing Branch  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-4005

RE: McLaury Engineering License No. 40-27571-01

I am submitting this information to inform you that I no longer have possession of the Portable Moisture Density Gauge. This gauge was licensed under McLaury Engineering, Inc, and the license number is 40-27571-01.

The portable gauge was turned over to Certified Testing in Sioux City, Iowa. Their license number is 0159-1-97-PF.

We do not have in our possession any controlled materials requiring licensing. I hereby request that our license be terminated.

I would like for someone from your office to contact me to determine that I will not need to do anything else with this transfer.

Should you need any additional information, please feel free to contact me anytime.

Best regards,

*Kim I. McLaury*  
Kim I. McLaury, PE, PLS  
McLaury Engineering, Inc.

LETTER OF TRANSMITTAL

Project

Moisture Density Gage

**McLAURY ENGINEERING, INC.**

PO BOX 1130

ELK POINT, SD 57025

(605) 356-2308 FAX (605) 356-2795

Project No. \_\_\_\_\_

Date 1-3-07

We are sending

To

Colleen Murnahan  
NRECS

Attached  Under Separate Cover Via \_\_\_\_\_

Shop Drawings

Plans

Copy of letter

Samples

Prints

Specifications

Change Order

\_\_\_\_\_

# 4D-27571-01

Mark	Copies	Description
	1	Letter of Cancellation
	1	Last leak test

These are transmitted for the following reasons:

For your file  For your review and comment  Return \_\_\_\_\_ corrected copies

For action as indicated on item transmitted

\_\_\_\_\_

Sign all copies and return \_\_\_\_\_ to this office

\_\_\_\_\_

Remarks:

If you need any additional information please let me know.  
Best regards!

Copy to \_\_\_\_\_  
 Copy to \_\_\_\_\_

With Enclosures  
 With Enclosures

McLAURY ENGINEERING INC.

By [Signature]



**Troxler Electronic Laboratories, Inc.**

3008 Cornwallis Rd., P.O. Box 12057  
 Research Triangle Park, NC 27709  
 Tel: (877) 876-9537 Fax: (919) 485-2250

License: NC 032-0182-1

**LEAK TEST CERTIFICATE**

*Rec'd  
7-24-06*

**DEVICE:**

Model: 3430 Serial No: 27956

**SEALED SOURCES:**

SERIAL NO.	MEASURE DATE	NUCLIDE	ACTIVITY	
			(GBq)	(mCi)
750-1846	07/30/1997	CS-137	0.296	8
47-24557	03/10/1997	AM-241:BE	1.48	40

**LEAK TEST ANALYSIS:**

Sample collected on: 07/05/2006

Sample analyzed on: 07/11/2006 at 1:08:00 PM

Analyzed by: HARRY P. PENDLETON, JR

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.28E+01	2.04E+01
Background measurement (cpm)	1	28
Sample measurement (cpm)	0	26
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	6.1E-01	1.3E+00

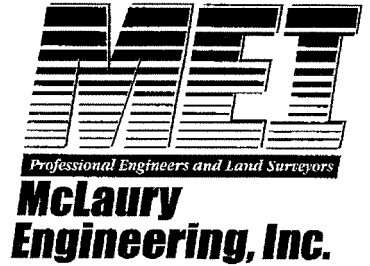
This certifies that the above leak test results are:

Less than 185 Bq (0.005 uCi)       Greater than 185 Bq (0.005 uCi)

If greater than 185 Bq (0.005 uCi):

Person Notified \_\_\_\_\_ Date \_\_\_\_\_

Phone \_\_\_\_\_ and/or Fax \_\_\_\_\_



2/7/07 10:40am CT

Spoke with Certified Testing's RSO, Robert Smutzler, and confirmed that

December 12, 2006 the gauge was transferred (donated) on Dec. 6, 2006.

U.S. Nuclear Regulatory Commission  
Attn: Materials & Licensing Branch  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-4005

RJT

RE: McLaury Engineering License No. 40-27571-01

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We do not have in our possession any controlled materials requiring licensing. I hereby request that our license be terminated.

I would like for someone from your office to contact me to determine that I will not need to do anything else with this transfer.

Should you need any additional information, please feel free to contact me anytime.

Best regards,

  
 Kim I. McLaury, PE, PLS  
 McLaury Engineering, Inc.

Certified Testing Services, Inc.  
 419 W 6th St. Sioux City, Iowa  
 51103 (Agreement State)

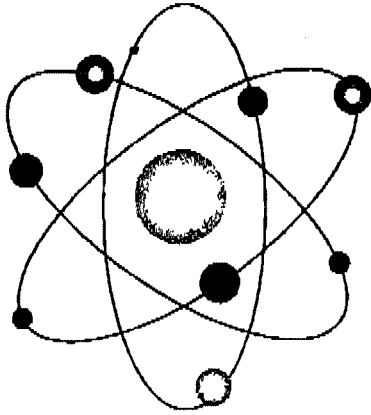
Phone 712-252-5132

2/7/07 8:15<sup>am</sup> CT

Talked to secretary at Iowa Bureau of Radiation Control and she indicated that Certified Testing has portable gauge license authorizing possession of Troxler 3430. Secretary will fax me copy of Certified Testing's license.

2/7/07 8:25 am CT

Called Jack Craig with Certified Testing and he will ask the RSO to confirm date of gauge transfer.



Iowa Department of Public Health  
Bureau of Radiological Health  
Lucas State Office Building  
321 East 12<sup>th</sup> Street  
Des Moines, Iowa 50319  
(515) 281-4529 FAX

Telecopy Message

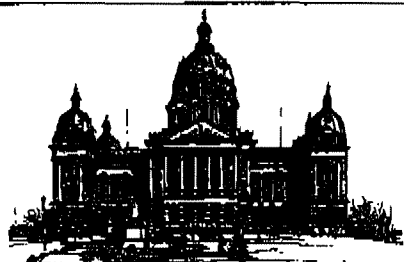
Date: 2/7/07 Time: 8:22am  
To: Rick to Tom FAX No.: 817-260-8263  
From: Ramona Ubaldo

Number of pages sent following this cover sheet: 3

Special instructions or comments: Call if you have  
any questions.

Note: If you do not receive all of the pages, or if any of the pages are illegible, please contact us.

Contact Person: Ramona L. Ubaldo  
Telephone: 515-281-0403  
Division: EH/HS/BRH



## IOWA DEPARTMENT OF PUBLIC HEALTH

Page 1 of 3 Pages

**MATERIALS LICENSE**

STATE CAPITOL OF IOWA DES MOINES, IOWA

Pursuant to Chapter 136C of the Iowa Code and 641-38 through 42 (136C) of the Iowa Administrative Code 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 radioactive materials 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 rules of the applicable chapter(s). This license is subject to all applicable rules and orders of the Iowa Department of Public Health including the Iowa Rules for Radiation Machines and Radioactive Materials [641-38 through 42] now or hereafter in effect, and to any conditions specified below.

Licensee	In accordance with the application dated September 19, 2003, License No. 0159-1-97-PG is renewed as follows:
1. Certified Testing Services, Inc.  2. PO Box 1193 Sioux City, Iowa 51102	3. License Number: 0159-1-97-PG  4. Expiration Date: November 30, 2008 <i>RM</i>

5. Byproduct, Source Special Nuclear and/or Natural Occurring or Accelerator Produced Radioactive Material	6. Chemical and/or Physical Form	7. Maximum Amount that Licensee May Possess At Any One Time Under This License
A. Americium-241: Beryllium	A. Sealed Source(s) (Troxler drawing number A-102451)	A. No single source to exceed 44 millicuries
B. Cesium-137	B. Sealed Source(s) (Troxler drawing number A-102112)	B. No single source to exceed 9 millicuries
C. Americium-241: Beryllium	C. Sealed Source(s) (Amersham model number AMNV.997; or Isotope Products Laboratories model number 3021 or 3027)	C. No single source to exceed 44 millicuries
D. Cesium-137	D. Sealed Source(s) (Amersham model number CDCW556; or Isotope Products Laboratories model number HEG-0058)	D. No single source to exceed 9 millicuries





STATE CAPITOL OF IOWA DES MOINES, IOWA

Iowa Department of Public Health  
**MATERIALS LICENSE**

Page 2 of 3 Pages

Supplementary Sheet

License No. 0159-1-97-PG

**8. Authorized Use**

- A. & B. To be used in Troxler Model 3411B for determination of moisture and density in soil, concrete, or asphalt.
- C. & D. To be used in Troxler Model 3430, 3430-M, 3440, or 3440-M for determination of moisture and density in soil, concrete, or asphalt.

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**CONDITIONS**

9. Licensed material may be stored at the licensee's facilities located at 419 West 6<sup>th</sup> Street, Sioux City, Iowa, and may be used at temporary job sites of the licensee anywhere in the State of Iowa where the Iowa Department of Public Health maintains jurisdiction for regulating the use of licensed material.
10. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have received the training described in application dated September 19, 2003 and have been approved in writing by the Radiation Safety Officer. The licensee shall maintain records of individuals designated as users for five (5) years following the last use of licensed material.
11. The Radiation Safety Officer for this license is Robert Smutzler.
12. When performing tests at temporary job sites, the authorized user shall not leave the nuclear gauge unattended. Upon completion of tests, the device shall be secured in the licensee's vehicle or a secure building to prevent loss, theft, or unauthorized use.
13. Any cleaning, maintenance, or repair of the gauge(s) that requires removal of the source rod shall be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
14. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport, storage or when not under the direct surveillance of an authorized user.
15. The licensee is authorized to transport licensed material only in accordance with the provisions of 641-39.5(136C), "Packaging and Transportation of Radioactive Material."
16. The licensee shall conduct a physical inventory of all sealed sources received and possessed under the license at intervals not to exceed six (6) months and retain each inventory record for five (5) years. The inventory record shall contain the identity and estimated activity of each radionuclide, the model number of each source, and serial number if one has been assigned, the location of each source, date of the inventory, and the signature of the Radiation Safety Officer.



STATE CAPITOL OF IOWA DES MOINES, IOWA

Iowa Department of Public Health  
**MATERIALS LICENSE**

Page 3 of 3 Pages

Supplementary Sheet

License No. 0159-1-97-PG

17. 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 Iowa Department of Public Health's rules shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the rules.

- A. Application dated September 19, 2003 (with attachments).
- B. Letter dated October 29, 2003 (with attachments).

For the Iowa Department of Public Health

Date 11/12/03By Nancy A. Farrington  
Nancy A. Farrington  
Radioactive Materials ProgramDate 11/12/03Concurrence Donald A. Flater  
Donald A. Flater, Chief  
Bureau of Radiological HealthM  
DKM

JAN 22 2007

DATE

This is to acknowledge the receipt of your letter/application dated 12-12-06, and to inform you that the initial processing, which includes an administrative review, has been performed.

There were no administrative omissions. Your application will be assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card:

---

The action you requested is normally processed within 90 days.

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 471210.  
When calling to inquire about this action, please refer to this mail control number.  
You may call me at 817-860-8103.

Sincerely,

  
Licensing Assistant

BETWEEN:

License Fee Management Branch, ARM  
and  
Regional Licensing Sections

(FOR LEADS USE)  
: INFORMATION FROM LITS  
:-----  
: Program Code: 03121  
: Status Code: 0  
: Fee Category: 3P  
: Exp. Date: 20071130  
: Fee Comments:  
: Decom Fin Assur Req'd: N  
:-----

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

Applicant/Licensee: MCLAURY ENGINEERING, INC.  
Received Date: 20061219  
Docket No: 3034578  
Control No.: 471210  
License No.: 40-27571-01  
Action Type: Termination

2. FEE ATTACHED

Amount: \_\_\_\_\_  
Check No.: \_\_\_\_\_

3. COMMENTS

Signed  
Date

*Colleen M. ...*  
01-08-07

B. LICENSE FEE MANAGEMENT BRANCH (Check when milestone 03 is entered / )

1. Fee Category and Amount: \_\_\_\_\_

2. Correct Fee Paid. Application may be processed for:

Amendment \_\_\_\_\_  
Renewal \_\_\_\_\_  
License \_\_\_\_\_

3. OTHER

\_\_\_\_\_

Signed  
Date

\_\_\_\_\_  
\_\_\_\_\_



Professional Engineers and Land Surveyors

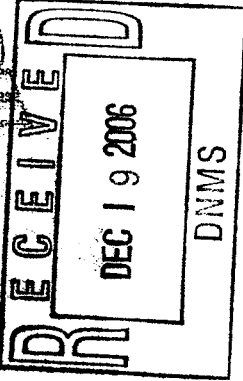
**McLauri  
Engineering, Inc.**

118 W. Main St.  
P.O. Box 1130  
Elk Point, SD 57025

40-27571-01  
030-34578

SIoux FALLS SD 571

12 DEC 2006 PM 2 L



Nuclear Materials Licensing Section  
U.S. Nuclear Regulatory Commission, Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

