

## MATERIALS LICENSE

Amendment No. 04

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.

301634

## Licensee

1. Midwest Engineering Services, Inc.

2. 205 Wilmont Drive  
Waukesha, WI 53186In accordance with letter dated  
July 12, 19963. License Number 48-26074-01 is amended in  
its entirety to read as follows:

4. Expiration Date April 30, 2005

5. Docket or  
Reference No. 030-313576. Byproduct, Source, and/or  
Special Nuclear Material7. Chemical and/or Physical  
Form8. Maximum Amount that Licensee  
May Possess at Any One Time  
Under This License

A. Cesium-137

A. Sealed source  
(Campbell Pacific  
Nuclear Model No.  
CPN-131)A. No single source  
to exceed 10  
millicuries

B. Americium-241

B. Sealed source  
(Campbell Pacific  
Nuclear Model No.  
CPN-131)B. No single source  
to exceed 50  
millicuries

C. Cesium-137

C. Sealed source  
(Troxler Dwg.  
No. A-102112)C. No single source  
to exceed 10  
millicuries

D. Americium-241

D. Sealed source  
(Troxler Dwg.  
No. A-102451)D. No single source  
to exceed 50  
millicuries

## 9. Authorized Use:

A. and B. To be used in CPN-Corporation Model MC-series surface moisture/density  
gauges.

C. and D. To be used in Troxler Model 3400 series surface moisture/density gauges.

9610220216 961003  
PDR ADDCK 03031357  
C PDRCOPY 2ml  
30  
SD

**MATERIALS LICENSE  
SUPPLEMENTARY SHEET**

License Number

48-26074-01

Docket or Reference Number

030-31357

Amendment No. 04

CONDITIONS

10. Licensed material may be used at the licensee's facilities located at 205 Wilmont Drive, Waukesha, Wisconsin, 1280 Van Dyke Road, Unit 4, Appleton, Wisconsin, 11 E. Birch Street, Chippewa Falls, Wisconsin, 9362 Calumet Avenue, Munster, Indiana and at temporary job sites of the licensee anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material.
11. A. Licensed material shall be used by, or under the supervision and in the physical presence of, individuals who have successfully completed the device manufacturer's training course for gauge users and have been designated by the licensee's Radiation Protection Officer. The licensee shall maintain records of the individuals who have been designated as authorized users.  
B. The Radiation Protection Officer for the activities authorized by this license is Matthew A. Henderson.
12. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed 6 months or at such other intervals as specified by the certificate of registration referred to in 10 CFR 32.210.  
B. In the absence of a certificate from a transferor indicating that a leak test has been made within 6 months prior to the transfer, a sealed source or detector cell received from another person shall not be put into use until tested.  
C. The leak test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(b)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations. The report shall be filed within 5 days of the date the leak test result is known with the U.S. Nuclear Regulatory Commission, Region III, ATTN: Chief, Nuclear Materials Safety Branch, 801 Warrenville Road, Lisle, Illinois 60532-4351. The report shall specify the source involved, the test results, and corrective action taken.  
D. The licensee is authorized to collect leak test samples for analysis by Troxler or CPN. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.
13. Sealed sources containing licensed material shall not be opened or removed from the gauges by the licensee.

MATERIALS LICENSE  
SUPPLEMENTARY SHEET

License Number

48-26074-01

Docket or Reference Number

030-31357

Amendment No. 04

14. When performing tests at temporary job sites, the authorized user shall not leave the moisture/density gauge unattended. Upon completion of tests the device shall be locked in the licensee's vehicle or a secure building to prevent unauthorized use, loss or theft.
15. The licensee shall conduct a physical inventory every six (6) months to account for all gauges received and possessed under the license. The records of the inventories shall be maintained for two (2) years from the date of the inventory for inspection by the Commission, and shall include the quantities and kinds of byproduct material, manufacturer's name and model numbers, location of each gauge and the date of the inventory.
16. 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 Commission or an Agreement State to perform such services.
17. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material".
18. In addition to the possession limits in Item 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 10 CFR 30.35(d) for establishing decommissioning financial assurance.
19. 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 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 October 25, 1994; and
  - B. Letters dated July 12, 1996 and October 3, 1996.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date October 3, 1996

By

Loren J. Hunter

Nuclear Materials Licensing Branch, Region III

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM  
AND  
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)  
INFORMATION FROM LTS

PROGRAM CODE: 03121  
STATUS CODE: 0  
FEE CATEGORY: 3P  
EXP. DATE: 20050430  
FEE COMMENTS:  
DECOM FIN ASSUR REQDT N

R8

LICENSE FEE TRANSMITTAL

A. REGION

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: MIDWEST ENGINEERING SERVICES, INC.  
RECEIVED DATE: 960722  
DOCKET NO: 3031357  
CONTROL NO.: 301634  
LICENSE NO.: 48-26074-01  
ACTION TYPE: AMENDMENT

1096 JUL 26 AM 10:51

2. FEE ATTACHED

AMOUNT: 300  
CHECK NO.: 18203

3. COMMENTS

SIGNED  
DATE

*[Signature]*  
7-25-96

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED / ☒ )

1. FEE CATEGORY AND AMOUNT: 3P \$300

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT ☒  
RENEWAL  
LICENSE

3. OTHER

SIGNED  
DATE

SC  
7/29/96

AUG 06 1996

Log	Jul 18 III
Remitter	
Check No.	18203
Amount	\$300
Fee Category	3P
Type of Fee	Amd
Date Check Rec'd	7/26/96
Date Completed	7/29/96
By:	SC





**midwest engineering services, inc.**

205 Wilmont Drive • Waukesha, WI 53186 • 414-521-2125 • FAX 414-521-2471

July 12, 1996

United States  
Nuclear Regulatory Commission  
Region III  
801 Warrenville Road  
Lisle, IL 60532-4351

RE: License No. 48-26074-01  
Amendment/Changes

Gentlemen,

We hereby request the following amendment/change to our current license:

Item 10

Midwest Engineering has opened a permanent operation in Munster, Indiana. We propose to store and maintain licensed material (moisture/density gauges) at the following location:

Midwest Engineering Services, Inc.  
9362 Calumet Avenue  
Munster, Indiana 46321

Enclosed is a drawing that shows the gauge storage location at this new facility.

Access control to the licensed material will be provided by limiting key access to the storage cabinet, gauge shipping container and density gauge to authorized users only.

Enclosed is a check for \$300.00 for this license amendment/change.

If you have any questions, please do not hesitate to call.

Sincerely yours,

MIDWEST ENGINEERING SERVICES, INC.

Daniel B. Anderson, P.E.  
Department Manager  
Construction Services

Enclosures  
usnuc1.doc

301634

PM: 7-17-96

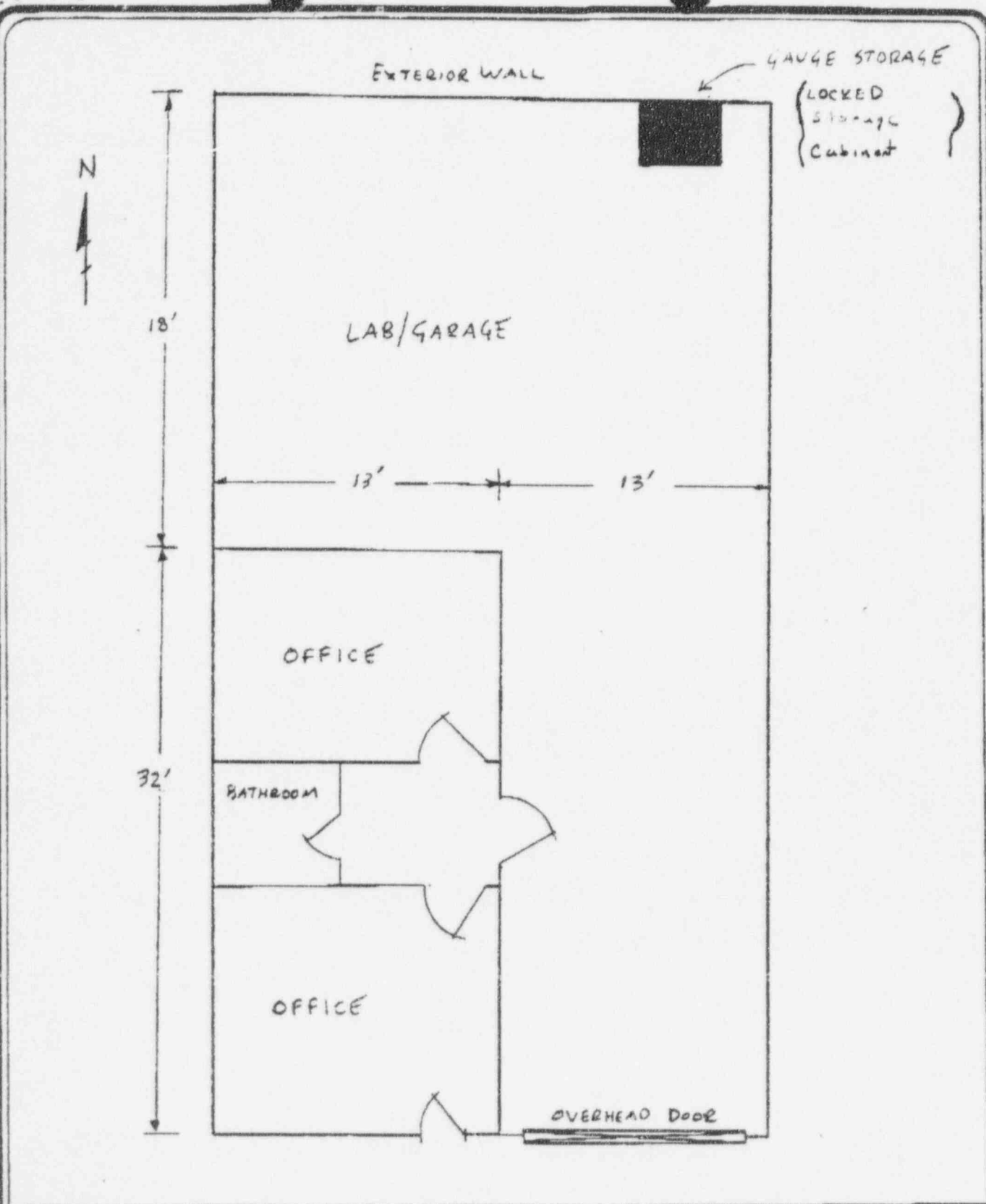
geotechnical, environmental, & materials engineers

RECEIVED

JUL 22 1996

REGION III

JUL 22 1996



midwest engineering services, inc.

FIGURE  
MUNSTER, INDIANA OFFICE  
9362 CALUMET AVE,  
(NOT TO SCALE)

PROJECT NUMBER.

DATE:

7-96

OCT 04 1996

Daniel B. Anderson, P.E.  
Department Manager, Construction Services  
Midwest Engineering Services, Inc.  
205 Wilmont Drive  
Waukesha, WI 53186

Dear Mr. Anderson:

Enclosed is Amendment No. 04 to your NRC Material License No. 48-26074-01 in accordance with your request.

Please review the enclosed document carefully and be sure that you understand all conditions. If there are any errors or questions, please notify the U.S. Nuclear Regulatory Commission, Region III office at (630) 829-9887 so that we can provide appropriate corrections and answers.

Please note: we have added five years to the expiration date listed on your license. You should have recently received official notification from our headquarters office explaining the cause for the five-year extension. In the meantime, if you have any questions, please call me.

Please be advised that your license expires at the end of the day, in the month, and year stated in the license. Unless your license has been terminated, you must conduct your program involving byproduct materials in accordance with the conditions of your NRC license, representations made in your license application, and NRC regulations. In particular, note that you must:

1. Operate in accordance with NRC regulations 10 CFR Part 19, "Notices, Instructions and Reports to Workers; Inspections," 10 CFR Part 20, "Standards for Protection Against Radiation," and other applicable regulations.
2. Notify NRC, in writing, within 30 days:
  - a. When the Radiation Safety Officer permanently discontinues performance of duties under the license or has a name change; or
  - b. When the licensee's mailing address changes (no fee is required if the location of byproduct material remains the same).
3. In accordance with 10 CFR 30.36(b) and/or license condition, notify NRC, promptly, in writing, and request termination of the license when you decide to terminate all activities involving materials authorized under the license.
4. Request and obtain a license amendment before you:
  - a. Change Radiation Safety Officers;

301634

- b. Order byproduct material in excess of the amount, or radionuclide, or form different than authorized on the license;
  - c. Add or change the areas of use or address or addresses of use identified in the license application or on the license; or
  - d. Change ownership of your organization.
5. Submit a complete renewal application with proper fee or termination request at least 30 days before the expiration date of your license. You will receive a reminder notice approximately 90 days before the expiration date. Possession of byproduct material after your license expires is a violation of NRC regulations. A license will not normally be renewed, except on a case-by-case basis, in instances where licensed material has never been possessed or used.

In addition, please note that NRC Form 313 requires the applicant, by his/her signature, to verify that the applicant understands that all statements contained in the application are true and correct to the best of the applicant's knowledge. The signatory for the application should be the licensee or certifying official rather than a consultant.

You will be periodically inspected by NRC. Failure to conduct your program in accordance with NRC regulations, license conditions, and representations made in your license application and supplemental correspondence with NRC will result in enforcement action against you. This could include issuance of a notice of violation, or imposition of a civil penalty, or an order suspending, modifying or revoking your license as specified in the General Policy and Procedures for NRC Enforcement Actions. Since serious consequences to employees and the public can result from failure to comply with NRC requirements, prompt and vigorous enforcement action will be taken when dealing with licensees who do not achieve the necessary meticulous attention to detail and the high standard of compliance which NRC expects of its licensees.

Sincerely,  
Original Signed By  
Loren J. Hueter  
Nuclear Materials Licensing Branch

License No.: 48-26074-01  
Docket No.: 030-31357

Enclosures: 1. Amendment No. 04  
2. Form NRC-3  
3. NRC Form 313

DOCUMENT NAME: M:\03031357.CL6

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	DNMS/RIII	<input checked="" type="checkbox"/>							
NAME	LHUETER:jaw	<input checked="" type="checkbox"/>							
DATE	10/03/96	<input checked="" type="checkbox"/>							

OFFICIAL RECORD COPY





midwest engineering services, inc.  
geotechnical • environmental • materials engineers

205 Wilmont Drive  
Waukesha, WI 53186  
414-521-2125  
FAX 414-521-2471

October 3, 1996

Ms. Lauren Hueter  
Nuclear Regulatory Commission  
Region 111  
801 Warrenville Road  
Lisle, IL 60532-4351

RE: License No. 48-26074-01  
Control No. 301-634  
Response Letter

Dear Ms. Hueter,


Per our telephone conversation on September 30, 1996, regarding our License Amendment request we are providing the following written response as you requested.

1. We agree to amend our current license to include providing an annual audit of our Radiation Safety program at each branch office in general accordance with Draft Regulation Guide DG-0008, May 1995. See attached copy.
2. The location of our Munster, Indiana office is an existing structure.
3. The existing structure noted in Item 2 is not part of a residence.

If you have any questions, please call.

Sincerely yours,

MIDWEST ENGINEERING SERVICES, INC.

  
Daniel B. Anderson, P.E.  
Department Manager  
Branch RSO

usnrc12.doc

RECEIVED  
OCT 03 1996  
REGION III

CORPORATE OFFICE: WAUKESHA, WI 414-521-2125

OTHER OFFICES:

APPLETON, WI

CHIPPEWA FALLS, WI

CHAMPAIGN, IL

CHICAGO, IL

MEMPHIS, TN

MUNSTER, IN

TOTAL P.01

## 10.8 Annual Audit of Radiation Safety Program

According to 10 CFR 20.1101, each licensee must (1) develop, document, and implement a radiation protection program commensurate with the scope and extent of licensed activities and sufficient to ensure compliance with the regulations, (2) use procedures and engineering controls to achieve occupational doses and doses to members of the public that are ALARA, and (3) review, at least annually, the content and implementation of their radiation programs. Licensees are required by 10 CFR 20.2102 to maintain records of their radiation protection program. Licensees must maintain records of the provisions of their radiation protection program until the NRC terminates the pertinent license. Licensees must also maintain records of audits and other reviews of program content and implementation for 3 years after the record is made.

As noted in Appendix C, the RSO needs to ensure that annual audits are conducted, but does not necessarily need to conduct the audits himself or herself. In fact, if the RSO is one of the authorized gauge users, it may be beneficial for a qualified individual (e.g., radiation safety consultant, the corporate radiation safety officer) who is not associated with day-to-day operations to conduct the audit. An example of an audit program is provided in Appendix I to this guide.

The audit should be sufficiently detailed to ensure that (1) the licensee is abiding by NRC and DOT regulations and the terms and conditions of the license (e.g., periodic leak tests and inventories, only trained and approved individuals use gauges independently), (2) the content and implementation of the licensee's radiation protection program achieve occupational doses and doses to members of the public that are ALARA (see 10 CFR 20.1101), and (3) the licensee maintains all appropriate records with all appropriate information (e.g., records of personnel exposure, leak tests, inventory, training of gauge users) sufficient to comply with NRC requirements. Appendix I describes an audit program that is acceptable to the NRC staff.

These audits may be conducted as "mini-inspections" similar to those conducted by the NRC and may include observation of some or all of the licensee's authorized users during actual or simulated use of portable gauges. NRC inspections have identified some common violations among portable gauge licensees: failure to perform leak tests or conduct inventories at the required frequency, failure to transport gauges in compliance with DOT regulations,

unauthorized personnel using gauges independently, possession and use of sealed source or device combinations other than those specified on the license, and an unauthorized individual as RSO.

The results of the audit, identification of deficient areas, and recommendations for change should be documented and provided to licensee management who, in turn, needs to take prompt action to correct any deficiencies noted by the auditor. If the licensee conducts licensed activities under other licenses or at locations other than the one audited, its personnel (at the other locations or working under the other licenses) should be informed of the deficiencies noted during audits and of the actions management expects all personnel to take to avoid similar deficiencies.

You should submit (1) the name and radiation safety qualifications<sup>a</sup> of the individual who will conduct audits, (2) a description of the scope and extent of the audits, (3) a commitment to conduct audits at intervals not to exceed 12 months and to maintain records of the audits for at least 3 years after the record is made, (4) management's commitment to review the documented results of the audit promptly after the audit's completion, and (5) a commitment to take prompt action to correct deficiencies identified during audits and to inform all personnel (including those at other locations and those working under other licenses) of the deficiencies and the actions management expects its personnel to take to avoid similar deficiencies.

In lieu of describing the scope and extent of the audits, you may state, "We will conduct audits as described in Appendix I of this regulatory guide (Draft Regulatory Guide DG-0008)."

#### 10.9 Financial Assurance and Recordkeeping for Decommissioning

Pursuant to 10 CFR 30.35, certain licensees must provide financial assurance for decommissioning, and all licensees must maintain records important to decommissioning. The requirements for financial assurance are keyed to the types and quantities of byproduct material authorized on a license. Only a few portable gauge licensees need to comply with the financial assurance provisions

<sup>a</sup>You may omit the statement of the auditor's qualifications if you have included it elsewhere in the application or have previously submitted it to NRC, provided your reference to previously submitted information is clear and specific.

## APPENDIX I

## SAMPLE AUDIT PROGRAM

An audit is conducted, in part, to fulfill the requirements of 10 CFR 20.1101 for an annual review of the content and implementation of the licensee's radiation protection program. It should also identify program weaknesses and allow licensees to take early corrective actions (before an NRC inspection). During an audit, the auditor needs to keep in mind not only the requirements of NRC's regulations, but also the licensee's commitments in its applications and other correspondence with NRC. The auditor should also evaluate whether the licensee is maintaining exposures to workers and the general public as low as is reasonably achievable (ALARA), and if not, make suggestions for improvement.

The form in this appendix can be used to document the annual audit of the radiation protection program. Guidance is provided here on completing each section of the form. In the remarks portions of the form, note any deficiencies that were identified and the corrective actions taken (or to be taken).

1. Audit History. Enter the date of the last audit, whether any deficiencies were identified, and whether actions were taken to correct the deficiencies.

2. Organization and Scope of Program. Briefly describe the organizational structure, noting any changes in personnel. Describe the scope of licensed activities at the audited location. Check whether the Radiation Safety Officer (RSO) is the person identified in the license and fulfills the duties specified in the license.

3. Training, Retraining, and Instructions to Workers. Ensure that workers have received the training required by 10 CFR 19.12. Be sure that, before being permitted to use a gauge, the user has received training (from the manufacturer or in an alternative course approved by NRC) and has a copy of, and training in, the licensee's operating and emergency procedures; records should be maintained. Note whether refresher training is conducted in accordance with licensee commitments. By interview and observation of selected workers, ensure that each

has a copy of the licensee's operating and emergency procedures and can implement them properly.

4. Internal Audits. Verify that audits fulfill the requirements of 10 CFR 20.1101, are conducted in accordance with licensee commitments, and are properly documented.

5. Facilities. Verify that the licensee's facilities are as described in its license documents.

6. Materials. Verify that the license authorizes the sealed source/device combinations that the licensee possesses. Verify that the licensee uses the source/device combinations in accordance with license provisions. Ensure that gauges are maintained in accordance with licensee commitments.

7. Leak Tests. Verify that all sealed sources are tested for leakage at the prescribed frequency and in accordance with licensee commitments. Records of results should be maintained.

8. Inventories. Verify that inventories are conducted at least once every 6 months to account for all sealed sources; inventory records should be maintained.

9. Radiation Surveys. Verify that the licensee has at least one operable, calibrated survey instrument at each jobsite and that the instruments are calibrated in accordance with licensee commitments; in accordance with 10 CFR 20.2103, calibration records must be retained for three years after the record is made. Alternatively, evaluate the licensee's arrangements for timely access to survey instruments in case of an incident. Check that radiation levels in the vicinity of use of the gauge and immediately outside areas used for gauge storage are within regulatory limits; in accordance with 10 CFR 20.2103, records of surveys must be retained for three years after the record is made. Verify compliance with 10 CFR 20.1301; records should be maintained.

10. Receipt and Transfer of Radiopactive Material (Includes Waste Disposal). Verify that gauges received from others (e.g., new gauges) are received, opened,



and surveyed in accordance with 10 CFR 20.1906. Ensure that gauge transfers are performed in accordance with 10 CFR 30.41. Records of surveys, receipt, and transfer must be maintained in accordance with 10 CFR 20.2103 and 30.51.

11. Transportation. Determine compliance with Department of Transportation (DOT) requirements. Verify that hazardous materials training is conducted as required by 49 CFR 172.700-704. Verify that radioactive packages are prepared, marked, and labeled in accordance with 49 CFR Parts 172 and 173 requirements. Be sure that the licensee has records of performance testing of its special form sources and DOT-7A packages. Verify that shipping papers are prepared, contain all needed information, and are readily accessible during transport (49 CFR 172.200-204 and 177.718). Check that packages are blocked and braced (49 CFR 177.842). Check for any needed placarding (49 CFR 172.504); if overpacks are used, verify that they are properly marked and labeled (49 CFR 173.25).

12. Personnel Radiation Protection. Evaluate the licensee's determination that unmonitored personnel are not likely to receive more than 10 percent of the allowable limits. Alternatively, if personnel dosimetry is provided and required, verify that it complies with 10 CFR 20.1501(c) and licensee commitments. Review personnel monitoring records; compare exposures of individuals doing similar work; determine reasons for significant differences in exposures. If any worker declared her pregnancy in writing, evaluate the licensee's compliance with 10 CFR 20.1208. Check whether records are maintained as required by 10 CFR 20.2101-2104 and 20.2106.

13. Auditor's Independent Measurements (If Made). If the licensee performs extended maintenance, the auditor should make independent measurements and compare the results with those made or used by the licensee. If the licensee does not perform extended maintenance, the auditor may, if desired, make independent measurements.

14. Notification and Reports. Check on the licensee's compliance with the notification and reporting requirements in 10 CFR Parts 19, 20, and 30. Ensure that the licensee is aware of the telephone number for NRC's Emergency Operations Center.

15. Posting and Labeling. Check for compliance with the posting and labeling requirements of 10 CFR 19.11, 20.1902, 20.1904, and 21.6.

16. Recordkeeping for Decommissioning. Check to determine compliance with 10 CFR 30.35(g).

17. Bulletins and Information Notices. Check to determine whether the licensee is receiving bulletins, information notices, NMSS Newsletters, etc., from NRC. Check whether the licensee took appropriate action in response to NRC mailings.

18. Special License Conditions or Issues. Verify compliance with any special conditions on the licensee's license. If the licensee has any unusual aspect of its work with portable gauges, review and evaluate compliance with regulatory requirements. If the licensee conducts licensed activities at locations other than the one being audited, consider the deficiencies identified at the other locations and ensure that the corrective actions implemented in response to those deficiencies have in fact been implemented at the audited locations.

19. Continuation of Report Items. This section is self-explanatory.

20. Problems or Deficiencies Noted, Recommendations. This section is self-explanatory.

21. Evaluation of Other Factors. Evaluate management's involvement with the radiation safety program, whether the RSO has sufficient time to perform his/her duties, and whether the licensee has sufficient staff to handle the workload and maintain compliance with regulatory requirements.

## NOTES FOR AUDITS OF PORTABLE GAUGE LICENSEE'S OPERATIONS

NOTE: All areas indicated in audit notes may not be applicable to every license and may not need to be addressed during each audit.

Audit Report No. \_\_\_\_\_

License No. \_\_\_\_\_

Licensee's name and mailing address:

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

Audit of activities at (Address):

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

Contact at Audit Location \_\_\_\_\_

Telephone No. \_\_\_\_\_

Date of Last Audit of this Location \_\_\_\_\_

Date of This Audit \_\_\_\_\_

## Summary of Findings and Action:

- ( ) No deficiencies  
( ) Deficiencies  
( ) Action on previous deficiencies

## Recommendations:

Auditor: \_\_\_\_\_  
(Signature)

Date \_\_\_\_\_

1. AUDIT HISTORY

( )N/A<sup>1</sup> - Initial audit

- A. Last audit of this location conducted \_\_\_\_\_  
 B. Any problems or deficiencies identified during last two audits or two years, whichever is longer? ( )Y ( )N  
 C. Open problems or deficiencies from previous audits:

<u>Requirement</u>	<u>Prob./Def.</u>	<u>Corrective Action Taken (Y/N)</u>	<u>Status Open/Closed</u>

- D. Any previous problem or deficiency not corrected or repeated? ( )Y ( )N ( )N/A  
 Explain.

2. ORGANIZATION AND SCOPE OF PROGRAM

- A. Briefly describe the organizational structure.

- (1) Structure is as described in license documents. ( )Y ( )N  
 (2) There are multiple authorized locations of use. ( )Y ( )N  
 (3) Briefly describe the scope of activities involving byproduct material, frequency of use, staff size, etc.

- B. Radiation Safety Officer

- (1) The same person who is authorized on the license. ( )Y ( )N  
 (2) Fulfills duties as RSO (see Appendix C of this guide). ( )Y ( )N

<sup>1</sup>N/A means "Not applicable."

- C. Use is only by authorized individuals who have been designated by the RSO.

( )Y ( )N

Remarks:

3. TRAINING, RETRAINING, AND INSTRUCTIONS TO WORKERS

- A. Instructions to workers are per 10 CFR 19.12.  
B. Training program is required.

( )Y ( )N

( )Y ( )N

(1) Initial training - Manufacturer's Course:

Before using a gauge, user received (a) a manufacturer's course that meets Appendix D of this guide in regard to content, instructor qualifications, tests, etc; and (b) a copy of and training in licensee's operating and emergency procedures.

( )Y ( )N

Records of training are maintained.

( )Y ( )N

(2) Initial training - Alternative Course:

Before using a gauge, user received (a) an alternative course (as described in correspondence with NRC as to content, instructor qualifications, tests, etc); and (b) a copy of and training in licensee's operating and emergency procedures.

( )Y ( )N

Records of training are maintained.

( )Y ( )N

(3) Refresher training

( )Y ( )N

Frequency, topics, and instructor are as described in correspondence with NRC.

( )Y ( )N

Records of refresher training are maintained.

( )Y ( )N

- C. Evaluation of individuals' understanding of procedures and regulations based on interviews and observation of selected workers.

(1) Each worker has an up-to-date copy of the licensee's operating and emergency procedures.

( )Y ( )N

(2) Each worker has an adequate understanding of:

Current operating procedures

( )Y ( )N

Emergency procedures

( )Y ( )N

Use of survey meters (if licensee expects workers to use meters after an incident)

( )Y ( )N ( )N/A



- (3) Workers can demonstrate proper implementation of selected procedures, including security of the gauge when in storage and maintaining constant surveillance and control during use.

( )Y ( )N

D. Revised Part 20. Workers are cognizant of requirements for:

- (1) Radiation Protection Program [20.1101]  
 (2) Annual dose limits [20.1301, 1302]  
 (3) New NRC Forms 4 and 5  
 (4) 10% monitoring threshold [20.1502]  
 (5) Dose limits to embryo/fetus and declared pregnant worker [20.1208]  
 (6) Procedures for opening packages [20.1906]

( )Y ( )N  
 ( )Y ( )N  
 ( )Y ( )N ( )N/A  
 ( )Y ( )N  
 ( )Y ( )N ( )N/A

Remarks:

4. INTERNAL AUDITS, REVIEWS OR INSPECTIONS

- A. Audits are conducted.

( )Y ( )N

- (1) Audits conducted by \_\_\_\_\_  
 (2) Frequency \_\_\_\_\_

- B. Content and implementation of the radiation protection program is reviewed annually [20.1101(c)].

( )Y ( )N

- C. Records of program are maintained [20.2102].

( )Y ( )N

5. FACILITIES

- Facilities are as described in the license application.

( )Y ( )N

Remarks:

6. MATERIALS

- A. Isotopes, quantities, manufacturer's name and model number of sources and devices, and use are as authorized on the license.

( )Y ( )N

## B. Maintenance of gauges:

- (1) If gauges are maintained by licensee, source is in shielded position in accordance with manufacturer's directions or recommendations.
- (2) For work that requires source be in unshielded position, source is returned to manufacturer; if maintenance is licensee-performed, needs specific authorization and must be performed in accordance with commitments to NRC.

( ) Y ( ) N

( ) Y ( ) N ( ) N/A

Remarks:

7. LEAK TESTS

- A. Leak tests are performed as described in correspondence with NRC (whether performed by a consultant, a leak test kit, or the licensee).
- B. Frequency is every 6 months or other interval approved by NRC or Agreement State.
- C. Records with appropriate information are maintained.

( ) Y ( ) N

( ) Y ( ) N

( ) Y ( ) N

Remarks:

8. INVENTORIES

- A. Inventories are conducted at 6-month intervals.
- B. Records with appropriate information are maintained.

( ) Y ( ) N

( ) Y ( ) N

Remarks:

9. RADIATION SURVEYS

- A. Instruments and equipment
- (1) Appropriate operable survey instruments are possessed or readily accessible.
- (2) Instruments are calibrated as required [20.1501].

( ) N/A

( ) Y ( ) N

( ) Y ( ) N

- (3) Calibration records are maintained [20.2103(a)]. ☐ Y ☐ N  
 (4) At least 1 meter is at each jobsite. ☐ Y ☐ N

OR

Adequate arrangements have been made for timely access to instruments in case of incident at any jobsite. ☐ Y ☐ N ☐ N/A

B. Briefly describe area survey requirements [20.1501(a)].

C. Radiation surveys are performed as required [20.1501(a)]. ☐ Y ☐ N

- (1) Radiation levels are within regulatory limits. ☐ Y ☐ N  
 (2) Corrective action is taken and documented. ☐ Y ☐ N

D. Records are maintained [20.2103]. ☐ Y ☐ N

E. Protection for members of the public.

- (1) Adequate surveys are made to demonstrate either (a) that the TEDE to the individual likely to receive the highest dose does not exceed 100 mrem (1 mSv) in a year or (b) that if an individual were continuously present in an unrestricted area, the external dose would not exceed 2 mrem (0.02 mSv) in any hour and 50 mrem (0.5 mSv) in a year [20.1301(a)(1), 1302(b)]. ☐ Y ☐ N  
 (2) Unrestricted area radiation levels do not exceed 2 mrem (0.02 mSv) in any one hour [20.1301(a)(2)]. ☐ Y ☐ N  
 (3) Records are maintained [20.2103, 2107]. ☐ Y ☐ N

Remarks:

10. RECEIPT AND TRANSFER OF RADIOACTIVE MATERIAL (INCLUDES WASTE DISPOSAL)

A. Describe how new gauges are received and by whom: ☐ N/A

- B. Written procedures for opening packages (e.g., new gauges) are established and followed [20.1906(e)]. ( ) Y ( ) N
  - C. If package shows evidence of degradation, contamination and radiation levels are monitored. ( ) Y ( ) N ( ) N/A
  - D. Monitoring of degraded packages is performed within time specified [20.1906(c)]. ( ) Y ( ) N ( ) N/A
  - E. Transfer between licensees (including "disposal" of unneeded gauges) is performed per 10 CFR 30.41. ( ) Y ( ) N ( ) N/A
  - F. All sources are surveyed before shipment and transfer [20.1501(a), 49 CFR 173.475(i), license condition]. ( ) Y ( ) N
  - G. Records of surveys and receipt or transfer are maintained [20.2103(a), 30.51]. ( ) Y ( ) N
  - H. Transfers within licensee's authorized users or locations are performed as required [license condition]. ( ) Y ( ) N ( ) N/A
  - I. Package receipt/distribution activities are evaluated for compliance with 10 CFR 20.1301 [20.1302]. ( ) Y ( ) N ( ) N/A
- Remarks:

11. TRANSPORTATION (10 CFR 71.5(a) and 49 CFR 170-189)

- A. Licensee shipments are: ( ) N/A
  - Delivered to common carriers. ( ) Y ( ) N ( ) N/A
  - Transported in licensee's own private vehicle. ( ) Y ( ) N ( ) N/A
  - No shipments since last inspection. ( ) Y ( ) N ( ) N/A
- B. HAZMAT training [172.709-704]
- C. Packages ( ) Y ( ) N ( ) N/A
  - (1) Authorized packages are used [173.415, 416(b)]. ( ) Y ( ) N
  - (2) Performance test records are kept on file for:
    - a. Special Form Sources [173.476(a)]. ( ) Y ( ) N
    - b. DOT-7A packages [173.415(a)]. ( ) Y ( ) N
  - (3) Two labels (White-I, Yellow-II, or Yellow-III) with TI, Nuclide, Activity, and Hazard Class are used [172.403, 173.441]. ( ) Y ( ) N
  - (4) Packages are properly marked (shipping name, UN number, package type, RQ, name and address of consignee) [172.301, 306, 310, 312, 324]. ( ) Y ( ) N

- (5) Packages are closed and sealed during transport [173.475(f)]. ( )Y ( )N
- (6) Packages have proper overpacks, if used (shipping name, UN Number, labeled, statement indicating that inner package complies with specification packaging) [173.25]. ( )Y ( )N ( )N/A

#### D. Shipping Papers

- (1) Are prepared and used [172.200(a)]. ( )Y ( )N
- (2) Include proper shipping name, hazard class, UN Number, quantity, package type, nuclide, RQ, radioactive material, physical and chemical form, activity, category of label, TI, shipper's name, certification and signature, emergency response phone number, "Cargo Aircraft Only" (as applicable) [172.200-204]. ( )Y ( )N
- (3) Are readily accessible during transport [177.718(e)]. ( )Y ( )N ( )N/A

#### E. Vehicles

- (1) Cargo is blocked and braced [177.842(d)]. ( )Y ( )N
- (2) Are placarded, if needed [172.504]. ( )Y ( )N

- F. Any incidents are reported to DOT [171.15, 16]. ( )Y ( )N

Remarks:

### 12. PERSONNEL RADIATION PROTECTION

- A. ALARA considerations are incorporated into the Radiation Protection Program [20.1101(b)]. ( )Y ( )N
- B. Adequate documentation of determination that unmonitored gauge users are not likely to receive >10% of allowable limit [20.1502(a)]. ( )Y ( )N ( )N/A

#### OR

External dosimetry is provided and required ( )Y ( )N ( )N/A

- (1) Supplier Frequency
- (2) Supplier is NRC/AP-approved [20.1501(c)] ( )Y ( )N
- (3) Dosimeters are exchanged at specified frequency [license condition]. ( )Y ( )N



C. Reports

- (1) Reviewed by \_\_\_\_\_ Frequency \_\_\_\_\_  
 (2) Auditor reviewed personnel monitoring records \_\_\_\_\_  
 for period \_\_\_\_\_ to \_\_\_\_\_  
 (3) Prior dose determined for individuals likely to  
 receive doses [20.2104].  
 (4) Maximum exposures TEDE \_\_\_\_\_ Other \_\_\_\_\_  
 (5) NRC Forms or equivalent [20.2104(d), 2106(c)]:  
 a. NRC-4<sup>2</sup> ( ) Y ( ) N Complete: ( ) Y ( ) N  
 b. NRC-5<sup>2</sup> ( ) Y ( ) N Complete: ( ) Y ( ) N  
 (6) Worker declared her pregnancy in writing since  
 last audit (review records). ( ) Y ( ) N ( ) N/A  
 If yes, determine compliance with [20.1208].  
 Check for records per 10 CFR 20.2106(e). ( ) Y ( ) N

- D. Records of exposures, surveys, monitoring, and  
 evaluations maintained [20.2102, 2103, 2106,  
 license condition]. ( ) Y ( ) N

Remarks:

13. AUDITOR'S INDEPENDENT MEASUREMENTS (IF MADE)

A. Survey instrument Serial No. Last calibration

- B. Auditor's measurements were compared to licensee's. ( ) Y ( ) N  
 C. Describe the type, location, and results of measurements:

"Cumulative Occupational Exposure History"

"Occupational Exposure Record for a Monitoring Period"

14. NOTIFICATION AND REPORTS

( ) N/A

- A. Licensee in compliance with 10 CFR 19.13 and 30.50 reports to individuals, public and occupational, monitored to show compliance with 10 CFR Part 20). ( ) Y ( ) N ( ) N/A
- B. Licensee in compliance with 10 CFR 20.2201 and 30.50 (theft or loss). ( ) Y ( ) N ( ) None
- C. Licensee in compliance with 10 CFR 20.2202 and 30.50 (incidents). ( ) Y ( ) N ( ) None
- D. Licensee in compliance with 10 CFR 20.2203 and 30.50 (overexposures and high radiation levels). ( ) Y ( ) N ( ) None
- E. Licensee aware of new telephone number for NRC Emergency Operations Center [(301)816-5100]. ( ) Y ( ) N

15. POSTING AND LABELING

- A. NRC-3, "Notice to Employees," is posted [19.11(c)]. ( ) Y ( ) N
- B. Parts 19, 20, 21, Section 206 of Energy Reorganization Act, procedures adopted pursuant to Part 21, and license documents are posted, or a notice indicating where documents can be examined is posted [19.11, 21.6]. ( ) Y ( ) N
- C. Other posting and labeling per 10 CFR 20.1902 and 1904, and the licensee is not exempted by 10 CFR 20.1903, 20.1905. ( ) Y ( ) N

Remarks:

16. RECORDKEEPING FOR DECOMMISSIONING (if needed)

( ) N/A

- A. Records of information important to the safe and effective decommissioning of the facility maintained in an independent and identifiable location until license termination [30.35(g)]. ( ) Y ( ) N
- B. Records include all information outlined in 10 CFR 30.35(g). ( ) Y ( ) N

Remarks:

17. BULLETINS AND INFORMATION NOTICES

- A. Licensee receives NRC Bulletins, NRC Information Notices, NMSS Newsletters, etc. ( ) Y ( ) N
- B. Appropriate action taken in response to Bulletins, Information Notices, etc. ( ) Y ( ) N

Remarks:

18. SPECIAL LICENSE CONDITIONS OR ISSUES

( )N/A

- A. Review special license conditions or other issues (e.g., extended maintenance); describe findings:
- B. Problems or deficiencies identified at licensee facilities other than at audit location:
- C. Evaluation of compliance:

19. CONTINUATION OF REPORT ITEMS

(If more space is needed, use separate sheets and attach to report.)

( )N/A

20. PROBLEMS OR DEFICIENCIES NOTED; RECOMMENDATIONS

( )N/A

Note: Briefly state (1) the requirement and (2) how and when violated. Provide recommendations for improvement.

21. EVALUATION OF OTHER FACTORS

- A. Senior licensee management is appropriately involved with the radiation safety program and RSO oversight.
- B. RSO has sufficient time to perform his/her radiation safety duties and is not too busy with other assignments.
- C. Licensee has sufficient staff.

( )Y ( )N

( )Y ( )N  
( )Y ( )N

Remarks/recommendations:

## CONVERSATION RECORD

TIME

DATE

9-30-96

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☒ OUTGOING

NAME OF PERSON(S) CONTACTED OR IN CONTACT

ORGANIZATION (OFFICE, DEPT. ETC.)

TELEPHONE NO.

Dan Anderson, P.E.

Midwest Engineering Services, Inc.

414-  
521-2125

SUBJECT

FAX 414 521-2471

CN 301634

SUMMARY

Confirm that proposed new facility at 9362 Calumet Ave., Munster Indiana is (1) an existing structure (not to be built) and (2) is not part of a residential building

Licensee has multiple <sup>permanent</sup> storage sites, describe the annual audit program used by RSO at each site to ensure NRC and DOT regulations and the terms and conditions of the license are complied with.

Respond in 15 days and reference CN 301634.  
Dan will try to FAX response 10-2-96, follow up by hard copy.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

Loren Hunter

9-30-96

ACTION TAKEN

SIGNATURE

TITLE

DATE



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION III  
801 WARRENVILLE ROAD  
LISLE, ILLINOIS 60532-4351

July 23, 1996

Matthew A. Henderson, P.E.  
Radiation Safety Officer  
Midwest Engineering Services, Inc.  
205 Wilmont Drive  
Waukesha, WI 53186

SUBJECT: ACKNOWLEDGEMENT OF CORRESPONDENCE  
( ☒ Letter ☐ Application ☐ Dated July 12, 1996)

Dear Licensee:

In response to your request, we have completed the initial processing, which is an administrative review of your application for a(n):

☐ New License                      ☒ Amendment                      ☐ Renewal  
☐ Termination                      ☐ Auth User (Amendment not required)                      ☐ QMP Revision  
☐ Other \_\_\_\_\_

No administrative deficiencies were identified during this initial review. However, it should be noted that a technical review may identify omissions in the submitted information, technical issues that require additional information, or policy/technical issues that require coordination with headquarters or other NRC regional offices.

It appears that your request is routine (see 1-3 below, as applicable) and complete.

1. New and amendment actions are normally processed within 90 days, unless we find major deficiencies, or policy issues requiring central program office assistance.
2. Renewal actions are normally processed within 180 days, however, under timely filing (before expiration), you may continue to operate under your existing license.
3. Termination actions are normally processed within 90 days, unless confirmatory surveys following decontamination/decommissioning activities are involved.

A copy of your correspondence has been forwarded to our Licensing Fee and Debt Collection Branch (301/415-6097) for approval of the fee category and amount.

If you have a compelling safety or business-related reason for requesting expedited review, please contact the Materials Licensing Branch at (708) 829-9887. We will try to complete your request as soon as practicable. Any correspondence about this request should reference the control number.

Nuclear Materials Support Branch

Mail Control No. 301634  
License No. 48-26074-01