

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 10/31/2008
 Estimated burden per response to comply with this mandatory collection request is 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 infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

APPLICATION FOR MATERIALS LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH: IF YOU ARE LOCATED IN:
 DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
 OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
 U.S. NUCLEAR REGULATORY COMMISSION
 WASHINGTON, DC 20555-0001
 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

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:
 IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:
 LICENSING ASSISTANCE TEAM
 DIVISION OF NUCLEAR MATERIALS SAFETY
 U.S. NUCLEAR REGULATORY COMMISSION REGION I
 475 ALLENDALE ROAD
 KING OF PRUSSIA PA 19406-1415
 ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:
 U.S. NUCLEAR MATERIALS LICENSING BRANCH
 U.S. NUCLEAR REGULATORY COMMISSION REGION I
 612 E LAMAR BOULEVARD SUITE 400
 ARLINGTON TX 76011-4125

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
 C RENEWAL OF LICENSE NUMBER
 2 NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)
 APPALACHIAN PAVING & AGGREGATE
 PO Box 548
 LENORE WV 25676

3 ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED
 APPALACHIAN PAVING & AGGREGATE
 US 119 HANNAH CENTER
 Delbarton WV 25670
 4 NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION
 CHARLES COOK
 TELEPHONE NUMBER
 304 475 0021

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 Sec 170.31)
 FEE CATEGORY AMOUNT ENCLOSED \$
 13 CERTIFICATION (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40. AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF

WARNING 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER - TYPE/PRINTED NAME AND TITLE SIGNATURE DATE
 CHARLES COOK, RSO [Signature] 3/14/09

FOR NRC USE ONLY

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

APPROVED BY _____ DATE _____

ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND PROPOSED USES

| Yes | No | Radioisotope | Manufacturer or Distributor Model No. | Quantity | Use As Listed on SSD Certificate | Specify Other Uses Not Listed on SSD Certificate |
|-----|----|---------------|--|---|---|---|
| | | Cesium-137 | Sealed source manufacturer or distributor and model number: AEA TECHNOLOGY or Isotope Products Xplorer 3500 <hr/> Device manufacturer or distributor and model number: AEA TECHNOLOGY or QSA Products XPLORER 3600 | Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate | Yes <input checked="" type="checkbox"/> Specific description of the gauge use: of soils and aggregates | <input type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: (Submit safety analysis supporting safe use) |
| | | Americium-241 | Sealed source manufacturer or distributor and model number: AEA TECHNOLOGY XPLORER 3500 <hr/> Device manufacturer or distributor and model number: AEA TECHNOLOGY or QSA Products XPLORER 3500 | Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate | Yes <input checked="" type="checkbox"/> Specific description of the gauge use: Moisture Content of soils & aggregates | <input type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: (Submit safety analysis supporting safe use) |

APPENDIX B

| Yes | No | Radioisotope | Manufacturer or Distributor Model No. | Quantity | Use As Listed on SSD Certificate | Specify Other Uses Not Listed on SSD Certificate |
|---|----|--------------------------|--|---|--|--|
| | | Californium-252 | Sealed source manufacturer or distributor and model number: <hr/> Device manufacturer or distributor and model number: <hr/> | Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate | Yes <input type="checkbox"/> Specific description of the gauge use: <hr/> <hr/> <hr/> <hr/> | <input checked="" type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: <hr/> (Submit safety analysis supporting safe use) |
| | | Other Isotope (Specify): | Sealed source manufacturer or distributor and model number: <hr/> Device manufacturer or distributor and model number: <hr/> | Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate | Yes <input type="checkbox"/> Specific description of the gauge use: <hr/> | <input checked="" type="checkbox"/> Not applicable <hr/> <input type="checkbox"/> Uses are: <hr/> (Submit safety analysis supporting safe use) |
| <i>Financial Assurance Required and</i> | | | <i>Evidence of Financial Assurance Provided</i> | | | |

ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE DISPOSAL

| Item No. And Title | Suggested Response | Yes | Alternative Procedures Attached |
|--|--|--|---------------------------------|
| 7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE – RADIATION SAFETY OFFICER Name: <u>Charles Cook</u> | Before obtaining licensed materials, the proposed RSO will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience - Radiation Safety Officer" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS | Before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev 1, dated November 2001. | | <input type="checkbox"/> |
| 9. FACILITIES AND EQUIPMENT | No information needs to be submitted in response to this item: key issues are addressed under "Radiation Safety Program – Public Dose" and "Radiation Safety Program – Operating and Emergency Procedures." | Separate Item 9 Response Need Not Be Submitted With Application | |
| 10. RADIATION SAFETY PROGRAM – AUDIT PROGRAM | The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase. | Need Not Be Submitted With Application | |
| 10. RADIATION SAFETY PROGRAM – TERMINATION OF ACTIVITIES | The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires when the licensee ceases operation, NRC Form 314 must be submitted. | Need Not Be Submitted With Application | |
| 10. RADIATION SAFETY PROGRAM – SURVEY INSTRUMENTS | We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled "Radiation Safety Program – Instruments" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

APPENDIX B

| Item No. And Title | Suggested Response | Yes | Alternative Procedures Attached |
|--|---|---|--|
| 10. RADIATION SAFETY PROGRAM – MATERIAL RECEIPT AND ACCOUNTABILITY | Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. RADIATION SAFETY PROGRAM – OCCUPATIONAL DOSIMETRY | Either we will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20, or we will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 10. RADIATION SAFETY PROGRAM – PUBLIC DOSE | The applicant is not required to submit a response to the public dose section during the licensing phase. This matter will be examined during an inspection. | Need Not Be Submitted With Application | |
| 10. RADIATION SAFETY PROGRAM – OPERATING AND EMERGENCY PROCEDURES | <p>We will implement and maintain the operating and emergency procedures in Appendix H of NUREG-1556, Vol. 1, Rev. 1, dated November 2001, and provide copies of these procedures to all gauge users and at each job site.</p> <p style="text-align: center;">OR</p> <p>Operating and emergency procedures will be developed, implemented, and maintained and will meet the criteria in the section entitled "Radiation Safety Program – Operating and Emergency Procedures" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.</p> | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> |
| 10. RADIATION SAFETY PROGRAM – LEAK TEST | Leak tests will be performed at intervals approved by NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions. | <input checked="" type="checkbox"/> | <input type="checkbox"/> The information in Appendix J supporting a request to perform leak testing and sample analysis is attached. |

Section 5
Radioactive Material :

| Radionuclide | Sealed Source | Max Activity | Manufacturer | Model | Registry |
|--------------|---------------------|--------------|--|---------------------|-----------------|
| CS-137 | CDC.805 or HEG-137 | 11 mCi | AEA Technology QSA, Inc. or Isotope Products, Inc. | 3500 Xplorer Series | NC-1241-D-101-S |
| Am241:Be | AMN.V977 or AMI.N02 | 44 mCi | AEA Technology QSA, Inc. or Isotope Products, Inc. | 3500 Xplorer Series | NC-1241-D-101-S |
| CS-137 | A-102112 | 9 mCi | Troxler | 3400 | NC646D130S |
| Am241-Be | A-102451 | 44 mCi | Troxler | 3400 | NC646D130S |

Section 6
Purpose for which licensed material will be used.

CS-137: For use in Model 3500 Xplorer series and Troxler 3400 series gauges to measure the moisture density of soils, aggregates and construction materials

Am241-Be: For use in Model 3500 Xplorer series and Troxler 3400 series gauges to measure hydrogen with relation to moisture content of construction/ building materials.

Section 7
Individual responsible for radiation safety program and their training experience.

Charles M Cook, Who has been designated as the Radiation Safety Officer for Appalachian Paving & Aggregate will complete a certified Nuclear Gauge Operator Training Course. Copies of the training Certificates will be sent upon completion for your review.

Section 8

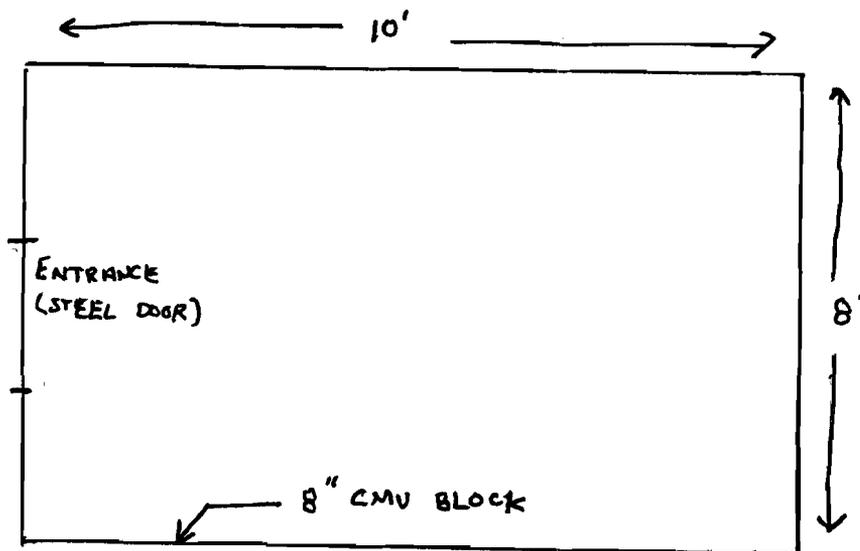
Training for individuals working in or frequenting restricted areas.

Only trained/certified individuals will operate the Nuclear Moisture/Density portable gauge. Each individual will attend a certified Nuclear Gauge operator Training course, and upon completion copies of their certificates will be kept on file by the company RSO. Furthermore, each individual will read, understand, and follow our Radiation Safety procedures as well as be approved by our Radiation Safety Officer.

Section 9

Facilities and Equipment

The nuclear density gauge will be permanently stored at Appalachian Paving & Aggregate's plant located at myrtle, West Virginia. The storage area will be properly posted according to 10 CFR 20.1902. At no time can a member of the general public access this area without proper supervision of the company Radiation Safety Officer or an authorized operator. The following is a sketch of the storage facility.



Section 11

Waste Management

Disposal of waste will be by transfer of the radioactive material to a person who is specifically licensed to receive it.

Appalachian Paving & Aggregate
PO Box 548 Lenore, WV 25676
(304) 475-0021 Fax (304) 475- 0040

Section 10
Radiation Safety Program

Radiation Safety Program

The following details Appalachian Paving & Aggregate's Radiation safety program.

A. Radiation safety Officer:

Charles M Cook is the designated Radiation Safety Officer for Appalachian Paving & Aggregate and will assume the following duties and responsibilities that include:

1. To ensure that all the terms and conditions of the license are being met and that the information contained in the license are up-to-date.
2. To ensure that the equipment has been leak tested in the required time and that the leak test is performed in the manner prescribed by the manufacturer.
3. To ensure that the use of the equipment is only by individuals that have been authorized by the Radiation Safety Officer and that all users wear personal monitoring equipment when using the gauge. Personal monitoring equipment used will be from an organization certified to provide such services
4. To maintain the records as required by the license and regulations. These records shall include personal exposure records , leak test records, and training certificates for all users.
5. To ensure that the equipment is properly secured against unauthorized removal at all times when not in use.
6. To serve as a point of contact and give assistance in case of emergency. such as equipment damage or theft, and to notify the proper authorities in case of an emergency.
7. To ensure that all users have read and understand the radiation safety operating and emergency procedures.

B. Personnel Monitoring Program.

1. All gauge users will be required to wear dosimeter badges at all times when using gauges.
2. The badges will be supplied by a certified organization. The badges will be exchanged every three (3) months.
3. Results of all personnel monitoring devices will be kept on file by the Radiation Safety Officer.

C. Radiation Detection Instruments.

1. At each jobsite we will have at least one survey instrument capable of measuring between 0.1 microsievert per hour (0.1 millirem per hour) and 1 millisievert per hour (100 milligrams per hour). This instrument will be used to perform surveys after an incident.
2. Each instrument will be calibrated by a certified calibration facility at least once every year.

D. Leak Testing

1. Leak test will be taken at least every six months and will be analyzed by a certified and approved facility capable of providing such services. The manufacture's instructions for collecting leak test samples will be strictly followed.

E. Inventories

1. Inventories will be conducted at least every six months to account for all sealed sources and devices received and possessed under this license.
2. Records will be maintained for at least three years from the date of inventory.
3. The inventory will contain the following information:
 - A. Radionuclide(s) and the amount (in units of Curies) of byproduct material in each sealed source
 - B. The manufacture's name, model number and serial number (if appropriate) of each device containing the byproduct material
 - C. The location of the sealed source and device.
 - D. The date of the inventory.

F. Maintenance.

1. Any maintenance will always be done with the radioactive source in the safe shielded position in accordance with the manufacture's instructions.
2. At no time will maintenance that involves removing the source or placing it in the unshielded position be performed.

G. Transportation of Devices To Field Locations.

1. Appalachian Paving & Aggregate will current copies of applicable DOT regulations and will develop and implement procedures for complying with applicable DOT regulations.

H. Operating and Emergency Procedures.

1. A copy of operating and emergency procedures will be given to all users before they begin using the gauge.
2. Operating Procedures
 - A. Before removing the gauge from storage, check to make sure that the gauge source rod is in the shielded, locked position, then lock the transport case if possible.
 - B. Must contact the Radiation Safety Officer and inform of intended use and location.
 - C. Must sign the gauge out in the log book and include the date of use, name of authorized users who will be responsible for the gauge, and the temporary jobsite(s) where the gauge will be used .
 - D. Never leave the gauge unattended while in your custody.
 - E. Follow all applicable DOT requirements when transporting the gauge.
 - F. Never touch the source rod with any part of your body and always make sure that the source rod is in the shielded position after each measurement is made.
 - G. Always wear your assigned radiation monitoring badge. Never wear another persons badge.
 - H. Keep unauthorized persons away from the area where the gauge is to be used.
 - I. Always maintain constant surveillance and immediate control of the gauge when it is not in storage.
 - J. Never look under gauge when the source rod is being lowered into the ground.
 - K. After each measurement, always return the source rod to the shielded position.
 - L. When the gauge is in use at a temporary jobsite, place the gauge in a secured location, locked in the trunk box or in a storage shed that has limited access.
 - M. When the gauge is returned to storage, so indicate in the source log book.

3. Emergency Procedures.

If the source fails to return to the shielded position or any other emergency or unexpected situation arises, which could pose damage to the gauge, the shielding, or the source rod itself, the following steps must be taken.

1. Immediately secure the area around the gauge.
2. Prevent any unauthorized personnel from entering the area.
3. If any equipment, heavy or light size, is involved, detain the equipment until it is determined that there is no contamination present.
4. Notify licensee management of the situation. calling company personnel in the order listed below:

Jay Jones - (304) 475-0021 / (606) 791-1194

Charles M Cook - (304) 475-0021 / (304) 752-2659

4. Licensee Management Procedure.

- A. Arrange for a survey with the appropriate detection instrumentation (this could be a licensed employee, consultant, or person with radiation survey meter experience).
- B. Make necessary notifications to local and state authorities as well as the Nuclear Regulatory authorities. Notification is required if a gauge containing licensed material is stolen or lost, and when involved in incidents that result in released doses in excess of limits stated in 10 CFR 20.2203 or
 1. The protective shielding is damaged such that the source is not fully shielded or cannot be moved into the shielded position.
 2. The source is left exposed in an unrestricted area such that radiation levels exceed 20 mrem in any one hour.
 3. The incident results in doses in excess of limits in part 20 or in the license (10 CFR 20.405 and 20.2203).

I. Annual Audit of Radiation Safety Program.

1. The Radiation Safety Officer will conduct the annual audit of the Radiation Safety Program.
2. The Radiation Safety Program audits will be conducted at least every 12 months and records of those audits will be maintained for at least three years after the records are made.
3. The Radiation Safety Officer along with licensee management, will review all findings and take prompt action to correct all deficiencies. They will report those deficiencies to all personnel working under the license as well as the actions management expects to avoid similar deficiencies.

J. Financial Assurance and Record Keeping For Decommissioning.

1. We will restrict the possession of licensed materials to quantities below the minimum level specified in 10 CFR 30.35(d) for establishing financial assurance for decommissioning.
2. According to 10 CFR 30.35(g), we will maintain the following records regarding decommissioning: Spill information, leaking sources, any unusual incidents that involve the spread of contamination. These records will be kept by the Radiation Safety Officer at his office.

K. Waste Management

1. Disposal will be by transfer of the radioactive material to a person who is specifically licensed to receive it.

This is to acknowledge the receipt of your letter/application dated

3/16/2009, and to inform you that the initial processing which includes an administrative review has been performed.

NEW LICENSE APPLICATION (03038013)
There were no administrative omissions. Your application was 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

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** 143594
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader