

## APPENDIX A

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|--|--|--|---|
| <b>NRC FORM 313</b><br>(8-1999)<br>10 CFR 30.32-33<br>34, 35, 36, 38 and 40  | <b>U. S. NUCLEAR REGULATORY COMMISSION</b> | APPROVED BY OMB: HQ 3150-0120<br>EXPIRES 08/31/2002  | Estimated burden per response to comply with this mandatory information collection request 7.4 hours. Submission 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 Management Branch (T-8 EB), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001 or by internal e-mail to dist@nrc.gov and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10302 (3160-C120), 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, NRC may not conduct or sponsor, and a person is not required to respond to the information collection. |
| <b>APPLICATION FOR MATERIAL LICENSE</b>  |  |  |   |
| <b>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.</b>  |  |  |   |
| <b>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</b><br>DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY<br>OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS<br>U.S. NUCLEAR REGULATORY COMMISSION<br>WASHINGTON, DC 20555-0001<br><br><b>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</b><br><br><b>IF YOU ARE LOCATED IN:</b><br><br>CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, PENNSYLVANIA, RHODE ISLAND, OR VERMONT, SEND APPLICATIONS TO:<br><br>LICENSING ASSISTANT SECTION<br>NUCLEAR MATERIALS SAFETY BRANCH<br>U.S. NUCLEAR REGULATORY COMMISSION, REGION I<br>615 ALLENDALE ROAD<br>KING OF PRUSSIA, PA 19406-1415<br><br>ALABAMA, FLORIDA, GEORGIA, KENTUCKY, MISSISSIPPI, NORTH CAROLINA, PUERTO RICO, SOUTH CAROLINA, TENNESSEE, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:<br><br>SAM MUNN ATLANTA FEDERAL CENTER<br>U.S. NUCLEAR REGULATORY COMMISSION, REGION II<br>81 FORSYTH STREET, S.W. SUITE 23785<br>ATLANTA, GEORGIA 30303-8921 |  | <b>IF YOU ARE LOCATED IN:</b><br><br>ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:<br><br>MATERIALS LICENSING SECTION<br>U.S. NUCLEAR REGULATORY COMMISSION, REGION III<br>801 WARRENVILLE RD<br>LISLE, IL 60532-4351<br><br>ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:<br><br>NUCLEAR MATERIALS LICENSING SECTION<br>U.S. NUCLEAR REGULATORY COMMISSION, REGION IV<br>811 RYAN PLAZA DRIVE, SUITE 100<br>ARLINGTON, TX 76011-8264<br><br><div style="text-align: center; font-size: large;"> <b>LL 31079</b><br/> <b>03037010</b><br/> <b>03121</b><br/> <b>(45-31079-01)</b> </div> |   |
| <b>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.</b>   |  |  |   |
| 1. THIS IS AN APPLICATION FOR: (Check appropriate box)<br><input checked="" type="checkbox"/> A. NEW LICENSE<br><input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER _____<br><input type="checkbox"/> C. RENEWAL OF LICENSE NUMBER _____   |  | 2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP Code)<br><b>GEO DESIGN &amp; ENGINEERING, INC.</b><br><b>21625 MONMOUTH TERRACE</b><br><b>ASHBURN, VA 20147</b>  |   |
| 3. ADDRESS(ES) WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED<br><b>14221-A WILLARD RD, SUITE 400</b><br><b>CHANTILLY, VA 20151</b>   |  | 4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION<br><br>TELEPHONE NUMBER _____   |   |
| 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<br>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. LICENSEE FEES (See 10 CFR 170 and Section 170.31)<br>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.<br><br>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, 38 AND 40 AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.<br><br>WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1949 (18 U.S.T. 740) MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.   |  |  |   |
| CERTIFYING OFFICER (Typed printed name and title) <b>MOHAMAD ABU-KASSEM, PRINCIPAL</b> DATE <b>8/26/05</b>   |  |  |   |
| <b>FOR NRC USE ONLY</b>  |  |  |   |
| TYPE OF FEE  | FEE CODE                                   | FEE CATEGORY   | AMOUNT RECEIVED \$  |
| APPROVED BY  |  | CHECK NUMBER   | COMMENTS  |
| DATE   |  | DATE   |   |

137556

A-1

NUREG-1556, Vol. 1, Rev. 1

NMSS/RGNI MATERIALS-002

## **Appendix B**

### **Suggested Format for Providing Information Requested in Items 5 through 11**

## APPENDIX B

## 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   |
|-----|----|---------------|--|---|---|--|
| X   |    | Cesium-137    | Sealed source manufacturer or distributor and model number:<br><br>Device manufacturer or distributor and model number:<br><u>TRUXLER</u><br>3411<br>3430<br>640 | 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"/><br>Specific description of the gauge use:<br><br><br><br><br><br><br> | <input checked="" type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br><br>(Submit safety analysis supporting safe use) |
| X   |    | Americium-241 | Sealed source manufacturer or distributor and model number:<br><br>Device manufacturer or distributor and model number:<br><br>                                  | 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"/><br>Specific description of the gauge use:<br><br><br><br><br><br><br> | <input checked="" type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br><br>(Submit safety analysis supporting safe use) |

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

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# 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<br><br>Name: <u>MOHAMAD ABU-KASSEM</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 checked="" type="checkbox"/>                                | <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<br>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"/>        |

| 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 <i>not</i> 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  | 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.  | <input checked="" type="checkbox"/>    | <input type="checkbox"/>  |
|  | <p style="text-align: center;"><b>OR</b></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 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"/><br><br>The information in Appendix J supporting a request to perform leak testing and sample analysis is attached. |

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| Item No. And Title                                 | Suggested Response  | Yes                                    | Alternative Procedures Attached  |
|--|---|--|--|
| 10. RADIATION SAFETY PROGRAM – MAINTENANCE         | <i>Routine Cleaning and Lubrication</i><br>We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.   | <input checked="" type="checkbox"/>    | <input type="checkbox"/>   |
|  | <i>Non-Routine Maintenance</i><br>We will send the gauge to the manufacturer or other person authorized by NRC or an Agreement State to perform non-routine maintenance or repair operations that require the removal of the source or source rod from the gauge. | <input checked="" type="checkbox"/>    | <input type="checkbox"/><br>The information listed in Appendix G supporting a request to perform non-routine maintenance in-house is attached. |
| 10. RADIATION SAFETY PROGRAM – TRANSPORTATION      | The applicant is <i>not</i> required to submit its response to transportation during the licensing process. However, this issue will be reviewed during inspection.   | Need Not Be Submitted With Application |  |
| 11. WASTE MANAGEMENT – GAUGE DISPOSAL AND TRANSFER | The applicant is <i>not</i> required to submit a response to waste management during the licensing process. However, the licensee should develop, implement, and maintain gauge transfer and disposal procedures in its radiation protection program.             | Need Not Be Submitted With Application |  |

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

8/26/2005, and to inform you that the initial processing which includes an administrative review has been performed.

☒ NEW LICENSE APPLICATION (03037010)  
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

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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 317556.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

BETWEEN: : (FOR LFMS USE)  
: INFORMATION FROM LTS  
: -----  
:   
License Fee Management Branch, ARM : Program Code: 03121  
and : Status Code: 3  
Regional Licensing Sections : Fee Category: \_\_\_\_\_  
: Exp. Date: 0  
: Fee Comments: \_\_\_\_\_  
: Decom Fin Assur Req'd: \_  
: :::

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: GEO DESIGN & ENGINEERING, INC.  
Received Date: 20050826  
Docket No: 3037010  
Control No.: 137556  
License No.: 45-31079-01  
Action Type: New Licensee

2. FEE ATTACHED

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

3. COMMENTS

Signed M. A. Perkins  
Date 8/26/2005

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 \_\_\_\_\_