



October 26, 2022

Mr. Randolph C. Ragland, Jr., CHP  
Senior Health Physicist  
**DIVISION OF RADIOLOGICAL SAFETY AND SECURITY**  
NRC Region I  
475 Allendale Road  
King of Prussia, PA 19406

Reference: Renewal Application Supporting Document  
NRC License 45-31479-01

Dear Mr. Ragland,

Please see attached Appendix B to support the renewal application of NRC License 45-31479-01

If you have any questions or need additional information concerning the items addressed above, please don't hesitate to contact us at (703) 657-0014.

Respectfully Submitted,

**GEOTECHNICAL SOLUTIONS, INC**



Abdallah A. Adas, P.E.

Principal

Attachment: Appendix B

**APPENDIX B**

**SUGGESTED FORMAT FOR PROVIDING INFORMATION REQUESTED IN  
ITEMS 5 THROUGH 11 OF  
U.S. NUCLEAR REGULATORY COMMISSION FORM 313**

**GEOTECHNICAL SOLUTIONS, INC.  
LICENSE NUMBER: 45-31479-01**

**Suggested Format for Providing Information Requested in  
Items 5 through 11 of  
U.S. Nuclear Regulatory Commission Form 313**

**Items 5 and 6: Materials To Be Possessed and Proposed Uses**

| Yes                                 | No                       | Radionuclide  | Manufacturer or Distributor Model No.                              | Quantity   | Use as Listed on SSD Registration Certificate  | Specify Other Uses Not Listed on SSD Registration Certificate   |
|-------------------------------------|--------------------------|---|--|--|--|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Cesium-137<br><br>Maintain Current Amendment No. 3 License    | Gauge manufacturer (or distributor) and model number:<br><br>_____ | Specify activity per source and number of gauges requested.<br><br>_____<br>_____<br>_____ | Yes <input type="checkbox"/><br>Specific description of the gauge use:<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ | <input type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br>_____<br><br>(Submit safety analysis supporting safe use.) |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Americium-241<br><br>Maintain Current Amendment No. 3 License | Gauge manufacturer (or distributor) and model number:<br><br>_____ | Specify activity per source and number of gauges requested.<br><br>_____<br>_____<br>_____ | Yes <input type="checkbox"/><br>Specific description of the gauge use:<br>_____<br>_____<br>_____<br>_____<br>_____<br>_____ | <input type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br>_____<br><br>(Submit safety analysis supporting safe use.) |

| Yes   | No | Radionuclide             | Manufacturer or Distributor Model No.                         | Quantity  | Use as Listed on SSD Registration Certificate                                  | Specify Other Uses Not Listed on SSD Registration Certificate   |
|---|----|--------------------------|---|---|--|---|
|   |    | Californium-252          | Gauge manufacturer (or distributor) and model number:<br><br> | Specify activity per source and number of gauges requested.<br><br> | Yes <input type="checkbox"/><br>Specific description of the gauge use:<br><br> | <input checked="" type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br><br>(Submit safety analysis supporting safe use.) |
|   |    | Radium-226               | Gauge manufacturer (or distributor) and model number:<br><br> | Specify activity per source and number of gauges requested.<br><br> | Yes <input type="checkbox"/><br>Specific description of the gauge use:<br><br> | <input checked="" type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br><br>(Submit safety analysis supporting safe use.) |
|   |    | Other Isotope (Specify): | Gauge manufacturer (or distributor) and model number:<br><br> | Specify activity per source and number of gauges requested.<br><br> | Yes <input type="checkbox"/><br>Specific description of the gauge use:<br><br> | <input checked="" type="checkbox"/> Not applicable<br><br><input type="checkbox"/> Uses are:<br><br>(Submit safety analysis supporting safe use.) |
| <input type="checkbox"/> Is financial assurance required? If yes, submit evidence of financial assurance. |    |                          |   |   |  |   |



**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                        |
|--|---|--|--|
| <b>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE—RADIATION SAFETY OFFICER</b><br><br>Name: <u>Khalid Aldulaimi</u> | Documentation demonstrating the proposed radiation safety officer's training and experience (e.g., certificate of completion of the RSO's course and/or the authorized user's course).  | Submit applicable documentation.<br><br>Current RSO on Amendment No. 3 |  |
| <b>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS</b>  | Before using licensed materials, authorized users will have successfully completed one of the training courses described in the "Criteria" part of the section titled, "Training for Individuals Working in or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses."  | <input checked="" type="checkbox"/><br><br>Troxler                     | <input type="checkbox"/>                               |
| <b>9. FACILITIES AND EQUIPMENT</b>   | Provide a facility diagram for each permanent portable gauge storage location. Include on the diagram the use of adjacent areas (including above and below), and information relevant to public dose and security as discussed in Sections 8.10.5, "Public Dose," and 8.10.6, "Operating, Emergency, and Security Procedures," respectively, in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses" | Submit applicable documentation.                                       | N/A<br><br>No Storage Location within NRC Jurisdiction |

| Item No. and Title   | Suggested Response  | Yes   | Alternative Procedures Attached |
|--|---|---|---------------------------------|
| <b>10.1 RADIATION SAFETY PROGRAM—AUDIT PROGRAM</b>                       | The applicant should not submit its audit program to the NRC for review during the licensing phase. The audit program will be reviewed during NRC inspections.  | Need Not Be Submitted with Application<br><input checked="" type="checkbox"/>                       |                                 |
| <b>10.2 RADIATION SAFETY PROGRAM—RADIATION MONITORING INSTRUMENTS</b>    | We will either possess and use, or have access to and use, a radiation survey meter that meets the criteria in the section titled, "Radiation Safety Program—Radiation Monitoring Instruments" in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses," in the event of an incident.   | <input checked="" type="checkbox"/>   | <input type="checkbox"/>        |
| <b>10.3 RADIATION SAFETY PROGRAM—MATERIAL RECEIPT AND ACCOUNTABILITY</b> | Physical inventories will be conducted every 6 months or at other intervals approved by the NRC to account for all sealed sources and devices received and possessed under the license.<br><br>AND<br><br>We will develop, implement, and maintain procedures for ensuring accountability of licensed materials at all times.   | <input checked="" type="checkbox"/>   | <input type="checkbox"/>        |
| <b>10.4 RADIATION SAFETY PROGRAM—OCCUPATIONAL DOSE</b>                   | We will maintain, for inspection by the NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a).<br><br>OR<br><br>We will provide and require the use of individual monitoring devices (dosimetry). All personnel dosimeters that require processing to determine the radiation dose will be processed and evaluated by a NVLAP-approved processor. | <input type="checkbox"/><br><br><br><br><br><br><br><br><br><br><input checked="" type="checkbox"/> | <input type="checkbox"/>        |



| Item No. and Title   | Suggested Response   | Yes   | Alternative Procedures Attached  |
|--|--|---|--|
| <b>10.5 RADIATION SAFETY PROGRAM—PUBLIC DOSE</b>                                   | The applicant is <i>not</i> required to submit a response to the public dose section in a license application. This matter will be examined during NRC inspections.  | Need Not Be Submitted with Application  |  |
| <b>10.6 RADIATION SAFETY PROGRAM—OPERATING, EMERGENCY, AND SECURITY PROCEDURES</b> | <p>We will implement and maintain the operating, emergency, and security procedures in Appendix G to NUREG–1556, Vol. 1, Rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses." Copies of these procedures will be provided to all gauge users and will be available at each jobsite.</p> <p style="text-align: center;">OR</p> <p>Operating, emergency, and security procedures will be developed, implemented, and maintained and will meet the criteria in section 8.10.6, "Radiation Safety Program—Operating, Emergency, and Security Procedures," NUREG–1556, Vol. 1, Rev. 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses." Copies of these procedures will be provided to all gauge users and will be available at each jobsite.</p> | <div style="text-align: center;"><input checked="" type="checkbox"/></div><br><br><br><br><br><br><br><br><br><br><div style="text-align: center;"><input type="checkbox"/></div> | <input type="checkbox"/> For this item, checking this box indicates that alternative procedures will be provided as part of the application and that these procedures will be provided to all gauge users and will be available at each jobsite. |

| Item No. and Title                             | Suggested Response  | Yes  | Alternative Procedures Attached  |
|--|---|--|--|
| <b>10.7 RADIATION SAFETY PROGRAM—LEAK TEST</b> | <p>Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the SSD registration certificate. Leak tests will be performed by an organization licensed by the NRC or an Agreement State to provide leak testing services to other licensees; or by using a leak test sample collection kit supplied by an organization licensed by the NRC or an Agreement State to provide leak test kits and/or sample analysis services to other licensees and according to the kit supplier's instructions. Records of leak test results will be maintained.</p> <p>OR</p> <p>We will implement the model leak test program published in Appendix I of NUREG-1556, Volume 1, Revision 2, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Portable Gauge Licenses." Records of leak tests will be maintained.</p> | <p><input checked="" type="checkbox"/></p> <p><input type="checkbox"/></p> | <p><input type="checkbox"/> For this item, checking this box indicates that alternative equipment and/or procedures will be provided as part of the application and that records of leak tests will be maintained.</p> |



| Item No. and Title                                      | Suggested Response  | Yes                                    | Alternative Procedures Attached  |
|---|---|--|--|
| <b>10.8 RADIATION SAFETY PROGRAM—MAINTENANCE</b>        | <i>Routine Cleaning and Lubrication</i><br>We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's written recommendations and instructions.   | <input checked="" type="checkbox"/>    | <input type="checkbox"/>   |
|   | <i>Nonroutine Maintenance</i><br>The gauge manufacturer or other person licensed by the NRC or an Agreement State will perform nonroutine maintenance or repair operations that require detaching the source or source rod from the gauge.      | <input checked="" type="checkbox"/>    | <input type="checkbox"/> The information listed in Appendix F of this NUREG supporting a request to perform nonroutine maintenance in house is attached. |
| <b>10.9 RADIATION SAFETY PROGRAM—TRANSPORTATION</b>     | The applicant is <i>not</i> required to submit a response about transportation during the licensing process. The NRC will review this issue during inspection.  | Need Not Be Submitted with Application |  |
| <b>11. WASTE MANAGEMENT—GAUGE DISPOSAL AND TRANSFER</b> | The applicant is <i>not</i> required to submit a response about waste management during the licensing process; however, the licensee should establish and include gauge transfer and waste disposal procedures in its radiation safety program. | Need Not Be Submitted with Application |  |