



CARMICHAEL

Engineering, Inc.

December 7, 2015

Attn.: Mr. Michael Reichard
Health Physicist
Division of Nuclear Materials Safety
United States Nuclear Regulatory Commission
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406

Re: Docket No. 03037109
License No. 01-31116-01
Control No. 589368

Dear Mr. Reichard,

Carmichael Engineering Inc. completed the attached Appendix B checklist
If you have any questions, please do not hesitate to call our office.

Sincerely,

Robert L. Carmichael, RSO, Quality Manager

J. Stephen Carmichael, P.E.
Registered Alabama No. 15730



Geotechnical and Environmental Consultants

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
		Cesium-137	Gauge manufacturer or distributor and model number of the gauge: <u>CPN</u>	Specify activity per source and number of gauges requested. <u>10 mCi</u> <u>20 gauges</u>	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____	<input type="checkbox"/> Not applicable <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
		Americium-241	Gauge manufacturer or distributor and model number of the gauge: <u>CPN</u>	Specify activity per source and number of gauges requested. <u>50 mCi</u> <u>20 gauges</u>	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____	<input type="checkbox"/> Not applicable <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use.)

License No.

DT 31116-01

Robert L. Cumberland

12-7-15

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 of the gauge: _____	Specify activity per source and number of gauges requested. _____ _____ _____	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____ _____	<input checked="" type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use.)
		Radium-226	Gauge manufacturer or distributor and model number of the gauge and number of gauges of each model that is being requested: _____	Specify activity per source and number of gauges requested. _____ _____	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____	<input checked="" type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use.)
		Other Isotope (Specify):	Gauge manufacturer or distributor and model number of the gauge: _____	Specify activity per source and number of gauges requested. _____ _____	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____	<input checked="" type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use.)
Is financial assurance required? If yes, submit evidence of financial assurance						

Robert L. Currier
12-7-15

**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>Robert L. Carmichael</u>	Provide documentation of the training of the proposed RSO.	Submit applicable documentation.	
8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS	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.	<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, Emergency, and Security Procedures" below.	Need Not Be Submitted with Application	
10.1 RADIATION SAFETY PROGRAM—AUDIT PROGRAM	The applicant is <i>not</i> required to, and 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	
10.2 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 titled "Radiation Safety Program—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"/>

Robert L. Carmichael

12-7-15

Item No. and Title	Suggested Response	Yes	Alternative Procedures Attached
10.3 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"/>
10.4 RADIATION SAFETY PROGRAM—OCCUPATIONAL DOSIMETRY	<p>We will maintain, for inspection by the NRC, documentation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20.</p> <p style="text-align: center;">OR</p> <p>We will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.</p>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>
10.5 RADIATION SAFETY PROGRAM—PUBLIC DOSE	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 an inspection.	Need Not Be Submitted with Application	
10.6 RADIATION SAFETY PROGRAM—OPERATING, EMERGENCY, AND SECURITY PROCEDURES	<p>We will implement and maintain the operating and emergency procedures in Appendix G to NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses," and will develop, implement and maintain security procedures using information in Appendix G. Copies of these procedures will be provided to all gauge users and at each job site.</p> <p style="text-align: center;">OR</p> <p>Operating, emergency, and security procedures will be developed, implemented, and maintained and consistent with the criteria in the section titled "Radiation Safety Program—Operating, Emergency, and Security Procedures" in NUREG-1556, Vol. 1, Rev. 2, "Consolidated Guidance about Materials Licenses: Program-Specific Guidance about Portable Gauge Licenses."</p>	<input checked="" type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/>

Ronald L. Amick

Item No. and Title	Suggested Response	Yes	Alternative Procedures Attached
10.7 RADIATION SAFETY PROGRAM—LEAK TEST	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 using a leak test kit supplied by an organization licensed by the NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.	☒	<input type="checkbox"/> The information in Appendix I supporting a request to perform the collection of leak test samples and sample analysis is attached.
10.8 RADIATION SAFETY PROGRAM—MAINTENANCE	<p><i>Routine Cleaning and Lubrication</i> We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.</p> <p><i>Nonroutine Maintenance</i> We will send the gauge to the manufacturer or other person authorized by the NRC or an Agreement State to perform nonroutine maintenance or repair operations that require detaching the source or source rod from the gauge.</p>	☒ ☒	<input type="checkbox"/> <input type="checkbox"/> The information listed in Appendix F supporting a request to perform nonroutine maintenance in house is attached.
10.9 RADIATION SAFETY PROGRAM—TRANSPORTATION	The applicant is <i>not</i> required to submit its response about transportation during the licensing process. 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 about waste management during the licensing process. However, the licensee should establish and include waste disposal procedures in its radiation safety program.		Need Not Be Submitted with Application

Robert L. Cambria