

SOUTH CAROLINA DEPARTMENT OF ENVIRONMENTAL SERVICES

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Amendment No. 33

Corrected Copy

RADIOACTIVE MATERIAL LICENSE

Pursuant to the Atomic Energy and Radiation Control Act, Section 13-7-40 et.seq. of S.C. Code of Laws of 1976, as amended, and Supplements thereto, and the South Carolina Department Environmental Services (Department) Regulation 61-63, Radioactive Material (Title A), and in reliance on statements and representations heretofore made by the applicant, a license is hereby issued authorizing the licensee to receive, acquire, possess and transfer radioactive material listed below; and to use such radioactive material for the purpose(s) and at the place(s) designated below. This license is subject to all applicable rules and regulations of the Department now or hereafter in effect and to any conditions specified below:

Licensee 1. GEL Laboratories, LLC	In accordance with RHA 2.19. Department Regulation 61-63:	4. Expiration Date: May 31, 2035
2. 2040 Savage Road Charleston, SC 29407	3. License No.: 362 is renewed in its entirety to read as follows:	5. Docket No.: 030-00246 Reference No.:

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license	9. Authorized use
A. Any radioactive material with Atomic Numbers 2 through 83.	A. Any	A. 100 millicuries total	A. As contaminants in environmental waste samples of unknown chemical composition.
B. Any radioactive material with atomic numbers 84 through 102, inclusive, except source and special nuclear material	B. Any	B. 10 millicuries total	B. As contaminants in environmental waste samples of unknown chemical composition.
C. Source material (natural or depleted Uranium or Thorium)	C. Any	C. 70 kilograms total	C. As contaminants in environmental waste samples of unknown chemical composition.
D. Hydrogen-3	D. Any	D. 1 curie total	D. As contaminants in environmental waste samples of unknown chemical composition.

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6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license	9. Authorized use
E. Any radioactive material with atomic numbers 1 through 98	E. Any	E. 2 millicuries per calibration and/or reference standard, and 100 millicuries total.	E. To be used as calibration and reference standards.
F. Technetium-99m	F. Any	F. 5 millicuries per source and 50 millicuries total.	F. To be used as calibration and reference standards.
G. Any byproduct material	G. Leak Test Samples	G. 10 microcuries total	G. The licensee is authorized to perform tests for leakage and/or contamination of sealed sources and of devices containing sealed sources of radioactive material.
H. Any Special Nuclear Material	H. Any	H. 300 grams of U-235, 2 grams of U-233, and 2 grams of Plutonium.	H. As contaminants in environmental waste samples of unknown chemical composition.

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10. Licensed material shall be used or stored at the licensee's facilities located at: 2040 Savage Road, Charleston, South Carolina, 29407
11. The licensee shall comply with the provisions of Title A, State of South Carolina Rules and Regulations for Radiation Control; Part I - General Provisions; Part II - Licensing of Radioactive Materials; Part III - Standards for Protection Against Radiation; and Part VI - Notices, Instructions, and Reports to Workers; Inspections.
12. The Radiation Safety Officer (RSO) for this license is Gregory Austin.
13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months, or at such other intervals as specified.
- B. Notwithstanding Paragraph A of this Condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.
- C. Each sealed source fabricated by the licensee shall be inspected and tested for construction defects, leakage, and contamination prior to any use or transfer as a sealed source.
- D. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.
- E. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta- and/or gamma-emitting material or not more than 10 microcuries of alpha-emitting material.

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- F. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- G. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, a report shall be filed with the Department in accordance with RHA 2.32.3.2, Department Regulation 61-63, and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Department regulations.
- H. Tests for leakage and/or contamination, including leak test sample collection and analysis, shall be performed by the licensee or other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
- I. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.
14. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the Department, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 3 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.
15. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee, except as specifically authorized.
16. This license does not authorize commercial distribution of licensed material.
17. The licensee is authorized to hold radioactive material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal in ordinary trash provided:

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- A. Before disposal as ordinary trash, the waste shall be surveyed at the container surface with the appropriate survey instrument set on its most sensitive scale and with no interposed shielding to determine that its radioactivity cannot be distinguished from background. All radiation labels shall be removed or obliterated, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.
- B. A record of each such disposal permitted under this license condition shall be retained for 3 years. The record must include the date of disposal, the date on which the byproduct material was placed in storage, the radionuclides disposed, the survey instrument used, the background dose rate, the dose rate measured at the surface of each waste container, and the name of the individual who performed the disposal.
18. Licensed material shall only be used by, or under the supervision of:
- | <u>Authorized Users</u> | <u>Material and Use</u> |
|-------------------------|-------------------------|
| Gregory Austin | ALL |
| Lonnie Morris | ALL |
| James Westmoreland | ALL |
19. Maintenance, repair, cleaning, replacement, and disposal of foils contained in detector cells shall be performed only by the device manufacturer or other persons specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
20. The licensee shall not use licensed material in field applications where activity is released except as provided otherwise by specific condition of this license.
21. The licensee shall not use the licensed material in or on humans.
22. The licensee shall not acquire licensed material in a sealed source or device unless the source or device has been registered with the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or equivalent regulations of an Agreement State.

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23. Experimental animals, or the products from experimental animals, that have been administered licensed material shall not be used for human or animal consumption.
24. Radioactive waste possessed under this license shall be stored in accordance with the statements, representations, and procedures included with the licensee's waste storage plan described in the licensee's application dated August 2, 2024, letter dated November 21, 2024, and letter dated December 20, 2024.
25. The licensee shall inform the Department prior to transferring or disposing of depleted uranium shielding.
26. Except for plutonium contained in a medical device designed for individual human application, no plutonium, regardless of form, shall be delivered to a carrier for shipment by air transport or transported in an aircraft by the licensee except in packages the design of which U.S. Nuclear Regulatory Commission has specifically approved for transport of plutonium by air.

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27. 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. This license condition applies only to those statements, representations, and procedures that are required to be submitted in accordance with the regulations. The Department's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence impose on the licensee requirements that are more restrictive than or in addition to the regulations.

- A. Application dated August 2, 2024.
- B. Letter dated November 21, 2024.
- C. Letter dated December 20, 2024.
- D. Letter dated February 21, 2025.
- E. Letter dated February 28, 2025.
- F. Letter dated April 11, 2025.
- G. Letter dated April 24, 2025.
- H. Letter dated May 2, 2025.

FOR the South Carolina Department
Environmental Services

Date: September 12, 2025By: Andrew M. Roxburgh For

Andrew M. Roxburgh, Director
Division of Radioactive Material
Licensing and Compliance