SOUTH CAROLINA DEPARTMENT OF ENVIRONMENTAL SERVICES
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 of Environmental Services 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 South Carolina Department of Environmental Services now or hereafter in effect and to any conditions specified below.

Amendment No. 56 amends

LICENSEE:

1. Name: Energy*Solutions*, LLC
Barnwell Processing Facility

3. License Number
287-04 in its entirety.

2. Address: 16043 Dunbarton Boulevard
Barnwell, SC 29812

4. Expiration Date:
June 30, 2031

5. Radioactive Material (Element & Mass No.)	6. Chemical and/or Physical Form	7. Maximum Radioactivity and/or quantity of material which Licensee may possess at any one time.
A. Hydrogen-3	A. Any Form	A. 100,000 Ci
B. Source Material	B. Any Form	B. 4,000,000 lbs
C. Any radioactive material with Atomic numbers between 2 & 91 inclusive (except SNM & source material.)	C. Any Form	C. 25,000 Ci
D. Special Nuclear Material (SNM)	D. Any Form	D. 350 grams total of ^{235}U or 200 grams of ^{233}U or 200 grams of plutonium or any combination of these provided the sum of the ratios of the quantities does not exceed unity.
E. Any radioactive material with Atomic Numbers 93 and above (except SNM)	E. Any Form	E. 30 Ci
F. Any radioactive material with Atomic Nos. 1-92.	F. Any Form	F. 1 Ci total
G. Any radioactive material with Atomic Nos. 93 and above (except SNM)	G. Any Form	G. 1 uCi

8. Authorized Use:

A. thru E. (1)For receipt, storage for processing to include; consolidation, decontamination, repackaging, dry active waste (DAW) compaction, dewatering/inspection, sluicing, solidification, water processing (THERMEX), and transfer to authorized licenses; (2) or receipt and storage for transfer to authorized licenses; (3) or as calibration and reference standards for radiological analysis; (4) or as contamination upon surfaces or contained within tools and equipment used at the Barnwell Processing Facility; (5) or as contamination in/on tools and equipment used on field projects.

D., F., and G. To be received as radioactive waste samples for experimental process testing at the waste testing laboratory.

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Conditions

9. Radioactive material as radioactive waste may only be received, processed, repackaged and stored at the Barnwell Processing Facility which is physically located at 16043 Dunbarton Boulevard, Barnwell, SC 29812. This license does not authorize reciprocity in any other Agreement State, or state or territory subject to jurisdiction of the U.S. Nuclear Regulatory Commission.

10. The licensee shall comply with the provisions of Regulation 61-63, Title A, State of South Carolina Rules and Regulations for Radioactive Materials, Part I - General Provisions; Part III - Standards for Protection Against Radiation; Part VI - Notices, Instructions, and Reports to Workers; Inspections; and Part XII - Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material, Regulation 61-83, Transportation of Radioactive Waste Into or Within South Carolina, U.S. Department of Transportation Regulation 49 CFR, and Radioactive Materials Licenses and Acceptance Criteria for Low-Level Radioactive Waste Disposal Facilities to which radioactive waste is transferred.

11. The licensee must comply with the reporting requirements for transactions involving nationally tracked sources in Title A, Part 3, Appendix G., RHA 3.58. This section includes the requirement to report any manufacture, transfer, receipt, disassembly, or disposal of a nationally tracked source, otherwise allowed by this license, by the close of the next business day after the transaction. A nationally tracked source, as defined in Title A, RHA 3.2.63, refers to a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Title A, Part 3, Appendix G, RHA 3.58, "Nationally Tracked Source Thresholds."

12. Operations of the Barnwell Processing Facility shall be conducted under the supervision of Michael Ferrentino (RSO), Thomas H. Bell, Phillip H. Thomas, Rodney Still, Richard Collins, Joshua Grubbs or other individuals designated by the RSO upon successful completion of the licensee's training program and approved by the licensee's Safety Review Board.

The licensee shall maintain continuity in the radiation control program by prior notification to the Department of any intended changes in the position of (Facility) Radiation Safety Officer or personnel contracted to perform and supervise any licensed activities. In the event of a change in the status of the current (Facility) Radiation Safety Officer, if prior contingencies have not been provided for interim supervision of licensed activities, suspension of activities authorized by this license shall be affected pending review and approval by the Department of submitted documentation regarding qualifications of candidates proposed to perform and supervise licensed activities.

13. Unless otherwise authorized in writing from the Department, the licensee shall only accept radioactive waste for processing, storage and transfer from those components of the United States Government exempted from permitting requirements as specified under the Principles of Understanding (POU) between the State of South Carolina and the Department of Defense dated December 4 and 10, 1980, and between the State of South Carolina and the Department of Energy dated October 29, 1980, or from waste generators which have been issued a valid S.C. Radioactive Waste Transport Permit in accordance with Regulation 61-83.

14. The licensee shall not accept radioactive waste for processing, storage, or transfer unless the shipper has provided a properly executed Department Form DES-803, Radioactive Waste Shipment Certification Form, Part I and II. The licensee shall not accept radioactive waste shipments consisting of more than 75 cubic feet or containing more than one (1) curie without a properly completed and executed Department Form DES-802, Radioactive Waste Shipment Prior Notification and Manifest Form.

15. The licensee shall only accept radioactive waste in accordance with the terms and conditions of this license and Barnwell Processing Facility Radioactive Material Acceptance Criteria. Any variance from this license shall have prior written approval from the Department with the exception of radioactive waste transportation regulations addressed in Condition 10.

16. Radioactive waste received for storage, or received for processing, shall only be stored for a maximum of one year from date of receipt.

17. The licensee shall not transfer radioactive waste to a disposal facility that is not acceptable under the terms and conditions of that facility's radioactive material license and acceptance criteria. Such radioactive waste received for consolidation and repackaging shall be returned within two weeks of such determination to the original waste generator/shipper in accordance with applicable regulations.

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18. The licensee shall comply with all applicable provisions of 10 CFR 20.2006, Transfer for Disposal and Manifest.

19. Sealed sources containing radioactive material shall not be opened by the licensee.

20. A. Except for sealed sources received for repackaging or processing for disposal, each sealed source containing radioactive material, other than Hydrogen-3, with a half-life greater than thirty (30) days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six (6) months. In the absence of a certificate from a transferor indicating that a test has been made within six (6) months prior to the transfer, the sealed source shall not be put into use until tested.

B. The test shall be capable of detecting the presence of 0.005 microcuries of radioactive material on the test sample. The test sample shall be taken from the sealed source or from the surfaces of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak test results shall be kept in units of microcuries and maintained for inspection by the Department.

C. If the test reveals the presence of 0.005 microcuries or more of removable contamination, the licensee shall immediately withdraw the sealed source from use and shall cause it to be decontaminated and repaired or to be disposed of in accordance with Department regulations. A report shall be filed within five (5) days of the test with the Director, Division of Waste Management, South Carolina Department of Environmental Services, 2600 Bull Street, Columbia, South Carolina 29201, describing the equipment involved, the test results, and the corrective action taken.

21. Tests for leakage and/or contamination shall be performed by persons specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such service.

22. The licensee shall immediately notify the Department of any violations of applicable radioactive material or radioactive waste transportation regulations, conditions of this license, or radioactive material/waste acceptance criteria.

23. The licensee shall conduct a possession quantities verification inventory monthly and a physical inventory every (6) months to account for the sealed source and all radioactive material received and possessed under the license. The records of the inventories shall be maintained for inspection by the Department and shall include the quantities and kinds of licensed material, location of radioactive material, and the date of the inventory.

24. A monthly processing report of all the activities conducted at the Barnwell Processing Facility shall be submitted to the Department no later than the 15th day of the following month.

25. A. Except as specifically provided otherwise, the licensee shall possess and use radioactive material described in Items 5,6, and 7 of this license for the purpose of processing, repackaging, storing and transporting radioactive waste and conduct the operations of the Barnwell Processing Facility in accordance with statements, representations, and procedures contained in the following;

a. Renewal application a with attachments dated May 27, 2026 signed by Jushua Grubbs.

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B. All operations authorized by this license shall be conducted in accordance with Chem-Nuclear Systems/Energy*Solutions* (ES) procedures, subsequent revisions, and additions approved by the Department. However, the licensee may, upon notification to the Department but without Department approval, make minor changes to these procedures provided that:

a. The change does not affect requirements of any other license condition within this license;

b. The change does not increase the potential for personnel exposures;

c. The change does not diminish operational safety;

d. The change does not increase the potential for release of radioactive material to unrestricted areas; and

e. The change does not reduce the licensee's record keeping and reporting system.

The licensee shall maintain records of these minor changes including evaluations which provide the basis for each change. The licensee shall provide a copy of all revised procedures to the Department within 30 days.

For the South Carolina Department of Environmental Services

Date of Issuance: June 12, 2026

By: _____

Kent Krieg, Director
Division of Waste Management
Bureau of Land & Waste Management