

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL  
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 Health and Environmental Control 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 Health and Environmental Control now or hereafter in effect and to any conditions specified below:

**Amendment No. 40 amends:**

**LICENSEE**

**1. Name:** EnergySolutions, LLC  
Nuclear Services Support Facility

**3. License Number:**  
287-02 in its entirety.

**2. Address:** 740 Osborn Road  
Barnwell, South Carolina 29812

**4. Expiration Date:**  
April 30, 2020

**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. Any radioactive material with Atomic Nos. 1-92 inclusive.
- B. Any radioactive material with Atomic Nos. 93 and above.
- C. Any radioactive material inclusive.
- D. Source material
- E. Any radioactive material with Atomic Nos. 93 and above (except SNM)
- F. Special Nuclear Materials

- A. Any Form
- B. Any Form
- C. Any Form
- D. Any Form
- E. Any Form
- F. Any form

- A. 10.0 curies total of all radionuclides.
- B. 10.0 millicuries total of all radionuclides.
- C. 5,000 curies total of with Atomic Nos. 1-92.
- D. 1,000 pounds total.
- E. 100 grams total.
- F. 100 grams total.

**8. Authorized Use:**

- A. Radioactive materials as contamination consisting of activation, corrosion and/or fission products upon surfaces or contained within tools, equipment, or components used in the maintenance, repair, testing, decontamination and waste processing functions of the Nuclear Services Support Facility.
  - B. Radioactive materials as incidental contamination on the surfaces or within tools, equipment, or components used in the maintenance, repair, testing, decontamination and waste processing functions of the Nuclear Services Division.
  - C&D. Radioactive materials and/or radioactive waste for receipt, processing, decontamination, storage, consolidation, solidification, encapsulation, and repackaging for transport to authorized licenses.
  - E&F. Radioactive material only incident to the radioactive materials of Item C.&.D.
- DHEC 812 (11/81)

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**CONDITIONS**

9. Radioactive material may be used at the licensee's site on Osborn Road, Barnwell, South Carolina.

10. 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 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.

11. Radioactive material shall be used by or under the supervision of Clifford E. Bowers (RSO), Robert W. Defrenn, Billy L. Carver, Hendrick B. Fisher, Daniel B. Morris, John F. Davis or other individuals designated by the Radiation Safety Officer 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.

12. The transportation of radioactive materials and radioactive waste within the State of South Carolina shall be in accordance with applicable regulations of the U.S. Department of Transportation, the U.S. Nuclear Regulatory Commission, Section RHA 2.22, and Appendix D, RHA 3.55, Department Regulation 61-63, Radioactive Material (Title A), and Department Regulation 61-83, Transportation of Radioactive Waste Into or Within South Carolina.

13. Radioactive waste shall be processed and packaged in accordance with applicable licenses issued by the U.S. Nuclear Regulatory Commission or an Agreement State to which radioactive material or waste will be transferred.

14. All operations authorized by this license shall be conducted in accordance with Chem-Nuclear Systems/EnergySolutions (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.

15. 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."

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16. The licensee shall, to the extent necessary, continue the employment of all personnel involved in the operation of the Nuclear Services Support Facility in accordance with all requirements of the license and applicable regulations and, in the event replacement of employees becomes necessary, only individuals of comparable qualifications and experience will be hired.

17. The licensee shall make no changes in the personnel training program, the internal safety audits, Safety Review Board, ALARA Review Committee, Site Criteria, or Procedures Manual and Standard Operating Procedures, without written approval from the Department, unless otherwise specified in this license.

18. The licensee shall not accept radioactive waste for storage or processing unless the shipper has provided for the waste shipment on a Barnwell Waste Management Facility's Uniform Low-Level Radioactive Waste Manifest form. The Department thereto shall approve such form or revisions.

19. The licensee shall not accept radioactive waste for storage or processing unless the shipper of such waste has a valid, unsuspended Radioactive Waste Transport Permit issued by the S.C. Department of Health and Environmental Control unless exempted by the Department.

20. The licensee shall not accept radioactive waste for storage or processing unless the shipper has provided a properly executed Department Form, DHEC-803, Radioactive Waste Shipment Certification form, Parts I and II. A properly completed and executed Department Form, DHEC-802, Radioactive Waste Shipment Prior Notification and Manifest Form shall also accompany shipments consisting of more than 75 cubic feet or containing more than one (1) curie.

21. Notwithstanding other conditions of this license, the licensee shall not accept radioactive waste for storage or processing unless he has received advance written notification of any waste shipment containing unusual hazards or potential hazards including but not limited to, physical, gaseous, chemical, pyrophoric, or excessive removable contamination on containers shipped inside casks or excessive internally contaminated casks, and unexpected high radiation levels at container surfaces.

22. The licensee shall immediately notify the Department of any waste shipments where a violation of applicable regulations or license conditions has been found.

23. The licensee shall notify the shipper and the Department when any shipment of radioactive waste or part of a shipment has not arrived within 60 days after the advance copy of the shipment manifest or shipping papers was received by the licensee.

24. The licensee shall notify the shipper when it has been determined that a radioactive waste shipment or part of a shipment cannot be accepted for processing by the licensee.

25. The licensee shall acknowledge receipt of the waste within 7 days of its acceptance for processing by returning a signed copy of the shipment manifest or shipping papers to the shipper. The licensee shall indicate on the returned copy of the shipment manifest of shipping papers any discrepancy between waste descriptions listed on the manifest or papers and the waste materials received in the shipment.

26. The licensee shall not possess any waste package containing licensed material for more than one year from the date of receipt of the package.

27. The licensee shall notify the Department in writing sixty (60) days in advance of plans to discontinue the activities authorized by this license.

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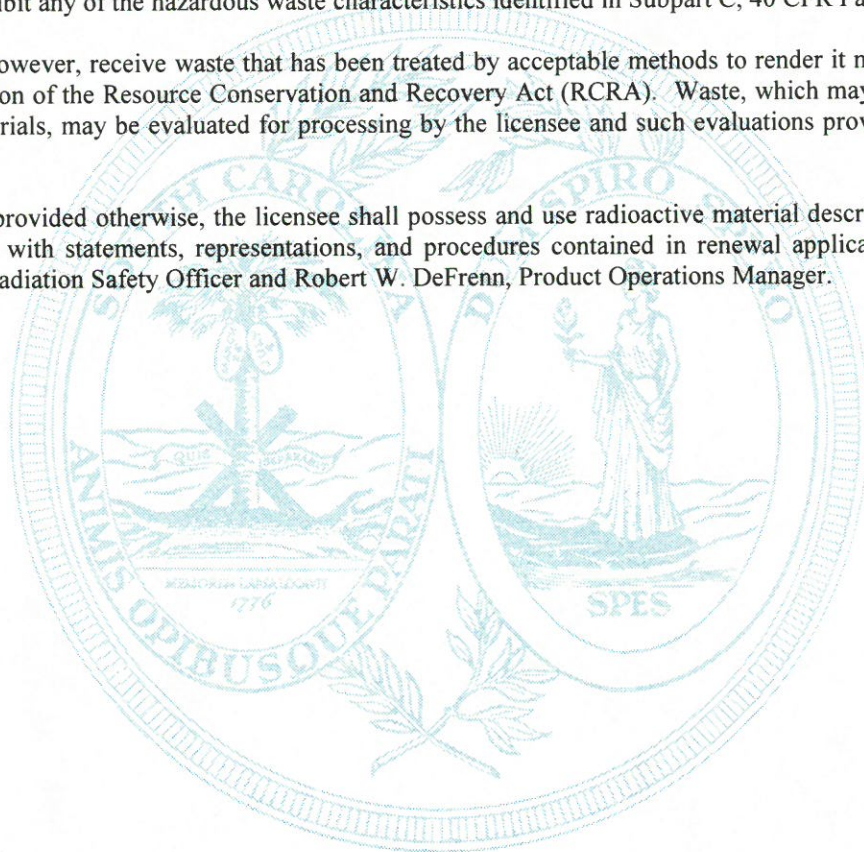
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28. The licensee shall conduct a physical inventory every six (6) months to account for all radioactive material received and possessed to include the quantities and kinds of licensed material, location of radioactive materials, and the date of the inventory. Records of such inventories shall be maintained for inspection by the Department.

29. A. Unless otherwise authorized, the licensee shall not receive for storage nor processing, any mixed low-level radioactive waste defined as waste that satisfies the definition of low-level radioactive waste specified in the Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L. 99-240), and contains waste that either (1) is listed as hazardous waste in Subpart D, 40 CFR 261, or (2) causes the waste to exhibit any of the hazardous waste characteristics identified in Subpart C, 40 CFR Part 261.

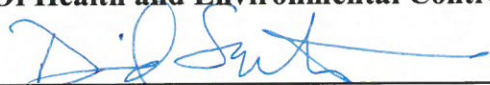
B. The licensee may however, receive waste that has been treated by acceptable methods to render it non-hazardous and therefore not subject to the jurisdiction of the Resource Conservation and Recovery Act (RCRA). Waste, which may contain discrete quantities of hazardous or toxic materials, may be evaluated for processing by the licensee and such evaluations provided to the Department for consideration of approval.

30. Except as specifically provided otherwise, the licensee shall possess and use radioactive material described in Items 5, 6, and 7 of this license in accordance with statements, representations, and procedures contained in renewal application dated March 4, 2015, signed by Joseph J. Still, Radiation Safety Officer and Robert W. DeFrenn, Product Operations Manager.



**Date of Issuance:** April 1, 2019

**For the South Carolina Department  
Of Health and Environmental Control**

By: 

**David Scaturo, PE, PG, Assistant Bureau Chief  
Division of Waste Management  
Bureau of Land & Waste Management**