

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. 7 amends:

LICENSEE

1. Name: EnergySolutions, LLC

3. License Number:
287-07 in its entirety

2. Address: Barnwell Logistics Facility (BLF)
740 Osborn Road
Barnwell, SC 29812

4. Expiration Date:
January 31, 2019

**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. between 1-92, inclusive, except special nuclear material (SNM) & source material.

A. Solid Form

A. 100.0 millicuries total for all radionuclides.

B. Any radioactive material with Atomic Nos. 93 & above, except SNM & source material.

B. Solid Form

B. 10.0 millicuries total for all radionuclides.

C. Any radioactive materials with Atomic Nos. between 2 & 92, inclusive, except SNM & source material.

C. Plated sources and/or sealed sources.

C. 10.0 microcuries total

8. Authorized Use:

A & B. Radioactive material as contamination consisting of mixed fission and activation products upon surfaces or contained within shipping casks that are emptied of their contents received specifically at the facility for maintenance and/or repair.

C. Radioactive material as small quantity radioactive sources specifically to perform instrument response checks.

Conditions

9. Radioactive material may only be possessed, used, or stored, as surface contamination or small quantity radioactive sources at the licensee's facility address listed in Item 2 of this license. No radioactive material may be received in a cask or otherwise at the facility.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Radioactive Material License
Supplementary Sheet

License No. 287-07
Amendment No. 07

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), William A. Veronee, Phillip H. Thomas, John R. Wells, Thomas H. Bell, Edward W. Beasley, Billy L. Carver, or Daniel B. Morris, 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.

12. The licensee shall maintain records of the Radiation Protection Program at the licensee's facility address listed in Item 2 of this license for periodic inspection by the Department.

13. 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."

14. Activities of the licensee involving the use of radioactive materials are limited to the maintenance and/or repair for empty casks and small quantity radioactive material sources for instrument response checks at the location specified in Condition 9. Radioactive wastes generated as a result of these activities shall not be stored for more than one (1) year, or for not longer than sixty (60) days upon the accumulation of one (1) B-25 box type, whichever occurs first. In addition, this waste shall be transferred to an authorized recipient in accordance with applicable Department regulations, the facility's radioactive material license, and acceptance criteria.

15. A radiological survey shall be performed by the licensee within eight (8) business hours of receipt for contaminated equipment at the location specified in Condition 9. Release surveys of equipment from the licensee's facility shall be performed prior to release. All pool loaded, stainless steel casks shall be surveyed within 72 hours prior to release in accordance with EnergySolutions Procedure S20-RP-031. Records of such surveys shall be documented and maintained for inspection by the Department.

16. All maintenance and/or repair activities involving the use of radioactive materials must be performed within established radiological control areas (RCAs), inside the BLF building and in the BLF yard, for the purpose of performing routine cask operations and to properly store slightly contaminated casks and equipment at the licensee's facility specified in Condition 9.

17. Storage of contaminated material at the licensee's facility shall be done in compliance with the provisions of Department Regulation 61-63, Radioactive Material (Title A), Part III – Standards of Protection Against Radiation.

18. Radioactive material shall be packaged and transported in accordance with the requirements of RHA 2.22 – Transportation of Radioactive Materials, Department Regulation 61-63, Radioactive Material (Title A), and Department Regulation 61-83, Transportation of Radioactive Waste Into or Within South Carolina.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
Radioactive Material License
Supplementary Sheet

License No: 287-07
Amendment No. 07

19. The license does not authorize the receipt, possession, or repair of transportation casks or packages containing radioactive materials or radioactive wastes unless the radioactive materials are residual or surface contamination. Vehicles in need of immediate repair having packages of radioactive material that are in transit to other licensed facilities may be received with Department approval on a case by case basis, provided prior approval is granted by the facility's health physics manager and operation manager or their designees. Possession limits of the license shall be maintained during such activities.

20. The licensee shall notify the Department in writing within sixty (60) days of plans to discontinue the activities authorized by this license as required by RHA 2.11.

21. 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 documented and maintained for inspection by the Department.

22. A. Except as specifically stated in the license conditions, 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 license application dated September 12, 2013, letter dated September 12, 2013, letter dated October 23, 2013, letter dated August 12, 2015, letter dated March 31, 2016 and letter with attachment dated April 5, 2016 all signed by Jimmy Still, Licensing Manager/RSO for EnergySolutions

B. 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.

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

Date of Issuance: August 31, 2017

By: Susan E. Jenkins for
David Scaturo, PE, PG, Director
Division of Waste Management
Bureau of Land & Waste Management