

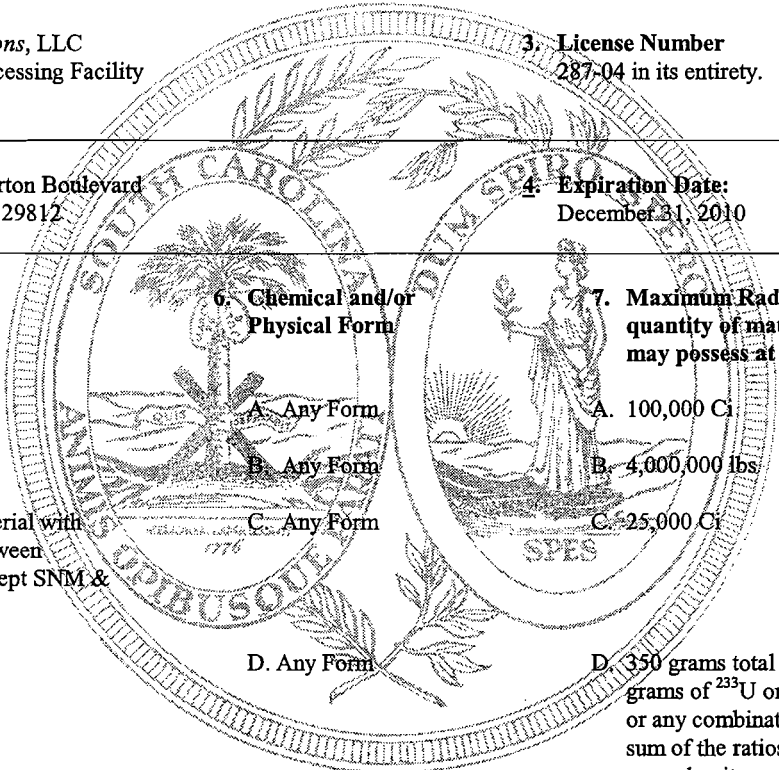
**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
RADIOACTIVE MATERIAL LICENSE**

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. 35 amends

LICENSEE:

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|---|---|--|
| <p>1. Name: EnergySolutions, LLC
Barnwell Processing Facility</p> | | <p>3. License Number
287-04 in its entirety.</p> |
| <hr/> | | |
| <p>2. Address: 16043 Dunbarton Boulevard
Barnwell, SC 29812</p> | | <p>4. Expiration Date:
December 31, 2010</p> |
| <hr/> | | |
| <p>5. Radioactive Material (Element & Mass No.)</p> <p>A. Hydrogen-3</p> <p>B. Source Material</p> <p>C. Any radioactive material with Atomic numbers between 2 & 91 inclusive (except SNM & source material.)</p> <p>D. Special Nuclear (SNM).</p> <p>E. Any radioactive material with Atomic Numbers 93 and above (except SNM)</p> <p>F. Any radioactive material with Atomic Nos. 1-92.</p> <p>G. Any radioactive material with Atomic Nos. 93 and above (except SNM)</p> | <p>6. Chemical and/or Physical Form</p> <p>A. Any Form</p> <p>B. Any Form</p> <p>C. Any Form</p> <p>D. Any Form</p> <p>E. Any Form</p> <p>F. Any Form</p> <p>G. Any Form</p> | <p>7. Maximum Radioactivity and/or quantity of material which Licensee may possess at any one time.</p> <p>A. 100,000 Ci</p> <p>B. 4,000,000 lbs</p> <p>C. 25,000 Ci</p> <p>D. 350 grams total of ²³⁵U or 200 Material grams of ²³³U or 200 grams of plutonium or any combination of these provided the sum of the ratios of the quantities does not exceed unity.</p> <p>E. 30 Ci</p> <p>F. 1 Ci total</p> <p>G. 1 uCi</p> |



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8. Authorized Use:

A.-E. For receipt, storage, consolidation, decontamination, repackaging, processing, and transfer to authorized licenses; or as calibration and reference standards for radiological analysis; or as contamination upon surfaces or contained within tools and equipment used at the Duratek Consolidation and Services Facility; or as contamination in/on tools and equipment used on field projects.

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

Conditions

9. Radioactive material as radioactive waste may only be received, processed, repackaged and stored at the Duratek Consolidation and Services 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 all applicable provisions of Department Regulation 61-63, Radioactive Material (Title A), Department 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 in which radioactive waste is transferred.
11. Operations of the Duratek Consolidation and Services Facility Consolidation Facility shall be conducted under the supervision of James W. Latham (VP, Barnwell Operations), William A. Veronee (RSO), Michael J. Benjamin, N. Reynolds Black, William C. Holcomb, John W. Ott, Michael P. J. Flynn, Pauline Y. Rhymer, Joseph J. Still or other individuals designated by the RSO and approved by the CNS Safety Review Board.
12. 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.
13. The licensee shall not accept radioactive waste for consolidation, repackaging, storage, or transfer unless the shipper has provided a properly executed Department Form DHEC-803, Radioactive Waste Shipment Certification Form, Part I and II. Shipments consisting of more than 75 cubic feet or containing more than one (1) curie, shall be accompanied by a properly completed and executed Department Form DHEC-802, Radioactive Waste Shipment Prior Notification and Manifest Form.
14. The licensee shall only accept radioactive waste in accordance with the terms and conditions of the license and Duratek Consolidation and Services Facility 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 21.
15. Radioactive waste received for processing and transfer shall only be stored for a maximum of one year from date of receipt.
16. 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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17. The licensee shall comply with all applicable provisions of 10 CFR 20.2006, Transfer for Disposal and Manifest.
18. Sealed sources containing radioactive material shall not be opened by the licensee.
19. 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 Assistant Director, Division of Waste Management, South Carolina Department of Health & Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201, describing the equipment involved, the test results, and the corrective action taken.
20. Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such service.
21. 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 waste acceptance criteria.
22. The licensee shall conduct an 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.
23. Radioactive liquid waste may be received for processing at the DCSF as follows:
- a. For liquid radioactive waste with isotopic concentrations greater than two (2) nanocuries/gram, the liquid shall be shipped within a secondary container inside a shipping cask; or
- b. For liquid radioactive waste with isotopic concentrations up to two (2) nanocuries/gram, the liquid shall be shipped in a CNS approved DOT cargo tanker or in 55-gallon drums or smaller inside secondary drums/containment. The inner drums/containment must be shored within the secondary container to prevent movement during transport.
24. A monthly processing report of all the activities conducted at the Duratek Consolidation and Services Facility shall be submitted to the Department no later than the 15th of the following month.

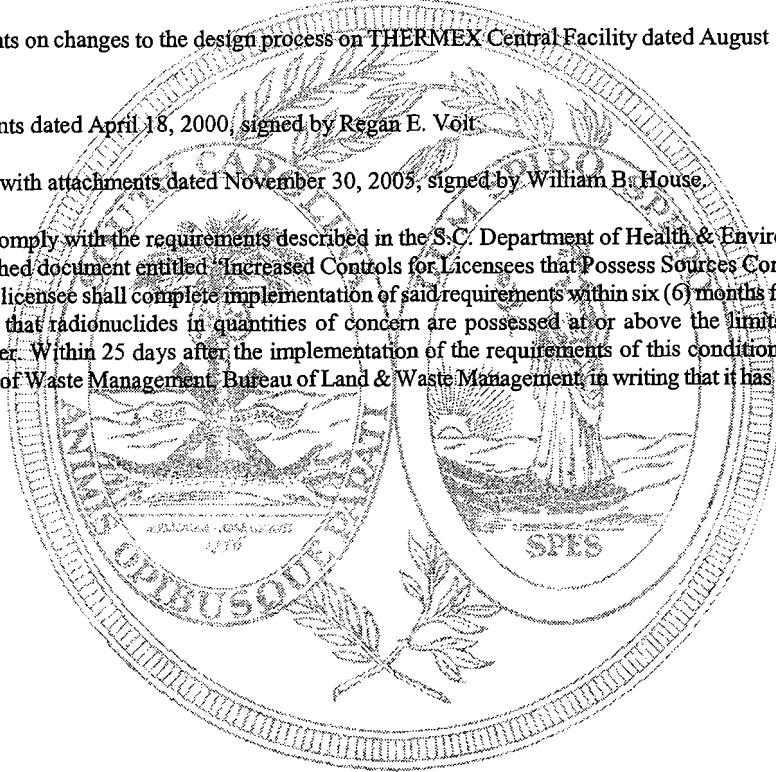
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25. A. Except as specifically provided otherwise, the licensee shall possess and use radioactive material described in Items 5,6, and 7 of this license for the purpose of processing, repackaging, and transporting radioactive waste and conduct the operations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

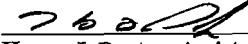
- a. Letter and first submittal dated July 11, 1994; letter and second submittal dated October 20, 1994; and letter and third submittal dated December 16, 1994 on THERMEX Central Facility application, signed by Lynne D. Garner.
- b. Letter with attachments on changes to the design process on THERMEX Central Facility dated August 18, 1995, signed by Lynne D. Garner.
- c. Letters and attachments dated April 18, 2000, signed by Regan E. Voit.
- d. Renewal application with attachments dated November 30, 2005, signed by William B. House.

B. The licensee shall comply with the requirements described in the S.C. Department of Health & Environmental Control letter dated November 8, 2005 and attached document entitled "Increased Controls for Licensees that Possess Sources Containing Radioactive Material Quantities of Concern". The licensee shall complete implementation of said requirements within six (6) months from the issuance of the license amendment or the first day that radionuclides in quantities of concern are possessed at or above the limits specified in Table 1 of the attachment, whichever is later. Within 25 days after the implementation of the requirements of this condition, the licensee shall notify the Assistant Director, Division of Waste Management, Bureau of Land & Waste Management, in writing that it has completed the requirements of this condition.



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

Date of Issuance: October 31, 2006

By: 
Henry J. Porter, Assistant Director
Division of Waste Management