



**RADIOACTIVE MATERIALS BRANCH  
RADIATION PROTECTION SECTION  
N. C. DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES**

**RADIOACTIVE MATERIALS LICENSE**

Pursuant to North Carolina Regulations for Protection Against Radiation and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, own, possess, transfer, and import radioactive materials listed below; and 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 North Carolina Department of Environment and Natural Resources now and hereafter in effect and to any conditions specified below.

<b>1. Licensee Name:</b> Barnhill Contracting Company  <b>2a. Mailing Address:</b> PO Box 1529 Tarboro, NC 27886 <b>b. Physical Address:</b> 1134 Shaw Mill Road Fayetteville, NC 28303-5376 <b>c. Radiation Safety Officer:</b> Randy Lee Burchette	<b>3. License No:</b> 026-0958-3  <b>4. Expiration Date:</b> April 30, 2008 <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; text-align: center;"><input checked="" type="checkbox"/> New License</td> <td style="width: 25%; text-align: center;"><input type="checkbox"/> Routine</td> <td style="width: 25%; text-align: center;"><input type="checkbox"/> Corrected Copy</td> </tr> <tr> <td style="text-align: center;">Renewal</td> <td style="text-align: center;">Administrative</td> <td style="text-align: center;">Termination</td> </tr> </table> <b>5.a. Amendment No.:</b> New License <b>b. Issuance Date:</b> April 22, 2003	<input checked="" type="checkbox"/> New License	<input type="checkbox"/> Routine	<input type="checkbox"/> Corrected Copy	Renewal	Administrative	Termination	<b>License Type:</b> 0300
<input checked="" type="checkbox"/> New License	<input type="checkbox"/> Routine	<input type="checkbox"/> Corrected Copy						
Renewal	Administrative	Termination						

<b>6. Radioactive Material (element and mass no.)</b>  <b>A. Cesium 137</b>	<b>7. Chemical and/or Physical Form</b>  <b>A. Sealed Source</b>	<b>8. Maximum Amount of Radioactivity and/or Quantity of Radioactive Material which Licensee May Possess at Any One Time.</b>  <b>A. No single source to exceed 9 millicuries</b>
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**9. Authorized Use:**

**A. To be used in a Troxler Model 4640B portable thin layer density gauge for determining the densities of compacted asphalt.**

**CONDITIONS**

10. **A.** The authorized place of receipt and storage of radioactive material is the licensee's address stated in item 2b. above
- B.** Radioactive materials may be used at temporary jobsites of the licensee throughout the State of North Carolina in areas not under exclusive Federal jurisdiction (Federal installations such as military bases, V.A. Hospitals, etc.). Authorization for the use of radioactive materials at temporary jobsites under exclusive Federal Jurisdiction shall be obtained either by (1) filing a NRC Form 241 [10 CFR 150.20(b)], or (2) applying for reciprocity, or (3) applying for a specific license from the NRC if the length of the job is to exceed six (6) months.
- C.** This condition does not prohibit the use of radioactive materials in other states; however, before radioactive materials can be used at a temporary jobsite in another state, authorization must be obtained from the State, if it is an Agreement state, or from the Nuclear Regulatory Commission for any non-Agreement State, either by filing for reciprocity or applying for a specific license.
11. The licensee shall comply with the provisions of 15A NCAC 11 .1600 "Standards for Protection Against Radiation," and 15A NCAC 11 .1000 "Notices, Instructions, Reports and Inspections." (The North Carolina Regulations for Protection Against Radiation are contained in 15A NCAC 11.)
12. **A.** Licensed material shall only be used by Randy Burchette, David Glover, Thomas Avery, Donald Enderle, Jr., Cora Nunnery, Angela Holmes, Charles Matthews, Ronald Bernbridge, Michael Snell, Mike Ange, John Shaw, Steven Moore, Timothy Hill, Ronald Clay Register, or individuals who (1) are employees of the licensee, (2) have successfully completed a manufacturers training program for gauge users, (3) have been instructed in the licensee's routine operating and emergency procedures and (4) have been designated in writing as having completed these requirements by the Radiation Safety Officer.
- B.** Records of these designations shall be maintained for three (3) years after the company no longer employs the individual.



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**CONDITIONS (continued):**

12. C. The licensee shall establish a method of identification and documentation of training for the persons authorized in Condition A above. This shall be made available for review by the agency at the time of either a field or home office inspection.
- D. The Radiation Safety Officer for the activities authorized under this license shall be Randy Lee Burchette.
- E. The Assistant Radiation Safety Officer for the activities authorized under this license shall be David Glover.
13. A. Each sealed source containing radioactive material shall be tested for leakage and/or contamination at intervals not to exceed six (6) months. In the absence of a certificate from the 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 microcurie 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 agency.
- C. If the test reveals the presence of 0.005 microcurie 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 agency regulations. A report shall be filed within five (5) days of the test with the Radioactive Materials Branch, Radiation Protection Section, Department of Environment and Natural Resources, 1645 Mail Service Center, Raleigh, NC 27699-1645, describing the equipment involved, the test results, and the corrective action taken.
- D. Tests for leakage and /or contamination shall be performed by persons specifically authorized by the agency to perform such services.
14. The licensee may transport licensed material or deliver licensed material to a carrier for transport in accordance with the provision of Section 71.5, Title 10, Code of Federal Regulations, Part 71, "Packaging of Radioactive Material For Transport."
15. Sealed sources containing radioactive material shall not be opened or removed from their respective source holders by the licensee.
16. Gauges that are equipped with a sliding block which require servicing shall be cleaned and lubricated only by personnel who are authorized in the license to use the gauge and who have received training on how to remove, clean and lubricate the sliding block properly. The sliding block may be removed provided:
  - A. Personnel removing the sliding block wear appropriate personnel monitoring equipment; and
  - B. Personnel removing the sliding block stay on the opposite side of the gauge from the sliding block and use a mirror to view the removal and reinstallation of the sliding block in order to minimize exposure.
17. The radioactive source rod containing radioactive material which requires servicing may be removed from the gauge for cleaning and lubrication only in accordance with procedures contained in the gauge manual and only by persons who are authorized in the license to use the gauge and who have received training on how to remove, clean, and lubricate the source rod properly. The source rod may be removed provided:
  - A. Personnel removing the source rod wear appropriate personnel monitoring equipment;
  - B. The source rod is removed while in an appropriate area away from other people;
  - C. After the source rod is cleaned and lubricated, a calibration check is made to confirm the source rod is in the proper location and instrument readings are normal;



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**CONDITIONS (continued):**

17. D. Records show the location, date, and name of the person performing the cleaning, lubrication, and calibration check; and
- E. The above records are maintained for a period of three (3) years or until the agency authorizes their disposal.
18. The licensee shall keep records for each device authorized in this license showing which authorized user has the device, the time and date the device was removed from storage, job where device was used and the time and date the device was placed back into storage. Records of use shall be kept for two (2) years for inspection by the agency or until they have been reviewed by the agency and if the records are determined to be satisfactory, then they may be disposed of.
19. The licensee shall conduct a physical inventory of all sealed sources received and possessed under this license at intervals not to exceed six (6) months. Records of the inventories shall be maintained for inspection by the agency and shall include the quantities and kinds of radioactive material, location of sources and the date of the inventory.
20. In addition to the possession limits in Item 8 above, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in 15A NCAC 11 .0353 for establishing decommissioning financial assurance.
21. The licensee shall annually review its Radiation Protection Program for content and implementation [Reference 15A NCAC 11 .1603(c)]. Documentation of the Radiation Protection Program reviews shall be retained for inspection by the agency [Reference: 15A NCAC 11 .1636].
22. The licensee shall institute the provisions of 15A NCAC 11 .1610 when an occupationally exposed woman voluntarily informs her supervisor, in writing, of the pregnancy and the estimated date of conception.
23. The licensee shall ensure that no individual "member of the public" [Reference: 15A NCAC 11 .0104(64)] receives a radiation dose in excess of the limits specified in 15A NCAC 11 .1611(a) while conducting licensed activities.
24. This license may be subject to amendment, revision, modification, suspension, or revocation in accordance with the provisions of 15A NCAC 11 .0344.
25. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6., 7., and 8. of this license in accordance with statements, representations and procedures and attachments listed below. The North Carolina Regulations for Protection Against Radiation shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application with attachments dated April 7, 2003, signed by W. Lee Cooper.

  
For: Beverly O. Hall

Section Chief, Radiation Protection Section 