

13.

RADIATION DETECTION INSTRUMENTS (FOR USE BY RADIATION PROTECTION PERSONNEL)
(Use supplemental sheets if necessary.)

TYPE OF INSTRUMENTS (Make and model number of each)	NUMBER AVAILABLE	RADIATION DETECTED	SENSITIVITY RANGE (mr/hr)	WINDOW THICKNESS (mg/cm ²)	USE (Monitor - Survey - Measure)
Monitor 4 By SE Interactiv	1	Gamma & X Rays	0 - 50 m/hr	1.5 - 20 mg/cm ²	Survey Instrument

14. METHOD, FREQUENCY, AND STANDARDS USED IN CALIBRATING INSTRUMENTS LISTED ABOVE

IN Accordance with ASTM standards @ Factory
+ NRC

15. FILM BADGES, DOSIMETERS, AND BIO-ASSAY PROCEDURES USED (For film badges, specify method of calibrating and processing, or name of supplier.)

Dosimeters - quarterly by Landauer

16. DESCRIBE PROJECT, EXPERIMENT, ETC. (Include major facilities and equipment to be used.)

Soils density testing at various construction
sites on post

17. RADIATION PROTECTION PROGRAM (Applicable to use at the installation(s) named in item 3)

SEE Attached License

18. WASTE DISPOSAL (NOTE: No radioactive material may be ultimately disposed of at Army installations except as provided in para 5-15, AR 385-11.)

IN Accordance with attached State License.

19. STATEMENT

THE APPLICANT OR ANY OFFICIAL FILING THIS APPLICATION ON BEHALF OF THE APPLICANT NAMED IN ITEM 1 STATES THAT ALL INFORMATION CONTAINED HERE, AND IN ATTACHED SUPPLEMENTS, IS CORRECT.

20a. DATE

20b. TYPED NAME AND TITLE

20c. SIGNATURE

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH



RADIOACTIVE MATERIAL LICENSE

Pursuant to Tennessee Department of Environment and Conservation Regulations, and in reliance on statements and representations heretofore made by the licensee, 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 Tennessee Department of Environment and Conservation and orders of the Division of Radiological health, now or hereafter in effect and to any conditions specified below.

1. Name LICENSEE Atlanta Testing & Engineering		3. License number R-19220-K02
2. Address 478 Allied Drive, Suite 104 Nashville, TN 37211		4. Expiration date November 30, 2002
		5. File no. R-19220
6. Radioactive Material (Element and Mass Number)	8. Chemical and/or physical form See Supplementary Sheets	9. Maximum Radioactivity and/or quantity of material which licensee may possess at any one time.
10. Authorized Use See Supplementary Sheets		

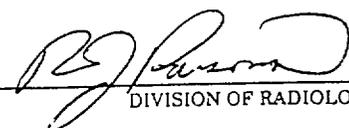
CONDITIONS

11. Unless otherwise specified, the authorized place of use is the licensee's address stated in item 2, above.

See Supplementary Sheets

For the Commissioner
Tennessee Department of Environment and Conservation

Date of Issuance November 5, 1997

By: 
DIVISION OF RADIOLOGICAL HEALTH

Page 1 of 4 Pages

Ronald J. Parsons
Health Physicist

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Supplementary Sheet

Page 2 of 4 Pages

License Number R-19220-K02

6. Radioactive Material (Element and Mass Number)	8. Chemical and/or Physical Form	9. Maximum Radioactivity and/or Quantity of Material Which Licensee May Possess at Any One Time
A. Cesium 137	A. Sealed Source (Troxler Drawing No. A-102112)	A. One (1) source not to exceed 9 millicuries.
B. Americium 241: Beryllium	B. Sealed Source (Troxler Drawing No. A-102451)	B. One (1) source not to exceed 44 millicuries.

10. Authorized use

A. and B. To be used in a Troxler Model 3400 Series Surface Moisture Density Gauge to measure properties of construction materials.

Conditions (continued)

12. The licensee shall comply with applicable provisions of 1200-2-4, 1200-2-5, and 1200-2-10, of "State Regulations for Protection Against Radiation."
13. Radioactive material authorized by this license shall be stored at 478 Allied Drive, Suite 104, Nashville, Tennessee.
14. Radioactive material authorized by this license may be used at temporary job sites of the licensee, in areas not under exclusive Federal jurisdiction, throughout the State of Tennessee.

Before radioactive materials can be used at a temporary job site at any Federal facility, the jurisdictional status of the job site must be determined. If the jurisdictional status is unknown, the Federal agency should be contacted to determine if the job site is under exclusive Federal jurisdiction. A response should be obtained in writing or a record should be made of the name and title of the person at the Federal agency who provided the determination and the date that it was provided. Authorization for use of radioactive materials at job sites under exclusive Federal jurisdiction shall be obtained either by: (1) filing a NRC Form-241 in accordance with 10 CFR 150.20(b), "Recognition of Agreement State Licenses,"; or (2) by applying for a specific NRC license.

Before radioactive materials can be used at a temporary job site in another State, authorization shall be obtained from the State if it is an Agreement State, or from the NRC for any non-Agreement State, either by filing for reciprocity or applying for a specific license.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Supplementary Sheet

Page 3 of 4 Pages

License Number R-19220-K02

15. A. Radioactive material authorized by this license shall be used by Richard D. Heckel, Alfred Futrell, Jr., or individuals who have completed a training course provided by the device manufacturer, and have been instructed in the licensee's operating and emergency procedures. Records of training for each user shall be maintained by the licensee for inspection by the Department.
- B. The Radiation Safety Officer for this license is Richard D. Heckel.
16. A. Sealed sources authorized by this license 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 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 surface of the device in which the sealed source is permanently mounted or stored on which one might expect contamination to accumulate. Records of leak tests shall be kept in units of microcuries and maintained for inspection by the Department.
- 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 Department regulations. A report shall be filed within five (5) days of the test with the Division of Radiological Health, Tennessee Department of Environment and Conservation, 3rd Floor L & C Annex, 401 Church Street, Nashville, Tennessee, 37243-1532, describing the equipment involved, the test results, and the corrective action taken.
- D. The licensee is authorized to collect leak test samples for analysis by gauge manufacturer, or by persons authorized by this Department, the U.S. Nuclear Regulatory Commission, or another Agreement state to perform such services.
17. The licensee shall not open sealed sources containing radioactive material or remove sealed sources from their respective source holders.
18. Maintenance and repair of devices containing radioactive material, and installation, replacement, removal from service, and disposal of sealed sources containing radioactive material used in devices shall be performed only by the respective device manufacturer or by other persons specifically authorized by this Department, the U. S. Nuclear Regulatory Commission, a Licensing State, or another Agreement State, as appropriate, to perform such services.
19. To prevent tampering or removal by unauthorized personnel, each radioactive device authorized by this license shall be secured in a locked storage container or area when not being used.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Supplementary Sheet

Page 4 of 4 Pages

License Number R-19220-K02

20. The licensee shall maintain complete and accurate records of the receipt and disposal of radioactive material. The licensee shall, for radioactive material no longer useful for any purpose and for any equipment or supplies contaminated with such material for which further use and decontamination is not planned, define those materials as radioactive waste and treat them as such in accordance with the following provisions:

- A. Radioactive waste material shall not be stored with non-radioactive waste.
- B. A written record of all radioactive waste material shall be maintained until it has been determined by a suitable survey or radioassay that it has decayed to background levels or until it has been shipped to an authorized recipient in accordance with all applicable regulations. Accountability of radioactive waste material prepared for shipment but not yet shipped from the licensee's premises shall be maintained by the licensee by an internal record system such that the licensee is constantly aware of the material's location and the proposed time of shipment. Individuals who are involved in the shipping of such material and/or the storage of such material prior to shipment, shall be trained in the precautions necessary for such handling and storage.
- C. For material which has decayed to background levels as determined by radioassay or external level as measured with appropriately calibrated instruments, records shall indicate that the material was determined to be no longer radioactive and will indicate the methods and results of the survey or analysis.
- D. Shipment records of radioactive waste material shall be maintained and the licensee shall require written confirmation from the authorized recipient of such material that this material has been received.
- E. All records and written confirmations required by this condition shall be maintained for inspection by the Department.

The requirements for this condition are in addition to any other requirements for the handling and/or disposal of radioactive material contained in this license and "State Regulations for Protection Against Radiation."

- 21. The licensee shall conduct a physical inventory every six (6) months to account for all sources and/or devices received and possessed under this license. Records of inventories shall be maintained for inspection by the Department.
- 22. No provision of this license relieves the licensee from compliance with other Federal, State and local laws, ordinances, and regulations applicable to the licensee's activities.
- 23. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated September 11, 1997, with attachments, and letter received November 5, 1997.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 1 of 2 Pages

License Number R-19220-K02

Atlanta Testing & Engineering
478 Allied Drive, Suite 104
Nashville, TN 37211

Attention: Richard D. Heckel, P.E., Branch Manager

Gentlemen:

As requested by Richard D. Heckel, and in accordance with his letter dated August 6, 1998, with attachment, your Tennessee Radioactive Material License number R-19220-K02 is amended as follows:

To change Items 9A. and 9B. and Conditions 15 and 23. These items and these conditions will now read as follows:

9A. Two (2) sources not to exceed 9 millicuries each.

9B. Two (2) sources not to exceed 44 millicuries each.

15. A. Radioactive material authorized by this license shall be used by Richard D. Heckel, Alfred Futrell, Jr., Kevin Latham, or individuals who have completed a training course provided by the device manufacturer, and have been instructed in the licensee's operating and emergency procedures. Records of training for each user shall be maintained by the licensee for inspection by the Department.

B. The Radiation Safety Officer for this license is Kevin Latham.

23. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated September 11, 1997, with attachments, letter received November 5, 1997, and letter dated August 6, 1998, with attachment.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 1

Page 2 of 2 Pages

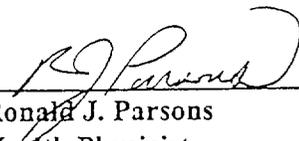
License Number R-19220-K02

All other parts of this license remain unchanged.

Date August 20, 1998

For the Commissioner
Tennessee Department of
Environment and Conservation

By



Ronald J. Parsons
Health Physicist
Division of Radiological Health

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 2

Page 1 of 2 Pages

License Number R-19220-K02

QORE Property Sciences
820 Fesslers Parkway, Suite 240
Nashville, TN 37210

Attention: C. Kevin Latham, Radiation Safety Officer,

Gentlemen:

As requested by Kevin Latham, and in accordance with his letter dated March 5, 1999, with attachments, your Tennessee Radioactive Material License number R-19220-K02 is amended as follows:

To change Items 1. and 2. and Conditions 15.A. and 23. These items and these conditions will now read as follows:

1. QORE Property Sciences
 2. 820 Fesslers Parkway, Suite 240
Nashville, TN 37210
15. A. Radioactive material authorized by this license shall be used by Richard D. Heckel, Alfred Futrell, Jr., Kevin Latham, James Hawkins, Aso Hawrami, Kamiran Doski or individuals who have completed a training course provided by the device manufacturer, and have been instructed in the licensee's operating and emergency procedures. Records of training for each user shall be maintained by the licensee for inspection by the Department.
- B. The Radiation Safety Officer for this license is Kevin Latham.
23. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated September 11, 1997, with attachments, letter received November 5, 1997, letter dated August 6, 1998, with attachment, and March 5, 1999, with attachments.

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 2

Page 2 of 2 Pages

License Number R-19220-K02

All other parts of this license remain unchanged.

Date March 18, 1999

For the Commissioner
Tennessee Department of
Environment and Conservation

By Sasi Krishnasarma

Sasi Krishnasarma
Health Physicist
Division of Radiological Health



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

3rd Floor, L & C Annex,
401 Church Street
Nashville, TN 37243-1532

November 5, 1997

Atlanta Testing & Engineering
478 Allied Drive, Suite 104
Nashville, TN 37211

Attention: Richard D. Heckel, Radiation Safety Officer

Gentlemen:

Attached to this letter is your Tennessee Radioactive Material License numbered R-19220-K02 issued to expire on November 30, 2002.

A copy of 'State Regulations for Protection Against Radiation' referred to in Condition 12 of the license conditions and several copies of Form RHS 8-3 for posting as noted on that form are being sent to you by a separate mailing. Your attention is directed to State Regulations and to specific license conditions 11 through 23 which are to be followed in the use this license.

If we can be further assistance to you, please contact us.

Sincerely,

Ronald J. Parsons
Health Physicist
Division of Radiological Health

Attachments:



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Radiological Health
3rd Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1532

*David
Please review
& return to
file
DDB
CEN-100-1-10*

April 3, 1998

Radiological Information Notice

Addressees: All portable gauge licensees

Subject: Thefts of portable gauges

On January 15, 1998, the United States Nuclear Regulatory Commission (NRC) issued an information notice (attached) to inform all portable gauge licensees of recent incidents of thefts of portable gauges and to remind them of their responsibilities to prevent loss and damage to portable gauges. The security requirements for storage of portable gauges in vehicles and facilities were followed by the licensees in nearly all of the incidents (33 total) of theft reviewed by NRC. Licensees may want to consider taking further precautions such as concealing the portable gauge from view, increasing surveillance in high crime areas, and including a discussion of this information notice in periodic or special portable gauge user training to heighten awareness to this growing problem. If you have further questions concerning this correspondence, please contact the individual named below:

Charles Amott
Licensing Manager of Radioactive Materials
(615) 532-0364

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON, D.C. 20555

January 15, 1998

NRC INFORMATION NOTICE 98-01: THEFTS OF PORTABLE GAUGES

Addressees

All portable gauge licensees

Purpose

The Nuclear Regulatory Commission (NRC) is issuing this information notice (IN) to share some recent incidents of thefts of portable gauges with addressees and to remind licensees of their responsibilities to prevent loss and damage to portable gauges. It is expected that recipients will review this information for applicability to their licensed activities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not NRC requirements; therefore no specific action nor written response is required.

Description of Circumstances

In the year and a half from February 1996 through August 1997, a total of 33 thefts of portable gauges were reported by NRC and Agreement State licensees. In almost all of these cases, the licensee complied with regulatory requirements by securing stored, licensed material from unauthorized removal or access.

Twenty-one of the thefts involved devices stored in vehicles (e.g., parked in shopping areas during the day, at gauge user residences overnight) and 12 thefts were from storage facilities (e.g., trailers at job sites, storage sheds). In three of the thefts, vehicles with the devices in them were stolen (one with the ignition key left in the vehicle). Out of the 21 thefts from vehicles, only one licensee appears to have not followed expected security requirements. Out of the 12 thefts from storage facilities, only one licensee appears to have not followed expected security requirements. Some representative examples of such thefts of portable gauges follow.

Case 1: A portable gauge was stolen from a vehicle parked at a private residence. The gauge was last accounted for during the evening, when it was located within a locked pickup truck. The gauge's source rod was locked in a shielded position and the entire gauge was in a locked transportation case chained to the truck bed. The gauge was identified as missing early the next morning. The truck had been broken open and the chain locking the gauge's transportation case to the truck was cut to access the portable gauge. The licensee reported the theft to the local media, the State, and NRC.

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Case 2: A portable gauge was stolen from the back of a pickup truck at a stop while enroute back to the office. The gauge user was returning to the office after completing work at a job site. The source rod was locked in its shielded position and the gauge was locked in its transport case. The transport case was chained and locked to the bed of the pickup truck. When the gauge user returned to the truck, the cap of the truck was unlocked and the gauge, transport case, chains, and locks were missing. The licensee notified NRC and local police, who informed the media. The licensee also contacted the gauge manufacturer and requested that it place this gauge on the manufacturer's "stolen gauge list."

Case 3: Two portable gauges were stolen from a temporary job site over a holiday weekend. The gauges were stored in a locked, metal storage unit. The locks and chains securing the gauges were both cut. Also stolen were other tools and a pickup truck. The local police, NRC and the gauge manufacturers were notified. The licensee issued a press release and offered a reward for the return of the gauges. Five days later police recovered the gauges from the garage of the thief who was arrested later that afternoon.

Case 4: A portable gauge was stolen from a locked storage shed at the licensee's corporate office. The gauge was in its shipping container and had been stored in a locked plywood cabinet within the locked storage shed. The licensee plans to move the storage location of its gauges to the basement of its building.

Discussion

Portable gauges are used extensively by NRC and Agreement State licensees. Thefts involving gauges appear to be occurring more frequently, especially when gauges are left unattended. The requirements for control and security of licensed material are given in 10 CFR 20.1801 and 20.1802. Control and security requirements may also be found on the NRC license and within Department of Transportation (DOT) regulations.

NRC licensees transporting portable gauges are subject to the regulations in 10 CFR Part 71. Section 71.5(a) incorporates certain regulations (49 CFR 170-189) of the Department of Transportation (DOT), to which these licensees are also subject. Licensees who transport gauges to and from temporary job sites in private vehicles are shippers acting as private carriers, and as such, must comply with DOT regulations governing both shippers and carriers. Title 49 CFR 177.842(d) requires that packages containing radioactive material (i.e., the gauge in its case) must be blocked and braced to prevent the movement of the package during transportation. For pickup trucks, this requirement is usually met when the gauge is secured within its case, and the case is secured and locked to the bed of the truck.

Licensees may want to consider taking further precautions such as concealing the gauge from view, increasing surveillance in high crime areas, and including a discussion of this IN in periodic or special gauge user training to heighten awareness to this growing problem.

Related Generic Communications

- IN 93-18, "Portable Moisture-Density Gauge User Responsibilities during Field Operations," March 10, 1993.
- IN 88-02, "Lost or Stolen Gauges," February 2, 1988.
- IN 87-55, "Portable Moisture/Density: Recent Incidents of Portable Gauges Being Stolen or Lost," October 29, 1987.
- IN 86-67, "Portable Moisture/Density Gauges: Recent Incidents and Common Violations of Requirements for Use, Transportation, and Storage," August 15, 1987.
- IN 84-26, "Recent Serious Violations of NRC Requirements by Moisture Density Gauge Licensees," April 16, 1984.

This information notice requires no specific action nor written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate regional office.

Donald A. Cool, Director
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material Safety
and Safeguards

Technical Contact: Anthony S. Kirkwood, NMSS
(301) 415-6140
E-mail: ask@nrc.gov



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION

3rd Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1532

October 13, 1997

Atlanta Testing & Engineering
478 Allied Drive, Suite 104
Nashville, TN 37211

Attention: Richard Heckel, Office Manager

Gentlemen:

We are in receipt of your application dated September 11, 1997, with attachments, for a Tennessee Radioactive Material License. Upon review of this information we have the following comments:

1. Confirm that your gauge storage area will be accessible only to the gauge users and the Radiation Safety Officer.
2. Confirm that the gauge will be locked and chained to an object in the storage area to prevent tampering and/or removal of the gauge or the case from the area.
3. Confirm that access to the gauge at temporary jobsites will be restricted to gauge users only.
4. Confirm that the manufacturer will analyze the leak test samples or provide the name, address, and license number of the service you will use.
5. Confirm that the gauge users will perform leak tests on sealed sources, or provide the name, address, and license number of the service you will use.
6. Confirm that the manufacturer's procedures will be followed in cleaning or performing simple maintenance on the gauge.

Upon receipt of this material review of this request will continue.

Sincerely,

Ronald J. Parsons
Health Physicist
(615) 532-0415
Division of Radiological Health

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF RADIOLOGICAL HEALTH

RADIOACTIVE MATERIAL LICENSE

Amendment 3

Page 1 of 1 Pages

License Number R-19220-K02

QORE Property Sciences
820 Fesslers Parkway, Suite 240
Nashville, TN 37210

Attention: C. Kevin Latham, Radiation Safety Officer,

Gentlemen:

As requested by Kevin Latham, and in accordance with his letters dated May 12, 2000, with attachment, and September 20, 2000, with attachments, your Tennessee Radioactive Material License number R-19220-K02 is amended as follows:

To change Items 9A. and 9B. and Condition 23. These items and this condition will now read as follows:

9A. No single source to exceed 9 millicuries.

9B. No single source to exceed 44 millicuries.

23. Except as specifically provided otherwise by this license, the licensee shall possess and use radioactive material described in Items 6, 8, and 9 of this license in accordance with statements, representations, and procedures contained in application dated September 11, 1997, with attachments, letter received November 5, 1997, letter dated August 6, 1998, with attachment, March 5, 1999, with attachments, May 12, 2000, with attachment, and September 20, 2000, with attachments.

All other parts of this license remain unchanged.

Date September 25, 2000

For the Commissioner
Tennessee Department of
Environment and Conservation

By


Ronald J. Parsons
Health Physicist

Division of Radiological Health