



90 Fieldstone Court  
Cheshire, CT 06410  
203-235-3351 Ext. 2958  
203-439-2998 Fax  
LDTonini@laneconst.com

NMSB 3

January 7, 2008

Licensing Assistant Section  
Nuclear Materials Safety Branch  
U.S. Nuclear Regulatory Commission, Region I  
475 Allendale Road  
King of Prussia, Pa 19406-1415

03015231

Re: License Number 06-06284-02 – Amendment to Radiation Safety Program

Attached herewith for your approval, please find proposed amendment(s) to The Lane Construction Corporation's current NRC License (amendment #17) and Radiation Safety Program Operating and Emergency Instructions for Nuclear Density Gauges.

Proposed license amendment to read as follows:

**Item I – Licensee (address change)**

The Lane Construction Corporation  
90 Fieldstone Court  
Cheshire, Connecticut 06410

Proposed Radiation Safety Program amendment(s) to read as follows:

**Item I – Corporate Information (address change)**

The Lane Construction Corporation  
90 Fieldstone Court  
Cheshire, Ct 06410

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NMSS/RGN1 MATERIALS-002

**Item II – Nuclear Density Gauges (change to gauge manufacturers)**

We utilize Troxler Electronic Laboratories, Inc. Series 3400 portable moisture/density gauges, Series 4640 asphalt density gauges and Series 3200 asphalt content gauges and a Humboldt 5001B asphalt density gauge. Radioactive materials involved are Cesium 137, and Americium 241.

**Item III – Storage (address change to Permanent Storage Location(s))**

90 Fieldstone Court, Cheshire, Ct 06410 (Corporate Headquarters)

**Item V, 2 – Utilization Procedures (change to training)**

Gauges will only be used by or under the supervision and in the physical presence of, individuals who have satisfactorily completed the Troxler Electronics Laboratories, Inc. (or similar training) and who hold valid certificates of training.

**Item VII - #4 Maintenance and Leak Testing (change to leak test period)**

Leak tests will be performed every twelve months, unless the gauge has not been used in the preceding twelve months, using the Troxler Model 3880 Leak Test Kit. The gauge may not be used if it has been in storage in excess of twelve months until such time as it has been leak-tested and results have been received.

**Item #XIII – Disposal (change to disposal source)**

Disposal will be handled solely by Troxler Electronics Laboratories, Inc. or the Humboldt Mfg. Co.

Proposed Troxler Nuclear Gauge Emergency Response Information to read as follows:

**Item #7 – First Aid**

- ❖ Report all incidents to L.D. Tonini at (203) 235-3351, Ext 2958. (Cell (413) 329-1700)

For your convenience, attached please find complete copy, as amended, of our Radiation Safety Program Operating and Emergency Instructions for Nuclear Density Gauges.

Very truly yours,

The Lane Construction Corporation

A handwritten signature in black ink, reading "Lawrence D. Tonini". The signature is written in a cursive style with a large initial "L" and "T".

Lawrence D. Tonini  
Assistant Safety Manager / RSO

cc: file

**RADIATION SAFETY PROGRAM**  
**OPERATING AND EMERGENCY INSTRUCTIONS**  
**FOR NUCLEAR DENSITY GAUGES**

**I. CORPORATE INFORMATION:**

The Lane Construction Corporation  
90 Fieldstone Court  
Cheshire, CT 06410

Radiation Safety Officer: Lawrence D. Tonini

**II. NUCLEAR DENSITY GAUGES:**

We utilize Troxler Electronic Laboratories, Inc., Series 3400 portable moisture/density gauges, Series 4640 asphalt density gauges, and Series 3200 asphalt content gauges and a Humboldt 5001B portable moisture density gauge. Radioactive materials involved are Cesium 137, and Americium 241.

**III. STORAGE:**

Permanent storage locations have been designated as:

90 Fieldstone Court, Cheshire, Connecticut 06410	(Corp. Headquarters)
3 Priestley Rd., Bridgeville, Pa 15017	(dba / The Lane Const. Corp.)
5601 Courtney Ave., Alexandria, Va 22304	(dba / Virginia Paving Co., Div.)
1003 Old Ox Rd., Sterling, Va 20167	(dba / Virginia Paving Co., Div.)
1012 Garrisonville Rd., Stafford, Va 22555	(dba / Virginia Paving Co., Div.)

and at temporary jobsites anywhere in the United States. Additionally, in those states having their own jurisdictional authority over the use of this material, storage locations are as identified in license applications for those states.

Troxler gauges will be kept in a locked box or cabinet, within a locked building or otherwise secure container such as a storage trailer. There must be a minimum of two locks in combination as security. "Radioactive" and "employee notice" posters must be posted.



#### IV. TRANSPORTATION:

The gauge will be transported in the Troxler transportation case at all times. The equipment must be secured in a locked box permanently affixed to the vehicle in the case of a pickup truck or other truck types, or within the locked trunk of a passenger car, secured against movement. A chain and lock system is also permitted for transportation in pickup trucks for short trips. At all times during transport, the operator must have a properly completed Bill of Lading for each gauge. Additionally, a copy of the DOT Emergency Response Information must be in the vehicle.

#### V. UTILIZATION PROCEDURES:

1. When the gauge is in the field, the authorized user must maintain control of the gauge at all times. The gauge must never be left unattended.
2. Gauges will only be used by or under the supervision and in the physical presence of, individuals who have satisfactorily completed the Troxler Electronics Laboratories, Inc., (or similar training) and who hold valid certificates of training.
3. All users must be thoroughly familiar with these operating and emergency instructions
4. When not making measurements, the gauge should be placed in the transportation case and returned to its permanent storage area as soon as possible. The gauge is to be used for its intended purpose only. By doing so, any radiation exposure will be as low as reasonably achievable (ALARA). The Lane Construction Corporation is committed to assuring ALARA exposures and will implement all recommendations made by the gauge manufacturer to achieve this purpose.
5. When using the gauge, unauthorized persons must be kept at least 15 feet from the gauge.

#### VI. RADIATION EXPOSURE MONITORING:

1. When using the gauge, the authorized user must wear a radiation film badge. This badge (TLD Dosimeter) will measure X-ray, Gamma and Beta radiation exposure to the user. Film badges will be obtained from and evaluated after exposure by Landauer, Inc., Glenwood, Illinois. Any exposure in excess of 5,000 mREM per year for the whole body, 50,000 mREM per year for the extremities and skin, or 15,000 mREM per year for



the eyes, will be **cause to remove** the exposed individual from **gauge** use, to be evaluated by medical **personnel**, and to be reported to the **governing** agency. Exposure to a **declared** pregnant woman must not **exceed 500 mREM** for the **nine-month period** of pregnancy. Occupational exposure to workers under the age of **18** is **restricted to 1/10** of the adult annual dose. These limits apply **only to occupational** exposure. Badges will be exchanged and **evaluated quarterly** during use. When not using the **equipment**, the badge must be **stored** in a radiation-free area.

2. Badges must also be worn during maintenance of the **gauge** and during leak testing.

## **VII. MAINTENANCE AND LEAK TESTING:**

1. **Maintenance** procedures will follow the **manufacturer's** recommendations. No maintenance will be performed which involves **removal** of the source from the gauge.
2. Troxler Electronics Laboratories, Inc. will perform all service work beyond normal routine maintenance provided for in the manufacturer's instructions.
3. Film badges must be worn during **cleaning, leak** testing, and other maintenance of the **gauge**.
4. **Leak** tests will be performed every **twelve** months, unless the **gauge** has not been **used** in the preceding **twelve** months, using the Troxler Model **3880** Leak Test Kit. The gauge may not be used if it has **been** in storage in excess of **twelve** months until such time as it has been leak-tested and results have been received.

## **VIII. UTILIZATION LOG:**

Utilization logs will be maintained at each location in possession of a gauge. The log must be capable of identifying the location of each gauge at all times and in whose possession it is. Logs must show:

1. Model and Serial Number
2. Date and Time Removed and Returned
3. User
4. Destination
5. Signature of User



## **IX. AUDITS**

The corporate RSO, or his designee, who has oversight responsibilities for both state and federal radiation programs, will conduct a management audit every 12 months.

## **X. EMERGENCY PROCEDURES:**

1. In the event of physical damage to the gauge, the following steps must be taken:
  - a. Locate the **source**.
  - b. An area of 15 feet in radius from the gauge must be cordoned off and entry of unauthorized persons prevented.
  - c. If a vehicle is involved, it must not be moved until the extent of **contamination** has been **determined**.
  - d. A visual inspection of the **gauge** must be made to determine whether any **damage** to the **source** housing or shield has been sustained.
  - e. As soon as possible, after the situation has been established, notify Lawrence D. Tonini at (203) 235-3351 (cell (413) 329-1700). Instructions will be given regarding procedures and further notification. If the situation involves an emergency during transportation, emergency assistance and information will be provided by Troxler at (919) 549-9539.
2. In the event that the **gauge** is **lost** or stolen, L.D. **Tonini** must be **notified immediately**.

## **XI. SHIPPING:**

Shipping of gauges must follow all applicable regulations. Federal Express or Yellow Freight Lines will be used. Due to the infrequency of gauge shipment by outside personnel, the person performing the shipment should contact L.D. Tonini for information regarding proper transportation methods, or, in the event that the gauge is being shipped back to Troxler, personnel at Troxler Electronics Laboratories should be contacted concerning proper documentation.

## **XII. TRANSFERS:**

inventory cards must reflect all moves and will be verified every six months. Prior to transfer, L.D. Tonini must be notified. If being transferred



to an Agreement State, the appropriate agencies will be notified in order to obtain a materials license, or reciprocity, depending on the need.

### **XIII. DISPOSAL:**

Disposal will be handled solely by Troxler Electronics Laboratories, Inc. or the Humboldt Mfg. Corp.

### **XIV. RESPONSIBILITY:**

Each user is responsible for the proper use of the gauges and must follow the above procedures at all times.

The radiation safety officer, L.D. Tonini, is responsible for assuring overall compliance with these procedures and for maintaining current knowledge of all applicable rules and regulations.



## TROXLER NUCLEAR EMERGENCY RESPONSE INFORMATION

### REGULATIONS FOR TRANSPORTATION

(Reference: DOT P5800.5 ERG93, and 49CFR)

#### 1. PROPER SHIPPING NAME:

- 4 RADIOACTIVE MATERIAL, SPECIAL FORM, NON-FISSILE/FISSILE EXCEPTED, 7 UN3332

### POTENTIAL HAZARDS

#### 2. HEALTH HAZARDS

- 9 Radiation **presents** minimal risk to lives of persons during transportation accidents.
- 9 Undamaged **packages** are safe; damaged packages or materials released from packages can **cause** external radiation hazards. Contamination is not suspected.
- 9 Packages (cartons, boxes, drums, articles, etc.) identified as "Type A" by marking on packages or by shipping papers contain non-life endangering amounts. Radioactive sources may be released if packaged are damaged in moderately-severe accidents.
- ❖ Packages (large and small, usually metal) identified by "Type B" by marking on packages or by shipping papers contain potentially life endangering amounts. Because of design, evaluation, and testing of packages, life-endangering releases are not expected in accidents except those of utmost severity.
- 9 Commonly available instruments can detect most of these materials.
- 4 Water from cargo fire control is not expected to cause pollution.

#### 3. FIRE OR EXPLOSION

- ❖ Packaging can be consumed without content loss from sealed source capsule.
- ❖ Radioactive source capsules and Type B **packages** are designed to withstand temperatures of 1475 °F (800 °C).

### EMERGENCY ACTION

#### 4. IMMEDIATE PRECAUTIONS

- ❖ **Priority** response actions may be performed before taking **radiation** measurements.
- ❖ **Priorities** are **life** saving, control of fire and other hazards, and **first** aid.
- 9 **Isolate** hazard area and **deny** entry. Notify Radiation authority of accident conditions.
- 4 Delay final cleanup until instruction or advice of Radiation Authority.
- 9 Positive pressure **self-contained** breathing apparatus (SCBA) and structural firefighter's protection clothing will provide adequate protection against internal radiation exposure, but not external radiation exposure.
- 9 **Call Troxler Electronic Laboratories, Inc. at (919) 549-9539 for Emergency Assistance.**

#### 5. FIRE

- ❖ Do not move damaged packages; move undamaged packages out of fire zone.
- 4 **Small Fires:** Dry chemical, CO<sub>2</sub> water spray or regular foam.
- 9 **Large Fires:** Water spray, fog (flooding amounts).

#### 6. SPILL OR LEAK

- ❖ **Do not touch damaged packages or spilled material.**
- 9 **Slightly damaged** or damp outer surfaces seldom indicate **failure** of inner container.
- 9 **If** source is identified as being out of package, stay away and await advice from Radiation Authority.

#### 9 7. FIRST AID

- ❖ Use first aid treatment according to the nature of the injury.
- ❖ Persons exposed to special form sources are not likely to be contaminated with radioactive material.
- ❖ **Report all incidents to L.D. Tonini at (203) 235-3351, Ext. 2958 (Cell (413) 329-1700)**



This is to acknowledge the receipt of your letter/application dated

1/7/2008, and to inform you that the initial processing which includes an administrative review has been performed.

☒ AMEND. 06-06284-02  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 141576.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)  
(6-96)

Sincerely,  
Licensing Assistance Team Leader