"Caution – Radioactive Materials" Signs
"Intentionally Blank"
“Radioactive Yellow II” Label

Note:
This label is for a Troxler Model 3440 Series gauge; the activities and Transport Index will differ for other gauge models.
Gauge Transport/Storage Container ID Labels

USA DOT 7A TYPE A RADIOACTIVE MATERIAL
TYPE A PACKAGE SPECIAL FORM, NON FISSILE OR FISSILE EXCEPTED, UN 3332 RQ

(Troxler ID Label)

USA DOT 7A TYPE A RADIOACTIVE MATERIAL
TYPE A PACKAGE, SPECIAL FORM 7, UN3332, RQ

(ADS ID Label)
Gauge Warning/ID Label
Emergency Phone Numbers Dashboard Label

CAUTION!

RADIOACTIVE MATERIAL

EMERGENCY PHONE NOS.
Project Engineer or ......................... Local __________
Person in Responsible Charge .... Suncom __________
HRS, Ofc. or Radiation Control ...... Local (407) 297-2095
Emergency Response Section .......... Suncom 326-2095
District Radiation Safety Officer ...... Local __________ Suncom __________
Law Enforcement Agency ....................... __________
"Empty" Label

EMPTY
"Intentionally Blank"
DOH Notice To Employees

FLORIDA DEPARTMENT OF HEALTH

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION:
NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS; INSPECTIONS

POSTING REQUIREMENT
THIS NOTICE MUST BE POSTED IN PLACES THAT PERMIT EMPLOYEES IN A RESTRICTED AREA
TO SEE A COPY ON THE WAY TO OR FROM THEIR PLACE OF EMPLOYMENT.

The Department of Health has established standards for protection against radiation hazards
in Chapter 64E-5, Florida Administrative Code.

YOUR EMPLOYER IS REQUIRED TO:
- Post or provide you a copy of the Department of Health rules and operating procedures that apply
to your work and explain them to you.
- Apply the rules to work involving radiation sources.
- Post or provide any Notice of Violation involving radiological working conditions,
proposed civil penalties, and orders.

YOU ARE REQUIRED TO:
- Become familiar with the rules and the operating
procedures that apply to your work.
- Observe the requirements to protect yourself and
your co-workers.

WHAT IS IN THESE RULES:
- Limits on exposure to radiation and radioactive material in restricted and unrestricted areas.
- Actions to take after accidental exposure.
- Personnel monitoring, surveys, and equipment.
- Caution signs, labels, and safety interlocks.
- Exposure records and reports.
- Options for workers about Department of Health inspections.
- Related matters.

REPORTS ON RADIATION EXPOSURE
Your employer must give you a written report if you receive an exposure above the limits in the rules or
in the license. The maximum limits for exposure to employees are in Part III of the rules. However,
your employer should keep your radiation exposure as low as reasonably achievable.

If you work where personnel monitoring is required:
- Your employer must give you a written annual report of your radiation exposures.
- Your employer must give you a written report of your radiation exposures when you terminate
employment.

INSPECTIONS
Representatives of the Department of Health inspect all licensed and registered activities. Any worker or
worker representative who believes that there is a violation of Chapter 404, Florida Statutes; Chapter
64E-5, Florida Administrative Code; or the terms of the employer’s license or registration can request an
inspection by contacting the Bureau of Radiation Control, Bin C21, 4052 Bald Cypress Way,
Tallahassee, FL 32309-1741 (850) 245-4266. The request must state specific reasons for the
inspection. During inspections, Department of Health inspectors can confer privately with workers
and any worker can bring to the attention of the inspectors any past or present condition that they
believe contributed to or caused any violation.

Copies of Chapter 64E-5, F.A.C., the license or
registration, operating procedures, any notice of
violation about working conditions, penalty
orders issued, and responses can be examined at:
Emergency Notification Poster

In the Event of an Accident, Damage, Loss, or Theft of a Density Gauge
IMMEDIATELY NOTIFY:

Dist. Radiation Safety Officer: 
Office: 
Cell: 

Asst. Dist. Rad. Safety Officer: 
Office: 
Cell: 

State Radiation Safety Officer: Ben Watson 
Office: (352) 955-2935 
Cell: (352) 318-8539 

Radiation Safety Consultant: Walt Cofer 
Office: (850) 668-8559 
Cell: (850) 519-5351 

FOR STATE RADIATION EMERGENCY NOTIFICATION OR ASSISTANCE, CALL: 
(407) 297-2095  
(Monitored 24/7) 

If damage to a gauge is suspected:
- Clear the area; establish a 10-15 ft. barricade around the gauge; restrict access to authorized personnel only 
- Except for those requiring medical attention, do not allow personnel (or vehicles) to leave the area until cleared by the FDOH Bureau of Radiation Control
Leak Test Kit

Date: 5/6/02
Model/Serial No.: 3440/ 22573
District: Seven
Location: Tampa Construction
Symbol Meanings

- Isotopes of the element hydrogen.

<table>
<thead>
<tr>
<th>Substance Symbol</th>
<th>Protons (Z)</th>
<th>Atomic Mass Number (A)</th>
<th>Neutrons (A-Z)</th>
<th>Electrons (Z)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen ( _1^1H )</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Deuterium ( _1^2H ) or ( _1^3D )</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Tritium ( _1^3H ) or ( _1^7T )</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Oxygen ( _8^16O )</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Uranium ( _92^238U )</td>
<td>92</td>
<td>238</td>
<td>146</td>
<td>92</td>
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</table>

- Symbol meanings.
**Periodic Table of the Elements**

<table>
<thead>
<tr>
<th>1st Period</th>
<th>2nd Period</th>
<th>3rd Period</th>
<th>4th Period</th>
<th>5th Period</th>
<th>6th Period</th>
<th>7th Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>2H</td>
<td>3Li</td>
<td>4Be</td>
<td>5B</td>
<td>6C</td>
<td>7N</td>
<td>8O</td>
</tr>
<tr>
<td>1He</td>
<td>9F</td>
<td>10Ne</td>
<td></td>
<td>11Na</td>
<td>12Mg</td>
<td>13Al</td>
</tr>
<tr>
<td>11Li</td>
<td>12Be</td>
<td>13B</td>
<td>14C</td>
<td>15N</td>
<td>16O</td>
<td>17F</td>
</tr>
<tr>
<td>12Be</td>
<td>13B</td>
<td>14C</td>
<td>15N</td>
<td>16O</td>
<td>17F</td>
<td>18Ne</td>
</tr>
<tr>
<td>13B</td>
<td>14C</td>
<td>15N</td>
<td>16O</td>
<td>17F</td>
<td>18Ne</td>
<td></td>
</tr>
<tr>
<td>14C</td>
<td>15N</td>
<td>16O</td>
<td>17F</td>
<td>18Ne</td>
<td></td>
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</tr>
<tr>
<td>15N</td>
<td>16O</td>
<td>17F</td>
<td>18Ne</td>
<td></td>
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</tr>
<tr>
<td>16O</td>
<td>17F</td>
<td>18Ne</td>
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<td></td>
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<tr>
<td>17F</td>
<td>18Ne</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>18Ne</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* Lanthanide Series
  - 58Ce
  - 59Pr
  - 60Nd
  - 61Pm
  - 62Sm
  - 63Eu
  - 64Gd
  - 65 Tb
  - 66Dy
  - 67Ho
  - 68Er
  - 69Tm
  - 70Yb
  - 71Lu

+ Actinide Series
  - 90Th
  - 91Pa
  - 92U
  - 93Np
  - 94Pu
  - 95Am
  - 96Cm
  - 97Bk
  - 98Cf
  - 99Es
  - 100Fm
  - 101Md
  - 102No
  - 103Lr
Cesium-137 Decay Chart

IN 7 HALF LIFE PERIODS, THE RADIATION LEVEL IS LESS THAN 1% OF ITS ORIGINAL INTENSITY.
Gauge Certificate

Gauge Certificate

TROXLER ELECTRONIC LABORATORIES, INC.

Gauge Certificate

Original

TROXLER GAUGE MODEL: 3440
GAUGE SERIAL NUMBER: 30617

TRANSFERRED ON: 24 SEPT 1999
SALES ORDER NUMBER: 9113712

RETURN CODE: 3440B28100 disturbances
LICENSE: 189-1
NAME: FLORIDA DOT
STATE MATERIALS OFFICE
2006 N.E. WALDO RD.
GAINESVILLE, FL 32604

32-102-1
TROXLER ELECT. LABORATORIES, INC.
P.O. BOX 10057
RESEARCH TRIANGLE PARK, NC 27709

SEALED SOURCE

56-137
750- 5157
r,26 6890 6.000 mCi
13 MAY 1993
106112
63853562
624494
22 SEPT 1999

SEALED SOURCE

AM-241 (6E)
47-27721
1.48 0581 40.889 mCi
07 SEPT 1998
108492
687/5-63
685/34
22 SEPT 1998

RETURN THIS DOCUMENT AS A RECORD OF GAUGE RECEIPT. THIS INFORMATION IS PROVIDED TO ASSIST IN COMPLIANCE WITH APPLICABLE RULES AND REGULATIONS.

SPECIAL FORM CERTIFICATE - THIS GAUGE CONTAINS RADIOACTIVE MATERIAL IN THE FORM OF SEALED SOURCES THAT HAVE BEEN CERTIFIED AS MEETING US DOT AND IDEA "SPECIAL FORM" CRITERIA. YOU ARE REQUIRED TO HAVE A COPY OF THE SPECIAL FORM CERTIFICATE LISTED ABOVE FOR EACH SOURCE TO TRANSPORT OR SHIP THIS GAUGE. PLEASE NOTE THAT EACH CERTIFICATE HAS AN EXPIRATION DATE. YOU MAY CONTACT TROXLER ELECTRONIC LABORATORIES, INC. TO OBTAIN A CURRENT CERTIFICATE UPON EXPIRATION.

LEAK TEST - THIS GAUGE WAS LEAK TESTED ON THE DATE SHOWN ABOVE AND THE REMOVABLE ACTIVITY WAS FOUND TO BE LESS THAN 0.1 MICS. YOU ARE REQUIRED TO PERFORM LEAK TESTS AT PERIODIC INTERVALS AS SPECIFIED BY APPLICABLE REGULATORY REQUIREMENTS.

TYPE A PACKAGE TESTING - THE SHIPPING CAGE MEETS US DOT 7A TYPE A PACKAGE CRITERIA. YOU ARE REQUIRED TO POSSES A COPY OF THE US DOT 7A TYPE A PACKAGE TESTING RESULTS IN ORDER TO TRANSPORT OR SHIP THIS GAUGE. A COPY MAY BE OBTAINED FROM TROXLER ELECTRONIC LABORATORIES, INC.

THE PROPER SHIPPIING NAME, CLASSIFICATION, AND MARKING FOR THIS GAUGE IS:

GAGE MATERIAL, SPECIAL FORM, N.O.A., 7, U2974, US DOT 7A TYPE A PACKAGE, RADIOACTIVE YELLOW II, II = 3.6

CERTIFIED BY

A-15
Type A Package Certification

Troxler Electronic Laboratories, Inc. certifies that each model 1250, 1260, 1350, 1360, 2220, 2275, 2400 Series, 3105, 3110, 3200 Series, 3300 Series, 3400 Series, 1241, 1565, and 4640 contain Type A quantities of special form radioactive materials and are packed for shipment in compliance with 79 Type A containers.

These containers meet the requirements of United States Department of Transportation CFR 173.44 and are designed and constructed to meet the standards as specified in CFR 173.443 and 173.465. These containers are marked and labeled in conformance with CFR 173.444. These regulations are in agreement with the regulations for the Safe Transport of Radioactive Materials (Safety Series No. 6) of the International Atomic Energy Agency as revised.

A copy of this certification must remain on file as required by CFR 173.445(a).

Troxler Electronic Laboratories, Inc.

[Signature]

Kenneth Brown, Jr.
Radiation Safety Officer
Declaration of Pregnancy

To: ________________________________

Employee Supervisor

In accordance with section 64E-5.311, Florida Administrative Code (FAC),

I, ________________________________, am declaring that I am pregnant.

I believe that I became pregnant in: ___________________   ____________

Month   Year

I understand that the radiation dose to my embryo/fetus during my entire pregnancy will not be allowed to exceed 500 millirem (5 mSv) unless that dose has already been exceeded between the time of conception and submitting this declaration. I understand that meeting the lower dose limit may require a change in job or job responsibilities during my pregnancy. I have been instructed to always wear my assigned dosimeter at waist level to estimate the embryo/fetus dose. I will make every effort to maintain the fetal dose as low as reasonably achievable (ALARA), and I am aware that the Florida Department of Health (DOH) recommends that an embryo/fetus not receive more than 50 millirem (0.5 mSv) in any one month. I understand that records of fetal dose will be maintained with my dose records.

I have received instructions on exposure monitoring requirements for declared pregnant women conducting activities involving sources of radiation, in accordance with the requirements of the Department’s radiation safety program, the terms and conditions of the Department’s radioactive materials license, and Chapter 64E-5, FAC.

I have also received instructions concerning the potential risks involved for pregnant women exposed to radiation, including a copy of Nuclear Regulatory Commission Regulatory Guide 8.13. “Instruction Concerning Prenatal Radiation Exposure” (Rev. 3, 6/99), which I have been encouraged to review. I understand that a declaration of pregnancy is voluntary, must be in writing, and must include the estimated date of conception.

I have been encouraged to request additional information if needed. I am aware that the Department Radiation Safety Officer (RSO) and District RSO are available to answer any questions I may have regarding declared pregnancies, and that radiation safety specialists from the DOH Bureau of Radiation Control are also available to answer my questions.

______________________________

Signature

______________________________

Printed Name

______________________________

Date
Bill of Lading

FLORIDA DEPARTMENT OF TRANSPORTATION

BILL OF LADING

SHIPPER: Florida Department of Transportation

ADDRESS: State Materials Office

Materials Research Park, 5007 NE 39th Ave.

Gainesville, FL 32609-8901

PHONE NO.: (352) 318-0539 (Ben Watson, RSO - cell)

DESCRIPTION

Radioactive Material, Type A Package, Special Form

Hazard Class 7, UN3332, RQ

PACKAGE CONTENTS

Radioactive Material | Activity (maximum)

Cesium-137 | 0.33 GBq (9 mCi)
Americium-241:Be | 1.48 GBq (44 mCi)

LABEL CATEGORY: Radioactive Yellow II

TRANSPORT INDEX: 0.6

24-HR. EMERGENCY RESPONSE INFORMATION NUMBER:

(407) 297-2095

FL Dept. of Health
Bureau of Radiation Control

Troxler Model 3400 Series Portable Moisture/Density Gauge

Note: This document must be kept on file for 2 years beyond the last shipment.

Gauge Serial No.: ______________
EMERGENCY RESPONSE INFORMATION

DESCRIPTION
Radioactive Material, Type A Package, Special Form, Hazard Class 7, UN3332, RQ

POTENTIAL HAZARDS

IMMEDIATE HAZARDS TO HEALTH
- Radioactive material; type and quantity are non-life-endangering amounts and present minimal risk during transportation accidents.
- Undamaged packages are safe; damaged packages or material released from packages present potential external radiation hazard from unshielded radioactive material.
- Radioactive materials are in special form (sealed sources); contamination is not expected.
- If special form capsule(s) breached (possible if package damage is severe), potential internal radiation hazard from inhalation, ingestion, or breaks in skin.

FIRE OR EXPLOSION
- No risk of fire or explosion; radioactivity does not change flammability or other properties of the materials.
- Packagings can be consumed without content loss from sealed sources

EMERGENCY ACTION

IMMEDIATE PRECAUTIONS
- Priority response actions may be performed before taking radiation measurements.
- Priorities are life saving, control of fire and hazards, and first aid.
- Isolate hazard area to at least a 15 foot radius and deny entry.
- Notify local authorities and FDOH Bureau of Radiation Control (407/297-2095) of accident conditions
- Detain uninjured persons, isolate equipment with suspected contamination, and delay cleanup until instructions received from FDOH Bureau of Radiation Control.

FIRE
- Do not move damaged containers; move undamaged containers out of fire zone.
- Fight fire from maximum distance.
- Small fire: Dry chemical, CO₂, water spray, or standard foam.
- Large fire: Water spray, fog (flooding amounts).

SPILL OR LEAK
- Do not touch damaged containers or exposed contents.
- Damage to outer container may not affect primary inner container.
- Special form capsules are not expected to leak as a result of an accident or fire.
- If source(s) out of package, stay away and await advice from FDOH Bureau of Radiation Control.

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, but if suspected, advise medical personnel that victim(s) may be contaminated with radioactive material.
- If contamination is suspected, remove and isolate potentially contaminated clothing and shoes if not affecting injuries and wrap victim in blanket before transporting.
- Except for the injured, detain persons exposed to radiation until instructed by FDOH Bureau of Radiation Control.
Emergency Procedure Checklist

Perform the below steps if a gauge is involved in an incident.

1. **Determine category of incident**

<table>
<thead>
<tr>
<th>Stationary</th>
<th>Misadventure</th>
<th>Transported</th>
<th>Fire</th>
<th>Loss/Theft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Go to Step 2</td>
<td>Go to Step 2</td>
<td>Go to Step 2</td>
<td>Go to Step 3</td>
<td>Go to Step 5</td>
</tr>
</tbody>
</table>

2. **Dose gauge appear damage or is the source exposed?**
   
   Yes   No
   
   If Yes:   
   A. Wrap the source in plastic, paper or close woven material to prevent spread of radioactive material
   B. Pack the wrapped source in a sack of damp soil
   C. Go to Step 4
   
   If No:   Go to Step 4

3. **Do not attempt to move gauge; go to Step 5**

4. **Is gauge in a safe location?**
   
   Yes   No
   
   If Yes:   Go to Step 5
   
   If No:   Move gauge or vehicle containing gauge to a safe location; note old and new locations

5. If gauge was being transported, is lost or stolen, or if a member of the public is involved, contact local law enforcement; go to Step 6

6. **Record the following information:**

   A. **Gauge Information**

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
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</tr>
</tbody>
</table>

   B. **Location:**

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

   (1/2)
6. Incident information (contd.)

C. Description of incident: __________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

D. Vehicle Info.: Tag No.: ____________ Vehicle No.: ____________________________

7. Notifications

The operator or individual involved in or discovering the incident must immediately notify their
Project Engineer/person-in-charge, their Dist. Radiation Safety Officer, Asst. DRSO, the State
RSO, or DRSO/ADRSO designee.

List of Persons Contacted

Project Engineer: ___________________________ #: ___________

Responsible Person-In-Charge: ___________________________ #: ___________

Dist. RSO: ___________________________ #: ___________

Asst. Dist. RSO: ___________________________ #: ___________

State RSO: ___________________________ #: ___________

Other: (list title) ___________________________ #: ___________

Other: (list title) ___________________________ #: ___________

The operator, Project Engineer, responsible person-in-charge, Dist. RSO, or designee
must immediately notify the DOH Bureau of Radiation Control at (407) 297-2095
(monitored 24/7) and follow the instructions provided by DOH.

DOH Representative: ___________________________ Date/Time: ________________

8. Description of DOH instructions: __________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
Notification of FDOT Nuclear Gauge Storage Area

**Notification**
This form documents required notifications and provides information on the gauges relevant to emergency personnel.

- Date: ______________ Notification Provided To: ____________________________
- Notification Provided By: ____________________________

**Description**
Portable nuclear gauges are used to test density and moisture content of soils and construction materials. Each device contains two low activity radioactive sealed sources (metal capsules containing small amounts of radioactive material). The Americium-241: beryllium source (used for moisture measurements) is located beneath the gauge's electronic panel. The Cesium-137 source (for density measurements) is located at the tip of the source rod, which is shielded by the body of the gauge when not in use.

**Emergency Contacts**
- Dist. Radiation Safety Officer (RSO)...
- Asst. District RSO............................
- FDOT RSO...........................................
- FDOH Bureau of Radiation Control..... (407) 297-2095 (24 hr. no.)