

INSPECTION RECORD

Region III Inspection Report No. 030-33903 /2011-001

License No. 21-26666-01

Docket No. 030-33903

EA-11-072

Licensee (Name and Address):

TTL Associates, Inc.  
44265 Plymouth Oaks Boulevard  
Plymouth, Michigan 48170

Licensee Contact: Jeffrey Elliott-Vice President and RSO Telephone No. 734-455-8600

Priority: 5 Program Code: 3121

Date of Last Inspection: 5/11/2006

Date of This Inspection: 3/24/2011 with in-office review until 3/30/2011 to review DOT training

Type of Inspection:  Initial  Announced  Unannounced  
 Routine  Special

Next Inspection Date: 3/2016  Normal  Reduced

Summary of Findings and Actions:

- No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- Non-cited violations (NCVs)
- Violation(s), Form 591 issued
- Violation(s), regional letter issued
- Followup on previous violations

Inspector

Andrew M. Bramnik  
Andrew M. Bramnik, Health Physicist

Date April 5, 2011

Approved

Tamara E. Bloomer  
Tamara E. Bloomer, Chief, MIB

Date April 11, 2011

**PART I-LICENSE, INSPECTION, INCIDENT/EVENT, AND ENFORCEMENT HISTORY**

**1. AMENDMENTS AND PROGRAM CHANGES:**

<u>Amendment No.</u>	<u>Date</u>	<u>Subject</u>
5	3/30/2006	License renewed in entirety

**2. INSPECTION AND ENFORCEMENT HISTORY:**

One Severity Level IV violation for failure for secure a portable gauge using a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal when the gauges were not under the control and constant surveillance of licensee personnel was identified during a previous inspection on May 11, 2006. One Severity Level IV violation for failure to lock either the source rod or the case for two portable gauges in storage was identified during a previous inspection on October 24, 2001.

**3. INCIDENT/EVENT HISTORY:**

None

## **PART II - INSPECTION DOCUMENTATION**

### **1. ORGANIZATION AND SCOPE OF PROGRAM:**

Management Structure:

Michael Boyle – Company President

Thomas Uhler, P.E. – Vice President

Jeffrey Elliott, P.E. – Vice President and Radiation Safety Officer (RSO)

Portable Gauge Operators

The licensee operated a portable moisture/density gauge program with offices in Plymouth and Detroit, Michigan, and was authorized to possess sealed sources of cesium-137, americium-241, and californium-252. The licensee did not store any radioactive materials or conduct any licensed operations at the Detroit office. The licensee possessed eleven portable moisture/density gauges: one Troxler model no. 3411-B, two Troxler model no. 3440s, three Troxler model no. 3430s, and five Seaman model no. C-200s, which will be discussed in greater detail in Section 4, below.

At the time of the inspection, one Troxler 3440 was at a temporary job site at McGuire Air Force Base in New Jersey, two Troxler 3430s were out for annual calibration, one Troxler 3440 was at a temporary job site in Dundee, Michigan, and the licensee's remaining gauges were secured in their permanent storage facility. The licensee employed approximately 10 gauge operators.

During this inspection, the inspector visited a temporary job site, toured the gauge storage room, interviewed licensee personnel, performed radiation surveys around the devices and the storage room, and reviewed records.

### **2. SCOPE OF INSPECTION:**

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: Sections 03.01 through 03.07

The inspector observed work being performed with a Troxler model no. 3440 gauge at a temporary job site at 918 Strawberry Lane, Dundee, Michigan, and interviewed the gauge operator. The operator maintained control and constant surveillance of the gauge at all times, and secured the gauge using two independent physical controls that formed tangible barriers to secure the gauge from unauthorized removal during transport. The operator provided the inspector with copies of shipping papers and emergency procedures, and was familiar with their content.

At the licensee's office, the inspector observed that all gauges stored in the licensee's permanent storage facility were secured by two independent physical controls that formed tangible barriers to secure the gauge from unauthorized removal. An interview conducted with the RSO revealed an adequate level of understanding of emergency and material handling procedures and techniques. The licensee demonstrated how gauges were tracked using utilization logs when they were last used. The licensee conducted leak tests, physical inventories, and annual audits for all of its gauges at the appropriate

frequencies. The licensee provided in-house training for gauge operators on nuclear safety as well as Department of Transportation requirements.

3. **INDEPENDENT AND CONFIRMATORY MEASUREMENTS:**

Independent measurements taken did not indicate readings in excess of limits in Title 10 of the Code of Federal Regulations (CFR) Part 20 in any unrestricted areas. Personal whole body dosimetry was observed during the inspection, and records did not indicate doses in excess of 10 CFR Part 20 limits.

The licensee possessed a survey meter that performed well in side-by-side confirmatory surveys with an NRC meter.

4. **VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:**

- A. Although the licensee was not authorized to possess discrete sources of radium-226, the licensee possessed five portable gauges that each utilized a nominal 4.5 milliCurie sealed source of radium-226. The Energy Policy Act of 2005 (EPA) expanded the definition of byproduct material to include Naturally occurring and Accelerator produced Radioactive Materials (NARM) and placed the material under the NRC's jurisdiction. In accordance with the EPA, the NRC issued a waiver on August 31, 2005, allowing the continued use and possession of NARM while the NRC developed a regulatory framework for the regulation of the new byproduct material. On October 1, 2007, the NRC published a Federal Register Notice informing licensees of amendments to the NRC's regulation regarding the possession and use of NARM. On May 7, 2009, the NRC published a Notice of Waiver Termination for licensees in the State of Michigan which stated, in part, that the NRC was terminating the waiver for persons possessing accelerator-produced radioactive material or discrete sources of radium-226 on August 7, 2009. The Notice further stated that the final rule allowed an additional six month period from the effective date of the final rule to apply for a license amendment, i.e., February 7, 2010.

Based on the above, the NRC determined that a violation of the NRC requirements occurred. The violation involved the licensee's failure to apply for a license amendment by February 7, 2010, and amend its NRC license to include possession of radium-226. The possession of this type and quantity of radioactive material not authorized on an NRC license is normally characterized as a Severity Level IV violation in accordance with the NRC Enforcement Policy.

As corrective actions, the licensee committed to submit a license amendment request to the NRC to include possession of radium-226 by April 8, 2011, which the licensee submitted on April 1, 2011.

After considering the information developed during the inspection, the NRC has determined to use enforcement discretion, in accordance with Enforcement Guidance Memorandum 09-004, to not issue a violation for failure to submit a license application on or before February 7, 2010, to include NARM activities.

- B. One previously-cited violation was closed for failure to secure a portable gauge using a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal when the gauges were not under the control

and constant surveillance of licensee personnel. The inspector verified that the licensee understood the two-barrier rule, and confirmed that all portable gauges were secured using two independent physical controls that formed tangible barriers while in storage or in transport.

5. **PERSONNEL CONTACTED:**

\*& Jeffrey Elliott, P.E. – Vice President and RSO  
William Gardner – Gauge Operator

Use the following identification symbols:

\* Individual(s) present at March 24, 2011 preliminary on-site exit meeting  
& Individual(s) present at March 30, 2011, telephone exit meeting

-END-