

PART I – LICENSE, INSPECTION, INCIDENT/EVENT AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES SINCE LAST INSPECTION:

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
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The licensee is in the process of renewing their license.

2. INSPECTION AND ENFORCEMENT HISTORY:

The last inspection of this licensee was on 3/17/2011. No violations of NRC requirements were identified.

3. INCIDENT/EVENT HISTORY:

No open items or events since the last routine inspection.

PART II – INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Central Missouri Professional Services Inc. is authorized under NRC Materials License No. 24-32774-01 to use licensed material for measuring physical properties of materials with nuclear gauging devices. Licensed material is authorized to be used anywhere in the United States in areas of NRC jurisdiction. The licensee uses the gauges on a daily basis for construction engineering projects throughout the Missouri area. The licensee uses Humboldt Model 5001EZ and Seaman C-200 portable gauges, containing radium -226, cesium-137 and americium-241.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: All

The inspector toured the licensee's main office to evaluate the licensee's measures for material security, hazard communication, and exposure control. The inspector was unable to observe the conduct of any licensed activities, because it was raining during the inspection and no gauge were being used in the field. The licensee demonstrated gauge transportation practices and use of licensed material while at the main office.

Through interviews with the Radiation Safety Officer (RSO) and several gauge users, the inspector found that the licensee's staff was knowledgeable and conscientious of radiation protection principles and licensee procedures for use, storage, and transportation of portable gauges. The inspector also witnessed demonstrations by the staff leak test collection, and emergency response.

The inspector reviewed a selection of licensee records for inventories, leak tests, use logs, non-routine maintenance, audits, dosimetry and public dose assessment. The inspector also reviewed the licensee's training materials and shipping papers.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Using a Ludlum 2403 survey meter with a model 44-38 energy-compensated GM detector calibrated on April 20, 2016, the inspector conducted independent surveys at the location inspected. The inspector found no readings which would indicate residual contamination or exposures to members of the public in excess of regulatory limits.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

On May 17, 2016, the inspector identified two Severity Level IV violations:

- A. Condition 14.A of NRC Materials License 24-32774-01 states that, sealed sources shall be tested for leakage and/or contamination at interval not to exceed the interval specified in the certificate of registration issued by NRC under 10 CFR 32.210 or by an Agreement State.

The Registry of Radioactive Sealed Sources and Devices Safety Evaluation of Device states that for a Seaman C-200 density moisture gauge the leak test frequency is 6 months.

Contrary to the above, on several occasions including from December 18, 2013 to October 2, 2014, and from July 23, 2013 to January 28, 2014, the licensee failed to performed leak test on several of their Seaman C-200 nuclear gauge exceeding the 6-month interval stipulated in the certificate of registration.

The cause of the violation was licensee oversight. As corrective action, the RSO stated that he would increase the frequency of his periodic audits to ensure that leak tests were being performed in accordance with the requirements.

- B. Title 10 of the *Code of Federal Regulations* (CFR) Section 71.5(a) requires that each licensee who transport licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the U.S. Department of Transportation regulations in 49 CFR Parts 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

Title 49 CFR 172.702 requires that each hazmat employer shall ensure that each hazmat employee is trained and tested, and that no hazmat employee performs any function subject to the requirements of 49 CFR Parts 171-177 unless trained, in accordance with Subpart H of 49 CFR Part 172. The terms Hazmat Employer and Hazmat Employee are defined in 49 CFR 171.8.

Title 49 CFR 172.704(a) specifies the elements of hazmat employee training as: (1) general awareness/familiarization training, (2) function-specific training, (3) safety training; (4) security awareness training; and (5) in-depth security training, if applicable.

Title 49 CFR 172.704(c)(2) requires, in part, that a hazmat employee receive initial training and recurrent training at least once every three years.

Contrary to the above, as of May 17, 2016, the licensee did not provide initial or recurrent training for its hazmat employees that satisfied the requirements in Subpart H to 49 CFR 171.8. Specifically, two of the licensee's hazmat employees had not been provide recurrent hazmat training in the last three years.

This is a Severity Level IV violation (Section 6.3).

The cause of the 10 CFR 71.5(a) violation was that the licensee was not aware of the requirements for recurrent hazmat training. As corrective action, the RSO retrained the two hazmat employees and kept a record of their training.

5. PERSONNEL CONTACTED:

Greg Dorge – Radiation Safety Officer

Attended exit meeting on June 1, 2016.