

INSPECTION RECORD

Region III
License No. 24-26620-01

Inspection Report No. 030-33719/11-01
Docket No. 030-33719

Licensee (Name and Address):
Shively Geotechnical
A Division of Environmental Operations, Inc.
1530 South Second Street, Suite 200
St. Louis, MO 63104

Licensee Contact: Mark Conder – RSO **Telephone No.** 618-398-1414

Priority: 5 **Program Code:** 3121

Date of Last Inspection: 9/2/2010 **Date of This Inspection:** 8/25/2011

Type of Inspection: () Initial () Announced (X) Unannounced
(X) Routine () Special

Next Inspection Date: 8/2016 (X) 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
- (X) Violation(s), regional letter issued
- () Followup on previous violations

Inspector */RA/*
Andrew M. Bramnik, Health Physicist

Date September 8, 2011

Approved */RA/*
Tamara E. Bloomer, Chief
Materials Inspection Branch

Date September 8, 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>
6	11/29/2010	New Radiation Safety Officer (RSO) (M. Conder) listed and cobalt-57 (total possession limit of 500 microcuries) for x-ray fluorescence lead paint detector added to license
5	5/18/2009	Change of Control and/or Ownership of license to Environmental Operations, Inc.
4	10/7/2008	Total possession limits added to license

2. INSPECTION AND ENFORCEMENT HISTORY:

One violation was identified but not cited during a reactive inspection on September 2, 2010, for the licensee's failure to request an amendment to their NRC license to add a cobalt-57 source containing a nominal activity of 12 millicuries after the deadline for the NARM rule. One Severity Level IV violation was identified during the previous routine inspection on September 21, 2006, for the licensee's failure to comply with the security requirements in Title 10 of the Code of Federal Regulations (10 CFR) 30.34(i) when portable gauges were used in Missouri. No violations were identified during the previous inspection on August 20, 2001.

3. INCIDENT/EVENT HISTORY:

None

PART II - INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Management Structure:

John E. Shively, P.E. – Vice President, Geotechnical Services

Mark Conder – Construction Services Manager, RSO

Donn Haines – Managing Director, Industrial Hygiene & Safety

The licensee operated an engineering and geotechnical services company that utilized portable gauges for moisture and density testing, and utilized a cobalt-57 x-ray fluorescence (XRF) device to detect lead in paint. The licensee's portable gauge operation was managed out of a location in Fairview Heights, Illinois, while the licensee's XRF detector was stored and managed out of a location in St. Louis, Missouri. At the time of the inspection, the licensee possessed 16 portable gauges under a State of Illinois license, but maintained an NRC license to transport and operate gauges in Missouri. The licensee authorized eight individuals to transport and operate the gauges, and four individuals to transport and operate the XRF detector. The licensee was not authorized to perform any non-routine maintenance or service activities on their devices.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: Sections 03.01 through 03.07

No work at temporary job sites was available for observation at the time of the inspection. Interviews of the RSO and available gauge users revealed an adequate level of understanding of operating and emergency procedures. Licensee personnel demonstrated how gauges were transported and secured in Missouri while using two independent physical controls that formed tangible barriers to both removing the gauge in its transportation case as well as removing the gauge from its transportation case; therefore, the previously-cited violation for failure to comply with 10 CFR 30.34(i) is closed.

A records review indicated that all required leak tests were performed at appropriate intervals. Licensee personnel described how they wore personal whole body dosimetry badges while transporting and using portable gauges, and a records review indicated that the maximum annual exposure to an individual in the last four years was 74 millirem. The licensee conducted physical inventories at appropriate intervals, and maintained records of employee safety and HazMat training certificates.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Independent measurements taken at the licensee's facility in St. Louis, Missouri did not indicate readings in excess of 10 CFR Part 20 limits in restricted or unrestricted areas. No surveys were performed at the licensee's facility in Illinois, because it was regulated by the State of Illinois. The licensee had access to a radiation survey meter from another company in the event of an incident or emergency involving a gauge.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

Condition 8.C. of NRC License No. 24-26620-01 states the maximum amount of cobalt-57 that the licensee may possess at any one time under this license is “No single source to exceed the maximum activity specified in the certificate of registration issued by NRC or an Agreement State, total possession limit of 500 microcuries.”

Contrary to the above, between August 27, 2010 and August 25, 2011, the licensee failed to restrict the possession of cobalt-57 to the maximum amount specified in Condition 8.C. of their license. Specifically, the licensee possessed an XRF lead paint detector that contained a nominal 12 millicuries of cobalt-57.

The root cause of the violation was a mistake in the licensee’s August 27, 2010 letter to the NRC, requesting to add cobalt-57 to their NRC license for use in an XRF lead paint detector. In the letter, the licensee requested that the NRC add the following detail to its license regarding the maximum amount of cobalt-57 that may be possessed at any one time: “No single source to exceed the maximum activity specified in the certificate of registration issued by NRC or an Agreement State, total possession limit of 500 microcuries.” Contrary to the licensee’s request, the XRF contained a nominal 12 millicuries of cobalt-57.

As corrective actions, the RSO faxed a license amendment request to the NRC Region III office on August 26, 2011. The request asked the NRC to increase the maximum possession limit of cobalt-57 to 15 millicuries. The licensee did not expect to acquire any additional devices containing cobalt-57 in the near future. The licensee’s staff is aware of their responsibility to review amendments to the NRC license and contact the NRC if there are any errors or questions.

5. PERSONNEL CONTACTED:

- John E. Shively, P.E. – Vice President, Geotechnical Services
 - * Mark Conder – Construction Services Manager, RSO
 - * Donn Haines – Managing Director, Industrial Hygiene & Safety
- Plus licensee portable gauge users

* Individual present at August 25, 2011 exit meeting

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