

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 15000001/2011001
Docket No.: 15000001
Alabama License No. AL 1479
Licensee: Advanced Material Services, LLC
Location: 2515 E. Glenn Avenue, Suite 107, Auburn, AL 36830
Inspection Dates: November 10, 2011, to February 1, 2012

Inspector:	<i>/RA M. C. Reichard for/</i> _____ Randolph C. Ragland, Jr. Senior Health Physicist Materials Security and Industrial Branch Division of Nuclear Materials Safety	<i>02/08/12</i> _____ date
Approved By:	<i>/RA R. K. Lorson for/</i> _____ Blake D. Welling, Chief Materials Security and Industrial Branch Division of Nuclear Materials Safety	<i>02/09/12</i> _____ date

EXECUTIVE SUMMARY

Advanced Material Services, LLC
NRC Inspection Report No. 15000001/2011001

Advanced Material Services (AMS) is a geotechnical engineering firm that is licensed by the State of Alabama (AL-1479) to conduct material density testing using a Troxler Model 4640B portable gauge (thin layer surface density gauge) which contains approximately 8 millicuries (mCi) of Cs-137.

The NRC determined that AMS worked in the State of Connecticut without filing for reciprocity with the NRC. As a result, one apparent violation of 10 CFR 150.20(b) was identified for AMS's failure to file reciprocity with the NRC for work performed in the State of Connecticut, during the period from May 12 – June 26, 2008.

REPORT DETAILS

Background

During a review of state registration documents, the NRC Region I office identified that Advanced Materials Services, LLC, (AMS), a State of Alabama (Agreement State) licensee, was registered in 2008 to work in the State of Connecticut, a non-Agreement State, which falls under NRC jurisdiction, and NRC had no record indicating that AMS filed for reciprocity with NRC. On August 1, 2011, an inspector contacted Marcia Prowell, President AMS, by telephone and inquired if AMS had used a gauge in the State of Connecticut and, if so, did they file with the NRC to work under reciprocity. Ms. Prowell explained that during the May–June 2008 time frame, AMS used a Troxler 4640B gauge in Connecticut for construction work at the Lime Rock Park Race Track in Lakeville, CT, and AMS did not file for reciprocity with the NRC. Ms. Prowell stated that she was unaware of a requirement to file for reciprocity with the NRC and stated that AMS had been advised by a representative of the State of Connecticut, Department of Environmental Protection, that in order to work in the State of Connecticut, AMS needed to complete an Ionizing Radiation Registration with the State of Connecticut, and then pay a registration fee. The inspector then explained to Ms. Prowell that although the State of Connecticut has their own radioactive material registration requirements, Connecticut is a Non-Agreement State which falls under the jurisdiction of the NRC, and Agreement State licensees are required to either obtain an NRC license or file for reciprocity in order to work in areas under NRC jurisdiction. In response to this issue, the NRC scheduled an onsite inspection at the AMS office in Auburn, AL.

I. Organization and Scope of the Program

a. Inspection Scope

The inspector reviewed the organization and scope of the licensee's portable gauge program. Information was gathered through direct inspection, reviews of records, and interviews with cognizant individuals.

b. Observations and Findings

Advanced Material Services (AMS) is a geotechnical engineering firm that is licensed by the State of Alabama (AL-1479) to conduct material density testing using a Troxler Model 4640B portable gauge (thin layer surface density gauge) which contains approximately 8 millicuries (mCi) of Cs-137. AMS occasionally performs work at race tracks to evaluate the densities of surface asphalt. Marcia Prowell is the President and Brian D. Prowell, PhD, is the Principal Engineer and Radiation Safety Officer.

c. Conclusions

AMS maintains a portable gauge program licensed by the State of Alabama. No violations of NRC requirements were identified.

II. Material Control

a. Inspection Scope

The inspector reviewed AMS's material control program. Information was gathered by a review of records and interviews with the Principal Engineer.

b. Observations and Findings

Records showed that AMS maintained current source leak test results and all results were negative, including results for tests performed before and after the gauge was in the State of Connecticut (CT). AMS also maintained adequate records of source inventory, radiation exposure records, and annual self-assessments.

During interviews, the Principal Engineer demonstrated a thorough knowledge of the management, oversight, and control of a portable gauge program including methods to comply with gauge security requirements outlined in 10 CFR 30.34(i) for storage and transportation of portable gauges.

c. Conclusions

AMS maintained adequate safety and security controls for their licensed gauge. No violations of NRC requirements were identified.

III. Material Use, Transfer, and Control

a. Inspection Scope

The inspector reviewed AMS's use of a portable gauge in the State of Connecticut (CT). Information was gathered through a review of records and through interviews with the Radiation Safety Officer (RSO).

b. Observations and Findings

The RSO reported that in 2008, AMS secured a contract to perform material density testing at the Lime Rock Park Race Track, located at 497 Lime Rock Road, Lakeville, CT 06039. The RSO explained that AMS was familiar with applying for reciprocity with Agreement states, and that when AMS planned to work in another state, he would perform an internet search to identify who the regulatory authority is in the Agreement State, then he would contact the regulatory authority to determine what requirements AMS needed to meet in order to work in that state. The RSO indicated that he assumed CT was also an Agreement State so he used a similar process and coordinated his planned work with the State of CT.

In 2008, the RSO contacted the State of CT, Department of Environmental Protection, Bureau of Air Management, Radiation Division, and inquired about the requirements to use a portable gauge in the State of CT. He was instructed to complete and submit an

"Ionizing Radiation Registration," which required him to provide details of his Alabama License, radiation safety personnel, type of device and activity that will be used, details of past performance, and to pay a \$200.00 registration fee. When he completed the registration and paid the fee, he assumed that AMS met all regulatory requirements to work in the State of CT. He then shipped a Troxler 4640B portable density gauge containing an 8 mCi Cs-137 source to CT.

The inspector noted that AMS possessed and used the gauge in CT from May 12, 2008, to June 26, 2008. The RSO stated that during the time that the gauge was in CT, there were no incidents, he maintained proper safety and security controls for the gauge, and leak test records confirmed that there was no leakage of the source when the gauge was in the State of CT.

The inspector determined that AMS failed to file for reciprocity because the RSO assumed that the State of CT was an Agreement State, and therefore, he simply registered with the State of CT and did not consider contacting the NRC. Compliance with NRC requirements was restored when the gauge was transported out of CT and sent back to Alabama on June 26, 2008.

The RSO reported that this was the only occurrence of AMS failing to file reciprocity with NRC. He also stated that as a preventative action, AMS has established a new work planning policy. The policy requires the work planner to review the NRC's website to determine if the state they plan to work in is a Non-Agreement State, and if so, to ensure that AMS properly files reciprocity with the NRC as necessary. He emphasized that this corrective action was effective as evidenced by AMS submitting an initial reciprocity request (NRC Form-241) for planned work in Michigan. That initial reciprocity request was approved by the NRC Region I office on September 27, 2011.

c. Conclusions

The inspector concluded that AMS's failure to file for reciprocity with the NRC for work in CT represented an apparent violation of NRC requirements.

10 CFR 150.20(a) provides, in part, that any person who holds a specific license from an Agreement State is granted an NRC general license to conduct the same activity in non-Agreement States, provided that the provisions of 10 CFR 150.20(b) have been met.

10 CFR 150.20(b)(1) requires, in part, that any person engaging in activities in non-Agreement States, shall, at least 3 days before engaging in each such activity, file a submittal containing an NRC Form 241, "Report of Proposed Activities in Non-Agreement States," with the Regional Administrator of the appropriate NRC regional office.

Between May 12, 2008, and June 26, 2008, Advanced Material Services, LLC, a licensee of the State of Alabama, used and stored a Troxler 4640B portable density gauge containing a Cs-137 source, in the State of Connecticut, a non-Agreement State, without filing Form-241 with the NRC as required by 10 CFR 150.20(b).

IV. Exit Meeting

On February 1, 2012, the inspector conducted an inspection exit meeting by telephone with Brian D. Prowell, PhD, PE, Principal Engineer, for Advanced Materials Services, LLC. The inspector described the inspection findings including one apparent violation of 10 CFR 150.20(b). Dr. Prowell acknowledged the inspection findings, emphasized that AMS has taken necessary corrective and preventative actions, and confirmed AMS's commitment to comply with NRC requirements.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Marcia Prowell, President

Brian D. Prowell, PhD, PE, Principal Engineer, Radiation Safety Officer

INSPECTION PROCEDURES USED

IP 87124, Fixed and Portable Gauges

LIST OF DOCUMENTS REVIEWED

- State of CT, Department of Environmental Protection, Bureau of Air Management, Division of Radiation, Ionizing Radiation Registration
- July 6, 2008, letter from Edward I. Wilds, Jr., PhD., Director, Division of Radiation, State of CT, forwarding AMS's Ionizing Radiation Registration
- AMS Leak Test Results
- AMS Source Inventory
- AMS Dosimetry Records for 2010 and 2011
- AMS Self Assessment for 2010 and 2011
- NRC Form 241, Approved by NRC Region I on 9/27/2011 for AMS work in Michigan

LIST OF ACRONYMS USED

AL	Alabama
AMS	Advanced Material Services, LLC
Cs-137	cesium-137
CT	Connecticut
DEP	Department of Environmental Protection
mCi	millicuries
NRC	Nuclear Regulatory Commission
RSO	radiation safety officer