

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.: 03037596/2013001
Docket No.: 03037596
License No.: 32-31294-01
Licensee: ECS Carolinas, LLP
Locations: 7211 Ogden Business Park, Suite 201
Wilmington, NC
Field Site: Marine Corps Base Camp Lejeune
Inspection Dates: November 20, 2013, and continued in-office until March 10, 2014
Date Follow-up Information Received: February 18, 2014
/RA/ **03/10/2014**
Inspector: _____ date
Randolph Ragland
Senior Health Physicist
Division of Nuclear Materials Safety
/RA SLodhi f/ **03/11/2014**
Approved By: _____ date
Blake D. Welling, Chief
Commercial, Industrial, R&D, and
Academic Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

ECS Carolinas, LLP
NRC Inspection Report No. 03037596/2013001

An announced inspection was performed of ECS Carolinas, LLP's (ECS) portable gauge program on November 20, 2013. The inspection was announced to ensure that it included observations at a field site.

Overall, ECS implemented a well maintained, safe, and compliant program. However, during this inspection, two apparent violations of NRC requirements were identified. These apparent violations are associated with a May 24, 2011, event at the Marine Corps Base Camp Lejeune, in which ECS temporarily lost control of a portable gauge. This event was the subject of NRC Event No. 46876 (ML14064A050).

On May 24, 2011, an ECS portable gauge user was working on a construction site at the Marine Corps Base Camp Lejeune. The gauge user did not properly secure the gauge in the truck, and due to a lapse of memory, drove away from the gauge. Upon discovery, ECS initiated a search for the gauge, discovered that the gauge was not in the location where it was left, and reported that the gauge might have been stolen. As it turns out, a site contractor (member of the public) observed the gauge on the side of the road, recognized it as an ECS gauge, secured the gauge in his truck, and returned the gauge to the ECS Radiation Safety Officer. The total time the gauge was lost was approximately three hours. The temporary loss of control of the gauge represents two apparent violations of NRC requirements, including the following:

- Failure to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage, as required by 10 CFR 20.1802; and
- Failure to use a minimum of two independent physical controls to that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee, as required by 10 CFR 30.34(i).

ECS responded appropriately to the event by immediately initiating a search for the gauge which led to the recovery of the gauge, and implementing preventative actions by conducting refresher training for all gauge users.

REPORT DETAILS

1. Organization and Scope of the Program

a. Inspection Scope

The inspector reviewed the organization and scope of the licensee's program. Information was gathered through direct observations, reviews of records, and interviews with licensee staff.

b. Observations and Findings

ECS Carolina, LLP (ECS) operates a portable gauge program in Wilmington, NC, and has a State of North Carolina license (065-02532) and an NRC license. Gauges are typically stored at their office in Wilmington, NC, and possessed under their North Carolina license. The NRC license authorizes a maximum of four gauges in NRC jurisdiction at any one time. Typical locations of use in NRC jurisdiction are the Marine Corps Base Camp Lejeune, the Marine Corps Air Station at Cherry Point, NC, and the Marine Corps New River Air Station. The licensee employs approximately 15 authorized gauge users and they typically use the gauges on a daily basis in NRC jurisdiction. Harry Slater is the Radiation Safety Officer (RSO) for the NRC license.

c. Conclusions

ECS maintained a portable gauge program in accordance with license conditions and no deficiencies were identified.

2. Material Receipt, Use, Transfer, and Control

a. Inspection Scope

The inspector reviewed the licensee's use of portable gauges in NRC jurisdiction. Information was gathered by reviews of records, interviews with cognizant personnel, and direct observations of use of a portable gauge at the Marine Corps Base Camp Lejeune.

b. Observations and Findings

Review of Records

Records showed that the licensee maintained proper records of gauge inventory, gauge leak tests, annual reviews of the radiation safety program content and implementation, training, gauge user periodic audits, operating and emergency procedures, and transportation documents. Records also showed that radiation exposures received by authorized gauge users were low and typically less than 100 mR per year.

Field Observations

The inspector observed a gauge user demonstrate use of a portable gauge at a temporary job site. The gauge user was familiar with the operation and use of the gauge and with emergency operating procedures, he possessed a bill of lading and emergency response paperwork, and was knowledgeable regarding requirements for maintaining constant surveillance when the gauge is not in storage. The gauge user also demonstrated proper methods for securing gauges in the truck to meet the security requirements in 10 CFR 30.34(i).

Independent Radiation Measurements

The inspector obtained independent radiation survey measurements of a Troxler Model 3440 portable gauge using a Ludlum Model 2401-EW Survey Meter, NRC Serial Number 32696G, calibration expiration date 2/25/2014. All general area exposure rates obtained at 1 meter were less than 0.1 mR/h, and all contact dose rates were less than the maximum dose rates listed in the sealed source and device registry.

NRC Event No. 46876

On May 24, 2011, ECS Carolinas, LLP, reported to the NRC Headquarters Operations Officer that they lost a portable gauge and that it may have been stolen. The NRC Event No. is 46876.

On May 24, 2011, an ECS authorized gauge user (AU) was assigned to work at a construction site located at the Marine Corps Base Camp Lejeune. The AU was using a Troxler Model 3440 portable gauge, which contained approximately 8 mCi Cs-137 and 40 mCi Am-241. The high temperature that day was recorded to be approximately 95 °F, and the AU reported that he placed the gauge in the shade under the tailgate of the truck while he ate lunch in the truck. He reported that after finishing his lunch, he had a lapse of memory and assumed he had properly stowed the gauge, and he drove away from the site. Upon realizing that he no longer had the gauge in his possession, he drove back to the work site, and could not locate the gauge. He then notified the ECS RSO who notified ECS management, who dispatched a team of six individuals to locate the gauge. The RSO instructed the gauge user to notify the Military Police, and the RSO notified the NRC (Event No. 46876). The RSO reported that shortly after the AU drove away from the gauge, a site contractor recognized the gauge on the side of the road as belonging to ECS; he recovered the gauge, and locked the gauge up in his truck. Approximately 2.5 – 3 hours after losing the gauge, the RSO was approached by the contractor who informed the RSO that he had the gauge secured in his truck. The RSO examined the gauge and found no damage. The gauge was surveyed and leak tested and no contamination was found. The gauge was transported back to the ECS main office and placed into secure storage.

The RSO stated that the AU who mishandled the gauge was suspended for one week and his gauge use privileges were suspended for one month after his return. As a

preventative action, all gauge users received mandatory refresher training. The RSO reported that when the gauge was recovered, it had a trigger lock on it to prevent an inadvertent source exposure, and that he estimated that the individual who recovered the gauge received minimal exposure (e.g., less than 0.1 mR).

While onsite, the inspector reviewed a copy of the licensee's 30 Day Event Report, which was dated May 25, 2011. The report is required to be sent to the NRC within 30 days of the event in accordance with 10 CFR 30.50(c)(2). The inspector noted that the report was complete and included the information required by 10 CFR 30.50(c)(2). Upon return to the NRC office, the inspector noticed that although the RSO reported that he sent the 30 day report to the NRC, it did not appear in NRC's record keeping system (ADAMS). The inspector speculated that because the report did not include the licensee's docket number or license number in the heading, it may not have been filed with ECS Carolinas, LLP records in NRC's record keeping system (ADAMS). The inspector requested the RSO to submit another copy to NRC and to include the license number, docket number, and Event Report Number in the heading of the letter. A copy of that report was received by NRC on February 18, 2014, and was placed into NRC's record keeping system (ML14064A050).

c. Conclusions

Overall, ECS implemented a well maintained, safe, and compliant program. However, during this inspection, two apparent violations of NRC requirements were identified. These apparent violations are associated with the May 24, 2011, event at the Marine Corps Base Camp Lejeune, in which ECS temporarily lost control of a portable gauge. This event was the subject of NRC Event No. 46876 (ML14064A050).

- Failure to control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage, as required by 10 CFR 20.1802; and
- Failure to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee, as required by 10 CFR 30.34(i).

3. Exit Meeting

On March 10, 2014, the inspector conducted an exit meeting by telephone with Mr. Kris Stamm, Vice President, ECS, and Harry Slater, Radiation Safety Officer. The inspector discussed the inspection findings including the apparent violations of 10 CFR 20.1802 and 10 CFR 30.34(i). The licensee acknowledged the inspection findings, emphasized that ECS took immediate corrective and preventative actions to address the temporary loss of material, and emphasized that ECS is committed to compliance with NRC requirements.

ATTACHMENT

PARTIAL LIST OF PERSONS CONTACTED

Harry Slater, Radiation Safety Officer
Kris Stamm, Branch Manager/Vice President

SUPPLEMENTAL INFORMATION

Licensee's 30 Day Report required by 10 CFR 30.50(c)(2) (ML14064A050)

INSPECTION PROCEDURES USED

IP 87124, Fixed and Portable Gauge Programs

LIST OF DOCUMENTS REVIEWED

Dosimetry Reports for 2013
Leak test records for 2013
Self-assessment for 2012 and 2013
Licensee's 30 Day Report required by 10 CFR 30.52(c)(2) (ML14064A050)
Gauge inventory records
Gauge use logs

LIST OF ACRONYMS USED

ADAMS: Agency wide Documents Access and Management System
CFR: Code of Federal Regulations
RSO: Radiation Safety Officer