

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03020896/2010001
Docket No. 03020896
License No. 52-17776-02
EA No. EA-10-253
Licensee: Geo Cim, Inc.
Address: Amelia Distribution Center, Emma Street, Lot 26A, Guaynabo,
Puerto Rico 00968-8007
Other Locations Inspected: Portugues Dam Site, State Road PR 10, Km. 5.5, Ponce, Puerto
Rico
Inspection Dates: October 5, 6, 7, 2010 & December 6, 2010

Inspector:	<i>/RA M. T. Miller for/</i>	<i>12/20/10</i>
	_____	_____
	Scott Wilson	date
	Health Physicist	
	Materials Security and Industrial Branch	
	Division of Nuclear Materials Safety	
Approved By:	<i>/RA/</i>	<i>12/20/10</i>
	_____	_____
	Marie Miller, Chief	date
	Materials Security and Industrial Branch	
	Division of Nuclear Materials Safety	

EXECUTIVE SUMMARY

Geo Cim, Inc.
NRC Inspection Report No. 03020896/2010001

Geo Cim, Inc. (GCI) is an engineering and geotechnical testing firm authorized by NRC License No. 52-17776-02, to possess, store and use portable nuclear moisture/density gauges (gauges) for the purpose of measuring the physical properties of materials. The licensee utilized gauges daily at construction and road building projects throughout Puerto Rico. This inspection included interviews with management and authorized gauge users, record reviews, and observations of licensed activities at permanent storage facilities authorized by the NRC license.

The inspection resulted in four apparent violations of NRC requirements, the first of which is being considered for escalated enforcement. These include: 1) a violation of 10 CFR 30.34(i) regarding the failure to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges were not under the control and constant surveillance of the licensee; 2) a violation of NRC License Condition 18 regarding the failure to provide hazmat employee training as required by 10 CFR 71; 3) a violation of 10 CFR 20.1101, regarding the failure to conduct an annual program review; and, 4) a violation of NRC License Condition 15 regarding the failure to conduct a physical inventory of all sources or devices every six months.

Subsequent to the inspectors identification and discussion of the apparent violations with GCI management, GCI took corrective actions and installed an additional barrier (lock and chain) to provide a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal; provided the required hazmat employee training to each hazmat employee; committed to performing an annual program review within 30 days; and, conducted a physical inventory of all devices in their possession. The licensee further committed to the implementation of a system of scheduling and reminders to ensure compliance with NRC requirements in the future. The corrective actions and commitments noted in this report were completed on or before November 28, 2010.

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope (IP 87124)

This inspection included a review of licensee records, interviews with authorized users, the Radiation Safety Officer (RSO), and the company President, and observations at the main office and an authorized storage location at the Portugues Dam Site near Ponce, Puerto Rico.

b. Observations and Findings

Geo Cim, Inc. (GCI) is an engineering and geotechnical testing firm authorized to possess, store and use portable nuclear moisture/density gauges (gauges) for the purpose of measuring the physical properties of materials. Gauges were used daily. The licensee employed 28 individuals, 11 of which were trained and authorized to use the gauges. Authorized Users (AU's) reported directly to the RSO, who reported directly to the company President. The organizational structure remained unchanged since the previous NRC inspection in 2005.

GCI possessed 15 gauges containing Am-241 and Cs-137, and one gauge containing Ra-226 sealed sources. GCI was in the process of replacing its older model (MC-1) gauges with newer models (MC-1DR) and six of the older gauges were in storage at the main office.

Since the last inspection, the license was amended to add one storage location at the geotechnical testing laboratory on the Portugues Dam Construction Project Site, 5.5 Km. north of Ponce, Puerto Rico, on state highway PR10. GCI stored two gauges at the Portugues Dam Site. Other recent amendments to the license include the authorization for the possession of a Seaman Nuclear Corporation (Model C300) gauge containing up to 5.5 millicuries of Radium-226. No other changes to the program were made since the previous inspection. The licensee uses the gauges as requested in their license application and as designed.

Storage facilities were appropriately posted with caution signs and employee notices, security measures were compliant with NRC regulations, and authorized users were knowledgeable of the licensees Operating and Emergency Procedures.

The inspector observed that the licensee transported gauges to temporary jobsites in robust metal containers (boxes) with an access door on one side. The boxes were physically secured to the cargo bed of company owned pickup trucks. The inspector observed that some of the boxes contained double locking mechanisms on the access doors; However, eight boxes had only one locking mechanism and therefore were not properly equipped with the security measures required by 10 CFR 30.34(i) in those instances when the gauge was not under the surveillance and constant control of the

licensee. The licensee stated that authorized users were not always in constant surveillance of the gauge when stored in the transport vehicle. This is an apparent violation of 10 CFR 30.34(i).

10 CFR 30.34(i), "Security requirements for portable gauges" states in part, that each portable gauge licensee shall 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.

Contrary to the above, on multiple occasions during the time period including August 25, 2010, through October 5, 2010, Geo Cim, Inc. failed to maintain two independent controls to form a tangible barrier to secure their portable gauge from unauthorized removal. Specifically, the licensee gauge utilization logs show that on multiple occasions between August 25, 2010, and October 5, 2010, Geo Cim, Inc. failed to use a minimum of two independent controls that form tangible barriers while gauges were stored in licensee owned vehicles (pickup trucks) secured with a single locking device, and the licensee was not in constant control of the gauges.

Through discussions with the RSO and a review of the GCI's records, the inspector determined that the licensee had not conducted an annual radiation protection program review, as required by 10 CFR 20.1101. The inspector further identified that GCI failed to conduct physical inventories of the gauges in storage, an apparent violation of NRC License Condition 15. The licensee stated that a formal documented program review had not been conducted and that prior to the purchase of new gauges, physical inventories were conducted every six months when leak testing the devices; however, subsequent to GCI's replacement of their older model gauges, the older style gauges were placed in storage, and the licensee did not conduct full physical inventories which included the older gauges.

c. Conclusions

The inspection identified three apparent violations including one apparent violation of 10 CFR 30.34(i), one apparent violation of 10 CFR 20.1101, and one apparent violation of License Condition 15.

II. Training of Workers

a. Inspection Scope (IP 87124)

This inspection included a review of licensee training records and interviews with the RSO and Authorized Users.

b. Observations and Findings

Through a review of the licensee's training records and discussions with the RSO and AUs, the inspector determined that individuals had transported gauges on public roads to and from temporary jobsites without having successfully completed the training required

by License Condition 18 (10 CFR 71), which requires the licensee to comply with U.S. Department of Transportation requirements including 49 CFR 172.

49 CFR 172.704(c) requires, in part, that a hazmat employee receive initial training within 90 days after employment or a change in job function, and recurrent training at least once every three years. Licensee records and discussions with the RSO indicated that GCI had not fully complied with the training requirements in 49 CFR Part 172 in that, on multiple occasions in 2010, GCI employees transported licensed material from the storage location in Guaynabo, Puerto Rico, over public roads to and from temporary jobsites, without having completed the necessary training required by 49 CFR 172.704(c). Specifically, licensee records indicate that of the employees that had transported gauges during the time period specified above: 1) two employees had not received recurrent training since 2005, a period of more than three years; and, 2) one employee had received initial training on August 16, 2003, and recurrent training was not completed as of April 28, 2010, a period of more than three years.

c. Conclusions

The inspection identified one apparent violation of 10 CFR 71 (License Condition 18).

III. Exit Meeting and Apparent Violation Corrective Actions

Subsequent to the inspector communicating the apparent violations to the licensee, the licensee installed an additional barrier (lock and chain) to provide a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal; provided the required hazmat employee training to each hazmat employee; committed to performing an annual program review within 30 days; and, conducted a physical inventory of all devices in their possession. The licensee further committed to the implementation of a system of scheduling and reminders to ensure compliance with NRC requirements in the future. The corrective actions and commitments noted in this report were completed on or before November 28, 2010.

The inspector conducted an exit meeting via telephone with the President of GCI, Mr. Luis Garcia, on December 6, 2010, in which the inspection results were discussed including the apparent violations and the corrective actions GCI had implemented. Mr. Garcia emphasized that corrective and preventative actions had been taken and that GCI was committed to safety, security, and compliance with NRC requirements. Mr. Garcia agreed with the inspectors findings and had no further information to add regarding the apparent violations or their corrective actions.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Luis Garcia, President*#
Rolando Davila, RSO#
Omar Santiago, AU

Present at entrance meeting.

*Present at exit meeting.