



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 E. LAMAR BLVD  
ARLINGTON, TX 76011-4511

May 11, 2017

EA-17-027

Mr. Kenneth R. Criley  
Radiation Safety Officer  
Geo-Logic Associates, Inc.  
143 E. Spring Hill Drive  
Grass Valley, CA 95945

SUBJECT: NRC INSPECTION REPORT 150-00004/2017-003

Dear Mr. Criley:

This letter refers to an unannounced inspection conducted on January 12-13, 2017, of your activities involving portable nuclear gauges at the Puerto Rico Dump, Saipan, and the Ordot Dump, Guam. The purpose of the inspection was to examine activities performed by Geo-Logic Associates, Inc. (GLA) using byproduct material in portable nuclear gauges on Guam and Saipan, both areas of Nuclear Regulatory Commission (NRC) jurisdiction. The inspection consisted of an examination of selected procedures and representative records, observations of facilities and activities, independent radiation measurements, and interviews with personnel. The preliminary inspection findings were discussed with you at the conclusion of the onsite portion of the inspection. A final exit briefing was conducted telephonically with you on April 24, 2017. The enclosed report presents the results of this inspection.

During calendar year (CY) 2014, activities were performed by GLA on Guam under a NRC general license, which was granted under Title 10 of the *Code of Federal Regulations* (CFR) Section 150.20, "Recognition of Agreement State licenses." The general license was granted to conduct the same activities authorized under GLA's State of California license, in areas of exclusive Federal jurisdiction. The activities authorized were limited to the use of portable nuclear gauging devices for the determination of physical properties of materials, for a period not to exceed 180 days in CY 2014. However, in CY 2014, GLA engaged in these activities on Guam for greater than 180 days. During CYs 2015-2016, GLA continued to perform these activities on Guam and on Saipan, and did not have authorization from NRC to perform these activities under a general or specific NRC license. In CY 2017, GLA requested and received reciprocal recognition of its Agreement State license after the noncompliance was identified by the NRC during the onsite inspection on Saipan and Guam.

Based on the results of the inspection, five apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violations being considered for escalated enforcement action involve failures to: (1) limit activities involving radioactive materials in Non-Agreement States to 180 days in CY 2014; (2) possess and use byproduct

material except as authorized in a specific or general license issued in accordance with the NRC regulations, for CYs 2015 and 2016; (3) file a submittal to the NRC at least 3 days before engaging in activities in NRC jurisdiction for the first time in CY 2017; (4) use a minimum of two independent physical controls that form tangible barriers to secure portable nuclear gauges from unauthorized removal, whenever portable nuclear gauges are not under the control and constant surveillance of the licensee; and (5) provide hazmat employees the training required by 49 CFR Part 172, Subpart H at least once every three years.

Following the NRC's onsite inspection, on January 26, 2017, GLA requested reciprocal recognition from the NRC of its State of California license to possess and use portable nuclear gauges at the Ordot Dump on Guam for CY 2017. On February 3, 2017, the NRC granted this approval to GLA, which retroactively authorized portable nuclear gauge activities on Guam starting on January 1, 2017. Under the general license, the use and storage of portable nuclear gauges in areas of NRC jurisdiction is granted for a period not to exceed 180 days. Because reciprocity was granted on January 1, 2017, under the general license, the continued use and storage of portable nuclear gauges on Guam is limited to June 30, 2017. During the telephonic exit meeting on April 24, 2017, several options for the gauges were discussed, including: (1) shipment of the gauges out of NRC jurisdiction on or before June 30, 2017; (2) transfer of the gauges to an authorized NRC licensee on Guam or Saipan on or before June 30, 2017; and (3) applying for and obtaining an NRC specific license on or before June 30, 2017. Other options may be explored and considered by GLA as appropriate before June 30, 2017. When developing your corrective actions, the NRC is interested in understanding GLA's planned actions regarding the two portable nuclear gauges currently on Guam.

Before the NRC makes its enforcement decision, we are providing you an opportunity to: (1) respond, in writing, to the apparent violations addressed in this inspection report within 30 days of the date of this letter; (2) request a Pre-decisional Enforcement Conference (PEC); or (3) request Alternative Dispute Resolution (ADR). If a PEC is held, it will be open for public observation and the NRC will issue a press release to announce the time and date of the conference. If you decide to participate in a PEC or pursue ADR, please contact Ms. Vivian Campbell, Chief, Materials Licensing and Inspection Branch, at 817-200-1455, within 10 days of the date of this letter to notify the NRC of your intended response. A PEC should be held within 30 days and an ADR session within 45 days of the date of this letter.

If you choose to provide a written response, it should be clearly marked as a "Response to Apparent Violations, NRC Inspection Report 150-00004/2017-003; EA-17-027" and should include for each of the apparent violations: (1) the reason for the apparent violation or, if contested, the basis for disputing the apparent violation; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken; and (4) the date when full compliance will be achieved. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. Your response should be sent to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to Mr. Mark R. Shaffer, Director, Division of Nuclear Materials Safety, U.S. Nuclear Regulatory Commission, Region IV, 1600 E. Lamar Blvd., Arlington, TX 76011-4511. If an adequate response is not received within the time specified or an extension of time has not been granted by the NRC, the NRC will proceed with its enforcement decision or schedule a PEC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on these matters and any other information that you believe the NRC should take into consideration before making an enforcement decision. The decision to hold a PEC does

not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference would be conducted to obtain information to assist the NRC in making an enforcement decision. The topics discussed during the conference may include information to determine whether a violation occurred, information to determine the significance of a violation, information related to the identification of a violation, and information related to any corrective actions taken or planned. In presenting your corrective actions, you should be aware that the promptness and comprehensiveness of your actions will be considered in assessing any civil penalty for the apparent violations. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be helpful. You can find the Information Notice on the NRC Web site at <http://pbadupws.nrc.gov/docs/ML0612/ML061240509.pdf>.

In lieu of a PEC, you may request ADR with the NRC in an attempt to resolve this issue. ADR is a general term encompassing various techniques for resolving conflicts using a neutral third party. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral mediator works with parties to help them reach resolution. If the parties agree to use ADR, they select a mutually agreeable neutral mediator who has no stake in the outcome and no power to make decisions. Mediation gives parties an opportunity to discuss issues, clear up misunderstandings, be creative, find areas of agreement, and reach a final resolution of the issues. Additional information concerning the NRC's program can be obtained at <http://www.nrc.gov/about-nrc/regulatory/enforcement/adr.html>. The Cornell University Scheinman Institute on Conflict Resolution (ICR) has agreed to facilitate the NRC's program as a neutral third party. Please contact ICR at 877-733-9415 within 10 days of the date of this letter if you are interested in pursuing resolution of this issue through ADR.

Please be advised that the number and characterization of apparent violations described in the enclosed report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

In accordance with 10 CFR 2.390, of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter and its enclosures will be made available electronically for public inspection in the NRC Public Document Room or in the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

To the extent possible, your response should not include any personal privacy, proprietary, security-related, or safeguards information so that it can be made available to the Public without redaction.

If you have any questions concerning this matter, please contact Ms. Vivian H. Campbell of my staff at 817-200-1455.

Sincerely,

***/RA by GMVasquez Acting For/***

Mark R. Shaffer, Director  
Division of Nuclear Materials Safety

Docket No. 150-00004  
License No. General License Pursuant to 10 CFR 150.20

Enclosure: NRC Inspection Report 150-00004/2017-003

cc w/Enclosure:

Gonzalo Perez  
Chief, Radiologic Health Branch  
Division of Food, Drug & Radiation Safety  
California Department of Health Services  
P.O. Box 997414, MS-7610  
Sacramento, CA 95899-7414

M. Thomas Nadeau  
Chief Environmental Public Health Officer  
Division of Environmental Health  
Guam Department of Public Health and Social Services  
123 Chalan Kareta  
Mangilao, Guam 96913-6304

NRC INSPECTION REPORT 150-00004/2017-003 DATED MAY 11, 2017.

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**U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV**

Docket No.: 150-00004

License No.: General License Pursuant to 10 CFR 150.20

Report No.: 150-00004/2017-003

EA No.: EA-17-027

Licensee: Geo-Logic Associates, Inc.

Facilities: Ordot Dump  
Near the Villages of Ordot and Chalan Pago, Guam

Puerto Rico Dump  
Village of Puerto Rico, Saipan  
Commonwealth of the Northern Mariana Islands

Inspection Dates: January 12-13, 2017

Exit Meeting Date: April 24, 2017

Inspector: Janine F. Katanic, PhD, CHP  
Senior Health Physicist  
Materials Licensing and Inspection Branch

Observed by: Katherine B. Duenas (Guam location only)  
Guam Department of Public Health and Social Services

Approved by: Vivian H. Campbell  
Chief, Materials Licensing and Inspection Branch  
Division of Nuclear Materials Safety

Attachment: Supplemental Inspection Information

Enclosure

## **EXECUTIVE SUMMARY**

### **Geo-Logic Associates, Inc. NRC Inspection Report 150-00004/2017-003**

#### **Program Overview**

Geo-Logic Associates, Inc. (GLA) possesses State of California radioactive materials license number 4889-29 for portable nuclear gauge use. In calendar year (CY) 2014, GLA applied for and received approval from NRC to perform activities under the general license granted in Title 10 of the *Code of Federal Regulations* (10 CFR) 150.20, "Recognition of Agreement State licenses." Any person who holds a specific license from an Agreement State is granted a general license to conduct the same activity authorized in the Agreement State license in Non-Agreement States. (Section 1)

#### **Inspection Findings**

On January 12, 2017, the NRC began an unannounced inspection of GLA's portable nuclear gauge activities on Saipan and Guam, both areas of NRC jurisdiction. Five apparent violations of NRC requirements were identified involving GLA's failures to: (1) limit activities involving radioactive materials in Non-Agreement States to 180 days in CY 2014; (2) possess and use byproduct material except as authorized in a specific or general license issued in accordance with the NRC regulations, for CYs 2015 and 2016; (3) file a submittal to the NRC at least 3 days before engaging in activities in NRC jurisdiction for the first time in CY 2017; (4) use a minimum of two independent physical controls that form tangible barriers to secure portable nuclear gauges from unauthorized removal, whenever portable nuclear gauges are not under control and constant surveillance of the licensee; and (5) provide hazmat employees the training required by 49 CFR Part 172, Subpart H at least once every three years. (Section 2)

#### **Corrective Actions**

On January 13, 2017, at the conclusion of the onsite inspection, when informed of the apparent violations, GLA issued a stop work order to its personnel involved in portable nuclear gauge activities on Guam and Saipan. In a letter dated January 24, 2017, GLA stated that its projects on Guam and Saipan were complete and that it intended to ship the portable nuclear gauges back to California. On January 25, 2017, the inspector reminded GLA that until the gauges are shipped off Guam, they remained in NRC jurisdiction, and that storage in NRC jurisdiction requires either a general or specific NRC license. On January 26, 2017, GLA requested reciprocal recognition from the NRC of its State of California license to possess and use portable nuclear gauges at the Ordot Dump on Guam. On February 3, 2017, the NRC granted approval to GLA, under a general license, which retroactively authorized portable nuclear gauge activities on Guam starting on January 1, 2017. (Section 3)

## **REPORT DETAILS**

### **1 Program Overview (Inspection Procedure 87124)**

#### **1.1 Program Scope**

Geo-Logic Associates, Inc. (GLA) is a geologic, geotechnical, civil, and environmental firm with corporate headquarters in Ontario, California, and several other offices throughout the United States. It possesses State of California radioactive materials license number 4889-29 for portable nuclear gauge use. Under the general license granted in Title 10 of the *Code of Federal Regulations* (10 CFR) 150.20, "Recognition of Agreement State licenses," any person who holds a specific license from an Agreement State is granted a general license to conduct the same activity authorized in the Agreement State license in Non-Agreement States, areas of exclusive Federal jurisdiction within Agreement States, and offshore waters. In calendar year (CY) 2014, GLA applied for and received approval from the NRC to conduct the same activities authorized in its Agreement State license in a Non-Agreement State.

#### **1.2 Observations and Findings**

The inspector reviewed GLA's Agreement State license and the NRC Form 241, "Report of Proposed Activities in Non-Agreement States," that was submitted by GLA to NRC for activities to be performed on Guam in CY 2014. The inspector reviewed records and information provided by GLA and interviewed GLA employees regarding the performance of portable nuclear gauge activities during CYs 2014-2017 in Guam and Saipan, Non-Agreement States and areas of exclusive Federal Jurisdiction.

The inspector determined that in CY 2014, GLA applied to the NRC for reciprocal recognition ("reciprocity") of its State of California Agreement State license to use portable nuclear gauges at the Layon Municipal Sanitary Landfill and the Ordot Dump on Guam. The activities were authorized under the NRC general license for a period not to exceed 180 days in CY 2014; however, GLA engaged in these activities for a period of greater than 180 days. In CYs 2015-2016, and in CY 2017 until February 2, 2017, GLA continued to use portable nuclear gauges on Guam, and also conducted these activities on Saipan, but did not have authorization from NRC to perform these activities under a general or specific license issued by the NRC.

### **2 Inspection Findings (Inspection Procedure 87124)**

#### **2.1 Inspection Scope**

On January 12, 2017, the inspector visited the Puerto Rico Dump on Saipan, interviewed individuals with the contractor overseeing construction activities at the site, and observed the project trailer where GLA had stored a portable nuclear gauge at the site. On January 13, 2017, the inspector visited GLA's project trailer at the Ordot Dump on Guam. The inspector observed a portable nuclear gauge in storage, reviewed records and procedures maintained at the project trailer, conducted an interview with a GLA Field Engineer (portable nuclear gauge user), and performed independent radiation measurements. Following the on-site inspection, the inspector obtained and reviewed additional records and information from GLA's Radiation Safety Officer (RSO).



## 2.2 Observation and Findings

On December 16, 2013, GLA submitted an NRC Form 241 to the NRC, for the use of portable nuclear gauges at the Ordot Dump, Guam, during CY 2014, from January 1, 2014, to June 30, 2014, a period of 180 days. The NRC Form 241 listed two portable nuclear gauges to be used on Guam, both Humboldt Scientific, Inc., Model 5001EZ, serial numbers 2366 and 2389. On February 26, 2014, GLA notified the NRC that the portable nuclear gauges arrived on Guam on February 20, 2014. This authorized GLA to continuously use and store portable nuclear gauges at the Ordot Dump on Guam until August 19, 2014, at which point 180 days would have been reached. No updates of work locations or changes of dates were provided to the NRC by GLA for CY 2014. For CY 2015, CY 2016, and CY 2017 (through February 2, 2017), there were no reciprocity filings or requests made to the NRC by GLA. Therefore when the NRC's inspection was conducted on January 12-13, 2017, the NRC was unaware of any activities involving GLA's use of portable nuclear gauges in areas of NRC jurisdiction since the February 26, 2014, GLA notification.

On January 12, 2017, the inspector visited the Puerto Rico Dump on Saipan. The former solid waste dump was being converted into a community park. Construction activities at the site were being performed by Black Construction Corporation. The inspector observed that one of the windows of the Black Construction Corporation work site project trailer had a large yellow and black radiation warning trefoil. The inspector interviewed personnel with Black Construction Corporation regarding portable nuclear gauge use on the project site. Personnel related that GLA had been using a portable nuclear gauge on the project site since the beginning of CY 2016 and had recently completed its work and shipped the portable nuclear gauge back to Guam via vessel. The inspector observed the area of the project trailer where GLA had stored its portable nuclear gauge prior to shipping the gauge off Saipan. An individual with Black Construction Corporation explained to the inspector how the gauge was secured inside of the project trailer. The inspector was informed that GLA had an ongoing project using a portable nuclear gauge on Guam at the Ordot Dump.

On January 13, 2017, the inspector contacted the GLA Field Engineer (portable nuclear gauge user) on Guam and made arrangements to meet the individual at the GLA project trailer at the Ordot Dump. At the Ordot Dump, GLA had been performing various activities related to post-closure actions and long-term monitoring, including portable nuclear gauge use to determine the physical properties of materials. At the GLA trailer, the inspector observed a portable nuclear gauge in storage (Humboldt Scientific, Inc., Model 5001 EZ, serial number 2366). The GLA Field Engineer stated that the portable nuclear gauge was used routinely at the Ordot Dump and on adjacent roads. The Field Engineer confirmed that there was a second portable nuclear gauge belonging to GLA (Humboldt Scientific, Inc., Model 5001 EZ, serial number 2389) that had recently been used on Saipan at the Puerto Rico Dump, and that the portable nuclear gauge activities on Saipan had concluded, and it and was in the process of being returned to Guam by vessel.

At the conclusion of the onsite inspection, the inspector had a telephonic conversation with GLA's RSO in California and explained that GLA appeared to be in violation of NRC requirements. The inspector explained that for CY 2014, under the general license, in an area of exclusive Federal jurisdiction, such as Guam, reciprocity activities are limited to a total of 180 days in a CY. The RSO stated that the portable nuclear gauges had

only been “used” a few times. The inspector noted that under the general license, the 180 day period includes days of use of the portable nuclear gauges as well as days of storage or possession of the portable nuclear gauges. The inspector noted that in CY’s 2015-2017, GLA used portable nuclear gauges on Guam and Saipan, both areas of exclusive Federal jurisdiction, but did not have authorization from NRC to perform these activities under a general or specific license issued by the NRC.

Based on the inspection findings, five apparent violations of NRC requirements were identified and are described below.

During CY 2014, GLA filed for reciprocity but its activities using portable nuclear gauges on Guam exceeded 180 days. The portable nuclear gauges arrived on Guam on February 20, 2014, and were used or stored on Guam continuously through December 31, 2014. The general license only authorized the use and storage of portable nuclear gauges for a period of 180 days.

**Apparent violation of 10 CFR 150.20(b)(4)**

10 CFR 150.20(a)(1) requires, in part, that any person who holds a specific license from an Agreement State, where the licensee maintains an office for directing the licensed activity and retaining radiation safety records, is granted a general license to conduct the same activity in Non-Agreement States.

10 CFR 150.20(b)(4) requires, in part, that the general licensee shall not, under the general license concerning activities in Non-Agreement States, possess or use radioactive materials, or engage in the activities authorized by 10 CFR 150.20(a) for more than 180 days in any CY.

In CY 2014, GLA possessed and used radioactive materials, and engaged in the activities authorized by 10 CFR 150.20(a) for more than 180 days. Specifically, GLA filed for reciprocity with NRC in CY 2014, and commenced activities in NRC jurisdiction on February 20, 2014. From August 19, 2014 to December 31, 2014, GLA possessed or used radioactive materials, or engaged in the activities authorized by 10 CFR 150.20(a) more than 180 days in CY 2014, on Guam, a Non-Agreement State and area of NRC jurisdiction.

The failure to limit activities involving radioactive materials in Non-Agreement States to 180 days in CY 2014 was identified as an apparent violation of 10 CFR 150.20(b)(4). (150-00004/2017-003-01)

During CY 2015 and CY 2016, GLA did not file for reciprocity with the NRC but continued its activities using portable nuclear gauges in areas of NRC jurisdiction. In CYs 2015 and 2016, activities involving portable nuclear gauges were performed in areas of NRC jurisdiction that were not authorized under either a general or specific license issued by the NRC. One portable nuclear gauge (serial number 2366) was used and stored continuously on Guam from January 1, 2015 to December 31, 2016. A second portable nuclear gauge (serial number 2389) was used and stored on Guam from January 1, 2015, till mid-to-late December 2015, when the gauge was shipped via vessel to Saipan. A review of the shipping documentation provided by GLA could not establish exact shipping and arrival dates at the destinations, but as best as could be understood, the portable nuclear gauge was shipped from Guam via vessel

approximately December 15, 2015, and arrived on Saipan approximately January 6, 2016. It was used and stored at the Puerto Rico Dump project site on Saipan. The portable nuclear gauge was shipped via vessel from Saipan to Guam approximately December 15, 2016. The date that the portable nuclear gauge arrived back on Guam could not be established, but it was after the NRC's January 13, 2017, inspection.

**Apparent violation of 10 CFR 30.3(a)**

10 CFR 30.3(a) requires, in part, that no person shall transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in 10 CFR Chapter I.

During CYs 2015 and 2016, GLA possessed and used byproduct material and these activities were not authorized in a specific or general license issued in accordance with the regulations in 10 CFR Chapter I. Specifically, for 365 days in CY 2015 and for 366 days in CY 2016; GLA possessed and used byproduct material in two portable nuclear gauges on Guam and Saipan, both Non-Agreement States and areas of NRC jurisdiction, and these activities were not authorized in a specific or general license issued in accordance with the NRC's regulations in 10 CFR Chapter I.

The failure to possess and use byproduct material except as authorized in a specific or general license issued in accordance with the NRC regulations in 10 CFR Chapter I for CYs 2015 and 2016 was identified as an apparent violation of 10 CFR 30.3(a). (150-00004/2017-003-02)

For CY 2017, starting on January 1, 2017, one portable nuclear gauge (serial number 2366) was used and stored on Guam at the Ordot Dump, and a second portable nuclear gauge (serial number 2389) was in transport on a vessel on route from Saipan to Guam. In CY 2017, activities involving portable nuclear gauges were performed in areas of NRC jurisdiction and were not authorized under either a general or specific license issued by the NRC. On the date of the inspection on Guam, January 13, 2017, the inspector identified the noncompliance to GLA personnel. The general license requires that the NRC be notified at least 3 days before engaging in the activity for the first time in a CY. On January 26, 2017, GLA filed for reciprocity with the NRC. It was granted on February 3, 2017, with a start date of January 1, 2017.

**Apparent violation of 10 CFR 150.20(b)(1)**

10 CFR 150.20(a)(1) requires, in part, that any person who holds a specific license from an Agreement State, where the licensee maintains an office for directing the licensed activity and retaining radiation safety records, is granted a general license to conduct the same activity in Non-Agreement States.

10 CFR 150.20(b)(1) requires, in part, that the general licensee shall, at least 3 days before engaging in each activity for the first time in a CY, file a submittal containing an NRC Form 241, "Report of Proposed Activities in Non-Agreement States," a copy of its Agreement State specific license, and the appropriate fee as prescribed in 10 CFR 170.31.

Starting on January 1, 2017, GLA engaged in activities in NRC jurisdiction and failed to file a submittal containing an NRC Form 241, a copy of its Agreement State specific

license, and the appropriate fee as prescribed in 10 CFR 170.31, at least 3 days before engaging in activities for the first time in CY 2017. Specifically, GLA engaged in activities in NRC jurisdiction starting on January 1, 2017, and filed its submittal containing an NRC Form 241, a copy of its Agreement State specific license, and the appropriate fee as prescribed in 10 CFR 170.31, on January 26, 2017, a period of 26 days after engaging in activities for the first time in CY 2017.

The failure to file a submittal containing an NRC Form 241, a copy of its Agreement State specific license, and the appropriate fee at least 3 days before engaging in activities in NRC jurisdiction for the first time in CY 2017 was identified as an apparent violation of 10 CFR 150.20(b)(1). (150-00004/2017-003-03)

#### **Apparent violation of 10 CFR 30.34(i)**

10 CFR 150.20(b) requires, in part, that general licenses provided in 10 CFR 150.20 are subject to all applicable rules, regulations, and orders of the NRC including the provisions of 10 CFR 30.34.

10 CFR 30.34(i) requires 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.

On January 13, 2017, at the Ordot Dump on Guam, the GLA Field Engineer unlocked the gate surrounding the site and unlocked the door to the GLA project trailer. The inspector observed that a GLA portable nuclear gauge (serial number 2366) was in storage inside of the trailer. The portable nuclear gauge was stored in the locked project trailer but did not have a second physical control to secure it from unauthorized removal. The GLA Field Engineer thought that the fence/locked gate that surrounded the Ordot Dump and project trailer constituted a barrier to secure portable nuclear gauges from unauthorized removal. Although only one physical control was in place to secure the portable nuclear gauge, there was no actual loss of radioactive material.

The failure to use a minimum of two independent physical controls that form tangible barriers to secure portable nuclear gauges from unauthorized removal, whenever portable nuclear gauges are not under control and constant surveillance of the licensee was identified as an apparent violation of 10 CFR 30.34(i). (150-00004/2017-003-04)

#### **Apparent violation of 10 CFR 71.5(a)**

10 CFR 150.20(b) requires, in part, that general licenses provided in 10 CFR 150.20 are subject to the provisions of 10 CFR Part 71.

10 CFR 71.5(a), requires, in part, that each licensee who transports licensed material outside of the site of usage, as specified in the NRC license, or where transport is on public highways, shall comply with the applicable requirements of the U.S. Department of Transportation (DOT) regulations in 49 CFR Parts 171 through 180, appropriate to the mode of transport.

49 CFR 172.704(c)(2) requires, in part, that a hazmat employee must receive the training required by 49 CFR Part 172, Subpart H, at least once every three years.

Following the onsite inspection, the inspector requested that GLA provide records related to the individual Field Engineers, including portable nuclear gauge training and recurrent U.S. DOT hazmat training. The GLA RSO provided documentation to support portable nuclear gauge training for each Field Engineer, but was unable to provide any records for U.S. DOT hazmat refresher training. The GLA RSO thought that the U.S. Department of Labor's Occupational Health and Safety Administration annual refresher course for Hazardous Waste Operations and Emergency Response Standard would meet the training requirements of 49 CFR Part 172, Subpart H. During the time that GLA used and stored portable nuclear gauges on Guam and Saipan, it rotated different Field Engineers to the projects to perform various activities, including portable nuclear gauge use. Of the individuals that used portable nuclear gauges on Guam and Saipan, based on the information provided by GLA, the individuals last received the required U.S. DOT hazmat training in 1987; 1993; 2000; 2006; 2007; and 2014. With the exception of the individual that received the training in 2014, the other individuals did not have current U.S. DOT hazmat training during the times that they transported portable nuclear gauges.

Between February 20, 2014 and January 13, 2017, GLA hazmat employees transported Class 7 (radioactive) material on public highways and GLA failed to provide the hazmat employees with the training required by 49 CFR Part 172, Subpart H at least once every three years. Specifically, between February 20, 2014 and January 13, 2017, GLA employees transported Class 7 (radioactive) material on multiple occasions on public highways on Guam and Saipan, and the employees last received the required training between 1987 and 2007, greater than three years prior to the transportation activities.

The failure to provide hazmat employees the training required by 49 CFR Part 172, Subpart H at least once every three years was identified as an apparent violation of 10 CFR 71.5(a). (150-00004/2017-003-05)

### 2.3 Conclusions

During CY 2014, activities were performed by GLA on Guam under an NRC general license, which was granted under 10 CFR 150.20. The general license was granted to GLA to conduct the same activities authorized under GLA's State of California license, in areas of exclusive Federal jurisdiction. The activities authorized were limited to the use of portable gauging devices for the determination of physical properties of materials, for a period not to exceed 180 days in CY 2014. In CY 2014, GLA engaged in these activities for greater than 180 days, and in subsequent CYs 2015-2017, GLA continued to perform these activities on Guam and on Saipan, Non-Agreement States and areas of exclusive Federal jurisdiction, and did not have authorization to perform these activities under a general or specific license issued by the NRC. In CY 2017, GLA requested authorization to perform these activities under a general license only after the noncompliance was identified by the NRC during an onsite inspection of GLA's activities on Saipan and Guam.

Five apparent violations of NRC requirements were identified involving GLA's failures to: (1) limit activities involving radioactive materials in Non-Agreement States to 180 days in CY 2014; (2) possess and use byproduct material except as authorized in a specific or general license issued in accordance with the NRC regulations, for CYs 2015 and 2016; (3) file a submittal to the NRC at least 3 days before engaging in activities in NRC jurisdiction for the first time in CY 2017; (4) use a minimum of two independent physical controls that form tangible barriers to secure portable nuclear gauges from unauthorized removal, whenever portable nuclear gauges are not under control and constant surveillance; and (5) provide hazmat employees the training required by 49 CFR Part 172, Subpart H at least once every three years.

Following the onsite inspection, GLA expressed that it was unaware that the general license granted by the NRC for CY 2014 was limited to 180 days of use and storage. The RSO misunderstood and thought that only days of use of the portable nuclear gauge counted toward the 180 days limit. The GLA RSO, who was responsible for portable gauge activities failed to understand the meaning and applicability of the requirements and the limitations for general licensees granted under 10 CFR 150.20. This failure was compounded when the responsible GLA personnel failed to read the instructions for completing the NRC Form 241 and to read and understand the letters from the NRC acknowledging initial receipt of the NRC Form 241 in CY 2014. The instructions for completing the NRC Form 241 explain how to use the form and summarize the requirements, and state that activities, including storage, are limited to a total of 180 days in a CY. Additionally, the letter from the NRC transmitted to GLA acknowledging receipt of an NRC Form 241 for CY 2014 included statements that informed GLA that under the general license, reciprocity activities including storage are limited to a total of 180 days in a CY. For the subsequent CYs 2015-2017, GLA attributed its failure to apply for reciprocity to not having sufficient procedures in place to prevent the oversight in the renewal of the reciprocity request with the NRC. Additionally, although the GLA RSO had responsibility for overseeing portable nuclear gauge activities across GLA's offices, the RSO did not have complete knowledge of the GLA project timelines on Guam and Saipan, as these projects were managed by individuals that did not keep the RSO well informed. As a result, the project managers would often make decisions to extend projects using portable nuclear gauges, switch personnel (portable gauge users), or commence new projects using portable nuclear gauges on Guam or Saipan without informing the RSO of these changes.

The apparent violations represent a significant impact on the NRC's regulatory process. Had GLA provided an update to the NRC in CY 2014, indicating the dates of actual portable nuclear gauge use and storage on Guam, the NRC would have had the opportunity to identify that 180 days had been or was going to be exceeded. The NRC could have explained the options to GLA for either ceasing portable nuclear gauge activities (including use and storage) in NRC jurisdiction or applying for an NRC specific license. Because GLA's portable nuclear gauge activities on Guam exceeded 180 days in CY 2014, and GLA failed to notify the NRC or apply for a specific license issued by the NRC, the NRC could not use appropriate regulatory tools to address the noncompliance because the NRC was unaware that the noncompliance existed.

### **3 Corrective Actions**

On January 13, 2017, at the conclusion of the onsite inspection, one portable nuclear gauge was in storage at the GLA project trailer at the Ordot Dump on Guam and the other portable nuclear gauge was in transit on a vessel in route from Saipan to Guam. The NRC inspector had a telephone conversation with the GLA RSO in California and explained that GLA appeared to be in violation of NRC regulatory requirements because GLA had used portable nuclear gauges in NRC jurisdiction in excess of 180 days in CY 2014, and had no authorization to use portable nuclear gauges in NRC jurisdiction (i.e. no specific NRC license or reciprocity filing) for CY 2015, CY 2016 and CY 2017.

Following the onsite inspection, GLA issued a stop work order to its personnel on Guam. The portable nuclear gauge that was already on Guam remained in storage at the project trailer at the Ordot Dump, and the second portable nuclear gauge was placed into storage on the project trailer at the Ordot Dump after it arrived back on Guam from Saipan.

In a letter dated January 24, 2017, GLA stated that its projects on Guam and Saipan were complete and that it intended to ship the portable nuclear gauges back to California as soon as possible. On January 25, 2017, the inspector reminded GLA that until the gauges are shipped off Guam, they remained in NRC jurisdiction, and that storage of portable nuclear gauges in NRC jurisdiction requires either a general or specific NRC license. The inspector informed GLA that until the portable nuclear gauges were shipped off Guam, GLA could either apply for a specific NRC license authorizing portable nuclear gauge use, or apply to NRC for reciprocal recognition of its State of California Agreement State under the general license in 10 CFR 150.20. On January 26, 2017, GLA requested reciprocal recognition from the NRC of its State of California license to possess, use, and store portable nuclear gauges at the Ordot Dump on Guam. On February 3, 2017, the NRC granted approval to GLA, which retroactively authorized portable nuclear gauge activities on Guam starting on January 1, 2017.

### **4 Exit Meeting Summary**

On April 24, 2017, a final telephonic exit meeting was conducted with Mr. Kenneth Criley, RSO, to discuss the apparent violations. The NRC representative described the enforcement process and the options for the licensee to provide a written response, request to attend a predecisional enforcement conference with the NRC, or request ADR with the NRC. The licensee acknowledged the inspection findings; no proprietary information was identified.

**Supplemental Inspection Information**

**PARTIAL LIST OF PERSONS CONTACTED**

Kenneth Criley, Laboratory Director, RSO  
Erik Olhoffer, Senior Technician, Alternate RSO  
William D. Janasak, Field Engineer

**INSPECTION PROCEDURES USED**

87124 Fixed and Portable Gauge Programs

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened

150-00004/2017-003-01	APV	Failure to limit activities involving radioactive materials in Non-Agreement States to 180 days in CY 2014. (10 CFR 150.20(b)(4))
150-00004/2017-003-02	APV	Failure to possess and use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in 10 CFR Chapter I, for CYs 2015 and 2016. (10 CFR 30.3(a))
5 and 2016. (10 CFR 30.3(a))		
150-00004/2017-003-03	APV	Failure to file a submittal containing an NRC Form 241, a copy of its Agreement State specific license, and the appropriate fee at least 3 days before engaging in activities in NRC jurisdiction for the first time in CY 2017. (10 CFR 150.20(b)(1))
150-00004/2017-003-04	APV	Failure to use a minimum of two independent physical controls that form tangible barriers to secure portable nuclear gauges from unauthorized removal, whenever portable nuclear gauges are not under control and constant surveillance. (10 CFR 30.34(i))
150-00004/2017-003-05	APV	Failure to provide hazmat employees the training required by 49 CFR Part 172, Subpart H at least once every three years. (10 CFR 71.5(a))

Closed

None

Discussed

None



## LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
ADR	Alternative Dispute Resolution
APV	Apparent Violation
CFR	<i>Code of Federal Regulations</i>
CY	calendar year
DNMS	Division of Nuclear Materials Safety
DOT	Department of Transportation
GLA	Geo-Logic Associates, Inc.
ICR	Institute on Conflict Resolution
NRC	Nuclear Regulatory Commission
PEC	Predecisional Enforcement Conference
RSO	Radiation Safety Officer