UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

February 9, 2006

Docket No. 030-35886 License No. 52-25580-01
EA No. 06-017

Carlos A. Mercado, P.E.
President
GEO-EXPLOR, Inc.
MSC-928, 138 Avenida Winston Churchill
San Juan, PR 00926-6023

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 030-35886/2005001

Dear Sr. Mercado:

This refers to the inspection conducted on November 15, 2005, at your facilities located in San Juan, Puerto Rico. This inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel. This inspection included a review of your efforts to find a portable gauge lost on August 16, 2005, which was subsequently recovered intact and undamaged on August 22, 2005. During the inspection, the NRC also reviewed your subsequent corrective actions and review of information provided on December 9, 2005, and January 11, 2006. The enclosed report presents the results of this inspection.

Based on the results of this inspection, it appears your activities were not conducted in full compliance with NRC requirements. Specifically, on August 16, 2005,

1 A portable gauge containing licensed material was not secured from unauthorized removal or access as required by 10 CFR 20.1801 and 20.1802;

2. Two independent physical controls that formed a tangible barrier to secure a portable gauge containing licensed material against unauthorized removal were not present as required by 10 CFR 30.34(i); and

3. A portable gauge containing licensed material was not secured to the bed of a pickup truck to prevent movement during normal transportation as required by 10 CFR 71.5 and 49 CFR 173.448(a).

The circumstances surrounding the apparent violations, the significance of the loss of licensed material, and the need for lasting and effective corrective action were discussed with members of your staff on November 15, 2005, December 9, 2005, and January 11, 2006.

These violations which resulted in a gauge containing licensed material being lost for approximately six days are being considered for escalated enforcement in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site

at www.nrc.gov; select **What we Do**, **Enforcement**, then **Enforcement Policy**. Before the NRC makes a final enforcement decision, although the NRC understands the corrective actions that you have taken and is prepared to make an enforcement decision without additional information, we are providing you an opportunity to either (1) respond in writing, within 30 days of the date of this letter, to the apparent violations described in the inspection report (see discussion below), to the significance of the violations and to the amount of the civil penalty that would result from application of the Enforcement Policy, or (2) request a Predecisional Enforcement Conference (PEC). In making your decision, you should be aware that a revision to the NRC Enforcement Policy became effective on February 16, 2001 (Section VII.A.1.g) which states that cases involving the loss, abandonment, or improper transfer or disposal of a sealed source or device should normally result in a civil penalty.

If you decide to provide a written response, it should be clearly marked as a "Response to Apparent Violations in Inspection Report No. 03035886/2005001" and should include for each apparent violation: (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 to avoid further violations, and (4) the date when full compliance will be achieved.

If you decide to request a PEC, it will be held at the Region I office in King of Prussia, PA, and will be open for public observation and the NRC will issue a press release to announce the Conference. The decision to offer a PEC does not mean that the NRC has determined that violations have occurred or that enforcement action will be taken. The conference will be held to achieve a common understanding of the facts in the case, obtain appropriate information so that we can determine whether violations occurred, to determine the significance of any violations which did occur, to understand how the violations were identified, and to understand any corrective actions taken or planned by GEO-EXPLOR, Inc. The conference will provide the opportunity for you to provide your prospective on these matters, including any errors in the inspection report, and any other information that you believe the NRC should take into consideration in making an enforcement decision.

You must contact Mr. John D. Kinneman at (610) 337-5252 within 10 days of the date of this letter to notify the NRC of your decision to either provide a written response or participate in a PEC. If you do not request a PEC and do not provide a written response within the time specified above, we will make an enforcement decision based on the available information.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, the enclosed report and your response (if you choose to provide one) will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC’s document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room). To the extent possible, any response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Thank you for your cooperation.

Sincerely,

/Original signed by Pamela Henderson Acting For/

George Pangburn, Director
Division of Nuclear Materials Safety

Enclosure:
1. Inspection Report No. 03035886/2005001

cc w/encls:
Reynaldo Rodriguez, Radiation Safety Officer/Operations Manager

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.	030-35886/2005001
Docket No.	030-35886
License No.	52-25580-01
Licensee:	GEO-EXPLOR, Inc.
Address:	MSC 928 138 Avenida Winston Churchill San Juan, Puerto Rico 00926-6023
Locations Inspected:	Carretera 842 Interior Km 1.9 Camino Los Romanos, Barrio Caimito San Juan, Puerto Rico
Inspection Dates:	November 15, December 9, 2005 and January 11, 2006

Inspector:

Original signed by Judith A. Joustra ***January 25, 2006***

David J. Collins — date
Health Physicist

Approved By:

Original signed by Judith A. Joustra ***January 25, 2006***

John D. Kinneman, Chief — date
Materials Security and Industrial Branch
Division of Nuclear Materials Safety

Document Name: E:\Filenet\ML060400517.wpd

EXECUTIVE SUMMARY

GEO-EXPLOR, Inc.
NRC Inspection Report No. 03035886/2005001

On August 16, 2005, a licensee technician was using a CPN- International Model MC-1 portable gauge at a temporary highway construction site (Efram Avenue and Route 692) in Dorado, Puerto Rico. After performing measurements, the technician placed the locked gauge in its locked box on the rear deck of his open pickup truck, but did not secure the two available chains nor the pickup tailgate. He moved the pickup truck out of the path of construction vehicles and completed the measurement paperwork. At about 11:30 a.m., after completing the paperwork, the technician drove off the construction site and entered traffic and the gauge fell or bounced off the truck as the technician entered traffic.

The technician discovered the loss of the gauge within 0.5 miles after leaving the site and immediately retraced his route, but did not find the gauge. He contacted the Radiation Safety Officer (RSO). The RSO contacted the police department and their consultant physicist. The media (press and televison) were contacted and a reward was offered. The NRC, the U.S. Department of Transportation and the Puerto Rico Department of Health were notified.

Members of the public retrieved the gauge, apparently immediately after it was lost from the pickup truck, and stored it at their company warehouse until their supervisor became aware of its presence. The supervisor was aware of the press coverage and contacted the licensee. The gauge was returned to the licensee intact and undamaged on August 22, 2005.

The technician who lost the gauge was suspended from work. The entire workforce, including the technician involved with the loss, was retrained in the use of the gauge and transportation of licensed materials two days after the event.

Three apparent violations were identified (all occurred on August 16, 2005):

A. The failure to secure a portable gauge containing licensed material to the bed of a pick-up truck or to maintain constant surveillance of the gauge is an apparent violation of 10 CFR 20.1801 and 20.1802.

B. The failure to have two independent physical controls that form a tangible barrier to secure a portable gauge containing licensed material from unauthorized removal is an apparent violation of 10 CFR 30.34(I).

C. The failure to secure a portable gauge containing licensed material to the bed of a pickup truck to prevent movement during transportation is an apparent violation of 10 CFR 71.5 and 49 CFR 173.448(a).

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspector interviewed staff and reviewed records maintained by the licensee.

b. Observations and Findings

GEO-EXPLOR, Inc. is a small firm with one office. There are two authorized gauge users. The Radiation Safety Officer is also the Operations Manager, reporting to the company President. The gauge operators report to the Operations Manager/RSO.

c. Conclusions

The inspector concluded that the organization and scope of the licensee's program is as described in the license.

II. Facilities and Equipment

a. Inspection Scope

The inspector observed the gauge storage area and reviewed the inventory, utilization and leak test records for the gauges.

b. Observations and Findings

The licensee's premises are located within a locked, walled compound. The inspector observed that all persons/vehicles requesting entrance to the compound are under surveillance by the staff. The compound is closed and locked during non-business hours.

The licensee possesses two CPN Model MC-1 portable gauges containing cesium-137 and americium-241 sealed sources. The gauges were properly stored in a locked room attached to the building's carport The handles of both gauges were locked and the cases were also locked. The licensee stated that only the gauge operators possessed keys to the storage location.

c. Conclusions

The inspector concluded that licensed materials in the office location are properly secured in storage against unauthorized access and removal, and are properly leak tested and controlled.

III. Review of Reported Event

a. Inspection Scope

The inspector reviewed the circumstances associated with the loss of a portable gauge after it was used at a temporary job site.

b. Observations and Findings

On August 16, 2005, a licensee gauge technician used a CPN Model MC-1 portable gauge containing cesium-137 and americium-241 in sealed sources for moisture density measurements at a temporary job site. The temporary job site was an intersection construction/improvement project at the intersection of PR Route 693 and Avenida Efron in Dorado, PR (approximately 15 - 20 miles from the licensee's office). The technician finished making his measurements, locked the gauge handle, placed the gauge in its transport box, locked the box and placed it in the bed of his open pick-up truck. He did not secure the gauge in the truck bed with the provided two chains and padlocks, nor did he close the tailgate of the truck. The technician moved the pickup truck a short distance inside the construction project to avoid blocking construction traffic while he completed the calculations and paperwork for his measurements.

After completing his paperwork, the technician drove off the construction site into traffic without securing the gauge to the truck. The gauge fell or was bounced from the pickup truck into the roadway at the exit from the construction site, blocking the path of a motorist. The motorist was unable to move the gauge in its box. Two communications workers helped move the gauge, placed it in their vehicle, and took it to their company warehouse.

The technician realized the gauge was not aboard his vehicle approximately 0.5 miles from the construction site. He immediately turned back, but was unable to find the gauge, since it had been almost immediately picked up and removed by the two communications workers. He notified the RSO and the jobsite contractors.

The RSO notified the local police department and the licensee's contract physicist. The RSO also contacted the local media, offered a reward for the gauge, was interviewed by a local television station, and placed advertisements for the return of the gauge. The RSO notified the NRC and the Puerto Rico Commonwealth Department of Health. (See Event Number EN41921, NMED Number 050544, and Preliminary Notification PNO-I-05-025 (ML052350877))

The warehouse supervisor, returning from a trip, observed the gauge in the warehouse and recognized it because of a newspaper article. The gauge, still locked in its case, undamaged, was returned to the licensee on August 22, 2005.

The gauge technician was disciplined, and the consultant provided training on gauge use, safety and transportation on August 19, 2005 for both gauge users, including the involved technician.

c. Conclusions

The following apparent violations were identified.

A. 10 CFR 20.1801 requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. 10 CFR 20.1802 requires that the licensee shall control or maintain constant surveillance of licensed material that is a controlled or unrestricted area and that is not in storage. The failure to secure the portable gauge to the pick-up truck bed or to maintain constant surveillance of the gauge is an apparent violation of 10 CFR 20.1801 and 20.1802.

B. 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 gauges are not under the control and constant surveillance of the licensee. The failure to have any independent physical control that formed a tangible barrier to secure a portable gauge from unauthorized removal, an apparent violation of 10 CFR 30.34(I).

C. 10 CFR 71.5(a) requires that a licensee who transports licensed material outside of the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 170 through 189.

49 CFR 173.448(a) requires each shipment of Class 7 (Radioactive) materials must be secured to prevent shifting during normal transportation conditions. The failure to secure the portable gauge to the bed of the truck to prevent movement during transportation is an apparent violation of 10 CFR 71.5 and 49 CFR 173.448(a).

IV. Training of Workers

a. Inspection Scope

The inspector reviewed the training program for both authorized users, and discussed pertinent aspects with the Radiation Safety Officer and the gauge technician Involved in the event.

b. Observations and Findings

The individuals expressed and demonstrated ample knowledge of the use of portable gauges, their transportation and storage. The licensee had contracted for a refresher course on portable gauge use and safety three days after the loss event on August 16, 2005. The inspector reviewed the prior training of the staff. The gauge technician has been an authorized user since 2001. The gauge technician stated that he moved the vehicle to allow passage of construction equipment and was distracted prior to entering traffic, so he forgot to secure the gauge to the truck.

c. Conclusions

The inspector concluded that the individuals are trained and knowledgeable as described in the license. The inspector further concluded that at the time of the event, the technician was properly trained.

V. Radiation Protection

a. Inspection Scope

The inspector reviewed dosimetry results for the years 2001 to 2005.

b. Observations and Findings

Dosimetry results on file show that both individuals, monitored quarterly had no exposure through the date of the inspection.

c. Conclusions

No violation was identified.

VI. Exit Meeting

The results of the inspection were discussed with the RSO on November 15 and December 9, 2005 and January 11, 2006. The apparent violations were discussed. The licensee discussed the corrective actions that were taken following the event. The inspector reviewed the NRC enforcement policy.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Reynaldo Rodríguez, Radiation Safety Officer
Roberto Gonzalez, Gauge User