



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

June 2, 2005

Docket No. 03014353
EA No. 05-109

License No. 29-18018-01

Michael Cannan
President
Craig Testing Laboratories, Inc.
P.O. Box 427
5439 Harding Highway
Mays Landing, NJ 08330

SUBJECT: INSPECTION 03014353/2005001, CRAIG TESTING LABORATORIES, INC.,
MAYS LANDING, NEW JERSEY AND TEMPORARY JOB SITE, POCOPSON,
PENNSYLVANIA

Dear Mr. Cannan:

On April 27, 2005, Craig Gordon and Donna Janda of this office conducted an announced safety inspection at the above address and the area where a portable nuclear density gauge was lost near a temporary job site in Pocopson, Pennsylvania. The purpose of the inspection was to follow up on the incident that occurred on April 25, 2005. The findings of the inspection were discussed with you and Ian Craig of your organization during a telephone conversation on May 16, 2005, with Mr. Gordon and Ms. Janda of this office. The enclosed report presents the results of this inspection.

Based on the results of this inspection, three apparent violations were identified and 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**. The apparent violations involve the failure to control or maintain constant surveillance of licensed material that is in an unrestricted area and is not in storage; the failure to ensure that a portable nuclear density gauge or its outer container is locked; and the failure to comply with the applicable requirements of the Department of Transportation regulations, examples of which include failure to properly block and brace a package (transport case) for transport, failure to transport radioactive material with the required information on the labels, and failure to store the shipping paper within the immediate reach of the driver during transport. Since the NRC has not made a final determination in this matter, no Notice of Violation is presently being issued for these inspection findings. In addition, please be advised that the number and characterization of apparent violations described in the enclosed inspection report may change as a result of further NRC review.

A predecisional enforcement conference, open to the public, to discuss these apparent violations has been scheduled for June 23, 2005, at 10:30 am, at the Region I office in King of Prussia, Pennsylvania. The NRC announces enforcement conferences to the public by issuing a press release. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be

M. Cannan
Craig Testing Laboratories, Inc.

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taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues, and the need for lasting and effective corrective action. In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspectives on 1) the severity of the violations, 2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and 3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII. In presenting your corrective action, you should be aware that the promptness and comprehensiveness of your action will be considered in assessing any civil penalty for the apparent violation. The guidance in the enclosed NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," may be helpful.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter (and its enclosure(s)) will be 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/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

Original signed by George Pangburn

George Pangburn, Director
Division of Nuclear Materials Safety

Enclosures:

1. Inspection Report No. 03014353/2005001
2. NRC Information Notice 96-28

cc:

Ian Craig, Radiation Safety Officer
State of New Jersey
Commonwealth of Pennsylvania

M. Cannan
Craig Testing Laboratories, Inc.

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U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03014353/2005001
Docket No. 03014353
License No. 29-18018-01
Licensee: Craig Testing Laboratories, Inc.
Address: P.O. Box 427
5439 Harding Highway
Mays Landing, New Jersey 08330
Other Locations Inspected: State Route 52 & U.S. Route 1
Pocopson, Pennsylvania
Inspection Dates: April 27, May 16, 2005
Additional Information Received: May 9, 2005

Inspectors:	<i>/RA/</i>	6/2/05
	_____ Donna M. Janda Health Physicist	_____ date
	<i>/RA by Sattar Lodhi Acting for/</i>	6/2/05
	_____ Craig Z. Gordon Senior Health Physicist	_____ date
Approved By:	Original signed by John D. Kinneman	June 2, 2005
	_____ John D. Kinneman, Chief Security and Industrial Branch Division of Nuclear Materials Safety	_____ date

EXECUTIVE SUMMARY

Craig Testing Laboratories, Inc.
NRC Inspection Report No. 03014353/2005001

On April 25, 2005, the President of Craig Testing Laboratories, Inc. reported that a Troxler Model 3430 portable moisture density gauge fell off a vehicle near State Route 52 and U.S. Route 1 in Pocopson, Pennsylvania and was missing. On April 27, 2005, Region I performed an announced safety inspection of Craig Testing Laboratories, Inc. at the licensee's facility in Mays Landing, New Jersey and at the area where the gauge was lost to review the incident. The gauge was found by a local citizen on April 25, 2005 and remained in his possession until the licensee was notified that the gauge was found and arranged for its return on April 29, 2005. This report summarizes the inspection results.

The inspectors identified three apparent violations:

1. Failure to control or maintain constant surveillance of licensed material that is in an unrestricted area and is not in storage is an apparent violation of 10 CFR 20.1802. (Section IV)
2. Failure to ensure that a portable nuclear density gauge or its outer container (transport case) is locked to prevent unauthorized or accidental removal of the sealed source from its shielded position is an apparent violation of Condition 17 of License No. 29-18018-01. (Section IV)
3. Failure to block and brace a package (transport case) so that it cannot change position, failure to transport radioactive material with the required information on the labels, and failure to store the shipping paper within the immediate reach of the vehicle driver when the driver is at the vehicle's controls are examples of an apparent violation of 10 CFR 71.5(a). (Section VIII)

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspectors reviewed the organization and scope of the radiation safety program.

b. Observations and Findings

NRC License No. 29-18018-01 authorizes the use of portable gauging devices containing sealed sources of cesium-137 and americium-241, of which no single source can exceed the maximum activity specified in the certificate of registration issued by the NRC or an Agreement State. The devices may be used only at temporary job sites where NRC maintains jurisdiction. The licensee possesses Troxler and Humboldt portable gauging devices, most of which are used at locations outside the main (NJ) office area. There are 26 authorized gauge users who report to the Radiation Safety Officer (RSO), who reports to the president of the company. Gauge users contact the RSO for work assignments. Each gauge user is assigned a gauge and will usually store the gauge overnight in their personal vehicle when working at temporary job sites.

c. Conclusions

No violations or safety concerns were identified.

II. Management Oversight of the Program

a. Inspection Scope

The inspectors reviewed the management and oversight of the radiation safety program.

b. Observations and Findings

The current RSO, who is also the Laboratory Manager, has been in this position since February, 2001. He supervises 26 gauge users and is also responsible for coordinating job assignments for all field workers. From interviews, the president of the company, who previously has been an authorized user and RSO on the license, was cognizant of NRC regulations and the company's radiation safety program commitments.

c. Conclusions

No violations or safety concerns were identified.

III. Facilities and Equipment

a. Inspection Scope

The inspectors reviewed the licensee's facilities and equipment.

b. Observations and Findings

On April 27, 2005, the inspectors visited the licensee's main office in Mays Landing, New Jersey. The inspectors observed the truck which belonged to the gauge user involved in the incident. The gauge user demonstrated the method used to secure the gauge in its transport case to the truck bed.

On the date of the inspection, most of the gauges were signed out to the gauge users who store them in their vehicles. The gauge users keep the gauges with them because they may move between jobs frequently. Work assignments are based on the proximity of gauge users' residences to job sites. The RSO inspects vehicles to determine the best method to secure gauges for transport.

c. Conclusions

No violations or safety concerns were identified.

IV. Material Use and Control

a. Inspection Scope

The inspectors reviewed the use and control of licensed material.

b. Observations and Findings

On April 25, 2005, an authorized gauge user for Craig Testing Laboratories, Inc. was using a Troxler Electronic Laboratories, Inc. Model 3430 (Serial No. 25540) portable moisture density gauge at the Chester County Prison (temporary job site) in Pocopson, Pennsylvania. According to the licensee, when it began to rain the gauge user stopped work, placed the gauge inside its transport case, and positioned the transport case on the rear edge of the truck bed. The gauge user attached a handle on one side of the transport case to the truck with a chain, which had several feet of slack. The gauge user did not tighten the chain, lock the transport case, or close the tailgate to a locked position. The gauge user remained in the cab of the truck for approximately 45 minutes, then departed the job site. After driving for approximately five miles, the gauge user heard a noise coming from behind the vehicle. The individual stopped the vehicle and observed the damaged transport case open on the ground but attached to the truck by the chain. The portable gauge was not in the case. The shipping papers, instruction booklet, drill rod, hammer and metal stake, which were stored in the transport case were also missing. The gauge user immediately retraced his route along U.S. Route 1 and found the instruction booklet for the gauge. The other missing items were not found.

The gauge user notified the President of Craig Testing and the construction manager for Keating Building Company (Keating), the main contractor at the Chester County job site, that the gauge was missing. The gauge user then searched for the gauge by retracing the route back to the prison property, along State Route 52 and U.S. Route 1. The gauge user also spoke with construction workers regarding the missing gauge and none reported seeing the gauge on the construction site. The gauge user made several attempts to locate the gauge along the route previously traveled, but was unsuccessful.

The construction manager for Keating notified the West Chester, Pennsylvania Police Department and the Pennsylvania State Police that the gauge was missing. The Pennsylvania Emergency Management Agency issued a press release on April 25, 2005, regarding the missing gauge. Following discussions with the inspectors, a team of Craig Testing personnel continued the search for the gauge on April 26 and 27, 2005 by walking along the route the gauge user had traveled.

On April 29, 2005, a private citizen informed Craig Testing that he had possession of the portable gauge. The licensee notified NRC Region I that the gauge was found and provided information about the individual who found the gauge. The inspectors contacted the individual and were informed that on April 25, 2005, at approximately 12:00 p.m., the individual found the gauge on U.S. Route 1 near State Route 52. The individual did not see the gauge fall off the truck. He placed the gauge in the back of his truck and then stored the gauge at his residence. He did not handle the gauge other than to put it in his truck and store it in his backyard. The individual did not observe a lock on the gauge.

The individual attempted to contact the gauge manufacturer (Troxler) on April 25, 2005, but did not receive a return phone call. On April 29, 2005, after reading an article about the missing gauge in a local newspaper, the individual contacted Craig Testing. The licensee picked up the gauge from the individual's residence. According to the licensee, the gauge was recovered in good condition with no visible damage. The licensee also noted that the gauge handle was not locked. The RSO surveyed the gauge using a Troxalert portable radiation detector to confirm the sealed sources were present. The RSO also wipe tested the gauge and sent the wipe for rush analysis.

Based on interviews of the individuals involved in the incident, areas surveys, and leak test results, it appears that no unnecessary radiation exposure occurred while the gauge was out of the licensee's control. However, review of the incident indicates that the gauge was not properly secured or controlled.

c. Conclusions

Two apparent violations related to the licensee's failure to ensure proper control of the portable gauge were identified.

Failure to control or maintain constant surveillance of licensed material that is in an unrestricted area and is not in storage is an apparent violation of 10 CFR 20.1802.

Failure to ensure that a portable nuclear density gauge or its outer container (transport case) is locked to prevent unauthorized or accidental removal of the sealed source from its shielded position is an apparent violation of Condition 17 of License No. 29-18018-01.

V. Training of Workers

a. Inspection Scope

The inspectors reviewed the gauge user's training and the licensee's training program.

b. Observations and Findings

The inspectors verified that the gauge user was trained to use the gauge and that training was current. During an interview with the gauge user on April 27, 2005, the gauge user described the method used to secure the gauge to the truck bed. The gauge user attached one side of the transport case to the truck with a chain and then locked it. It was noted that the chain had several feet of slack which allowed the transport case to move around in the truck bed. The licensee's RSO provides instruction to gauge users every six months regarding proper blocking and bracing techniques. The RSO also inspects gauge users' vehicles on an unannounced basis by visiting one job site per month and by inspecting vehicles at the main office when available.

c. Conclusions

No violations or safety concerns were identified. The failure to properly block and brace the transport case is described in Section IX, Transportation.

VI. Radiation Surveys

a. Inspection Scope

The inspectors reviewed the licensee's leak test results for the missing gauge.

b. Observations and Findings

The missing gauge was leak tested at the required six month interval. The latest routine leak test result from December 18, 2004, and the leak test result after the gauge was returned to the licensee on April 29, 2005, indicated no contamination.

c. Conclusions

No violations or safety concerns were identified.

VII. Radiation Protection

a. Inspection Scope

The inspectors reviewed the gauge user's radiation exposure history.

b. Observations and Findings

The inspectors reviewed the licensee's radiation exposure records for the gauge user. The licensee uses Landauer Luxel dosimeters that are exchanged quarterly. Landauer is a NVLAP-approved processing facility. The gauge user received an exposure of 128 millirem for calendar year 2004.

c. Conclusions

No violations or safety concerns were identified.

VIII. Transportation

a. Inspection Scope

The inspectors reviewed the transportation of the missing portable gauge.

b. Observations and Findings

The inspectors interviewed the gauge user about the circumstances surrounding transportation of the missing portable gauge and visited the area where the incident occurred. A detailed description of the incident is provided in Section IV, Material Use and Control. The transport case containing the portable gauge was not properly secured (i.e. blocked and braced) to the vehicle. The gauge user had attached a handle on one side of the transport case to the truck with a chain which was then padlocked. The chain had several feet of slack. The gauge user did not tighten the chain, lock the transport case, or close the tailgate. In addition, the shipping papers were stored in the transport case with the gauge, not within the immediate reach of the vehicle driver as required. After driving for approximately five miles, the gauge user heard a noise, stopped the vehicle and observed the damaged transport case open on the ground still attached to the truck by the chain. However, the gauge, shipping papers, hammer, charger and drill rod were missing from the case.

The inspectors observed the labels on the transport case used to carry the missing gauge. The transport case had two Radioactive Yellow-II labels, one on each side of the case. One label did not list the transport index and the second label did not list the radionuclides, their respective activities, or the transport index as required.

c. Conclusions

Examples of the licensee's failure to comply with the applicable requirements of Department of Transportation regulations when transport of radioactive material is on public highways include:

1. Failure to block and brace packages so that they cannot change position during conditions normally incident to transportation is an apparent violation of 10 CFR 71.5(a) and 49 CFR 177.842(d).
2. Failure to store the shipping paper within the immediate reach of the vehicle driver when the driver is at the vehicle's controls is an apparent violation of 10 CFR 71.5(a) and 49 CFR 177.817(e)(2)(i).
3. Failure to have the required information on the labels of the transport case is an apparent violation of 10 CFR 71.5(a) and 49 CFR 172.403.

IX. Exit Meeting

The initial findings of the inspection were discussed during a meeting with the RSO and President at the conclusion of the inspection on April 27, 2005. The RSO indicated that he would notify all Craig Testing gauge users of the circumstances surrounding the loss of the gauge and would reinforce the requirements for gauge security and for properly blocking and bracing the transport cases. In addition, the RSO indicated he would have all of the transport cases inspected to ensure all required labels are properly completed.

On May 16, 2005, the inspectors discussed the results of the inspection and apparent violations identified during the inspection by telephone with the President and RSO. The RSO informed all portable gauge users of the circumstances surrounding the loss of the gauge and reinforced the need to lock the gauges and transport cases and properly block and brace the transport cases prior to transport. In addition, the RSO confirmed with each gauge user that the user had sufficient chains and locks to properly secure the transport cases to the vehicles. The RSO performed spot checks of vehicles to observe that the portable gauges were properly blocked and braced. In addition, the licensee plans to demonstrate proper blocking and bracing techniques to all gauge users during their June 2005 safety meeting.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

#* M. Cannan, President

#* I. Craig, RSO

W. Bewley, authorized gauge user

Individual present at entrance meeting

* Individual present at exit meeting