



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

July 13, 2007

Docket No. 03037214  
EA No. 07-166

License No. 20-16401-03

Paul Skorohod  
President/ Radiation Safety Officer  
PK Associates, Inc.  
dba Briggs Engineering & Testing  
P.O. Box 369  
Rockland, MA 02370

SUBJECT: INSPECTION 03037214/2007001, PK ASSOCIATES, INC., MASHANTUCKET,  
CONNECTICUT CONSTRUCTION SITE

Dear Mr. Skorohod:

On March 14 and 15, 2007, Craig Gordon of this office conducted a safety inspection of activities authorized by the above listed NRC license at your Mashantucket, Connecticut facility. The inspection was an examination of your licensed activities as they relate to radiation safety and to compliance with the Commission's regulations and the license conditions. The inspection consisted of observations by the inspector, interviews with personnel, and a selected examination of representative records. The findings of the inspection were discussed with you on March 19, 2007, at the conclusion of the inspection and during a subsequent telephone conversation with you on July 13, 2007. The enclosed report presents the results of this inspection.

Based on the results of this inspection, two apparent violations were identified including one that is being considered for escalated enforcement in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy). The current Enforcement Policy is included on the NRC's Website at [www.nrc.gov](http://www.nrc.gov); select **Site Map**, then **Enforcement Policy**. The first apparent violation occurred when you did not use any physical controls that formed tangible barriers to secure a portable nuclear gauge from unauthorized removal, while the gauge was not under the control and constant surveillance of the authorized user, as required by 10 CFR 30.34(i). The regulation requires that a portable gauge licensee use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal whenever the portable gauges are not under control and constant surveillance of the licensee. The second violation, which is not being considered for escalated enforcement, involved the failure to block and brace the portable gauge transport case, so that it could not change position during transport, as required by 49 CFR 177.842(d).

Regarding the first violation, a civil penalty may not be warranted for this violation, as provided in Section VI.C.2 of the Enforcement Policy, because your facility has not been subject to escalated enforcement action for the last two years, and based on our understanding, you took prompt and comprehensive corrective actions to prevent reoccurrence. Specifically, you trained

the two authorized users regarding the requirements for maintaining security of the gauge when being used at field locations.

The NRC has concluded that it has sufficient information to make an enforcement decision, because the information regarding the reason for the apparent violations, the corrective actions taken to correct the violations and prevent recurrence, and the date when full compliance was achieved are already adequately addressed as described in the enclosed inspection report. Before the NRC makes its enforcement decision, however, we are providing you an opportunity to either (1) respond to the apparent violations addressed in this inspection report within 30 days of the date of this letter, or (2) request a predecisional enforcement conference (PEC).

Please contact Marie Miller at (610) 337-5205 within ten days of the date of this letter, to inform us as to which of the above two options you choose. Please note that you are not required to provide a written response or attend a PEC, unless the description of the corrective actions, or the factual information in the enclosed inspection report, does not accurately reflect your corrective actions or your position on this matter. Also, be advised that a PEC is typically open for public observation and is announced to the public by issuing a press release.

If you choose to respond in writing, your response should be clearly marked as a "Response to Apparent Violations in Inspection Report No. 03037214/2007001" 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. In presenting your corrective action, 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 the enclosed NRC Information Notice 96-28, "SUGGESTED GUIDANCE RELATING TO DEVELOPMENT AND IMPLEMENTATION OF CORRECTIVE ACTION," may be helpful. Your response should be submitted under oath or affirmation and may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. 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. To the extent possible, your response should not include any personal privacy, proprietary, or security sensitive information, so that it can be made available to the public without redaction.

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. You will be advised by separate correspondence of the results of our deliberations on this matter.

Current NRC regulations are included on the NRC's website at [www.nrc.gov](http://www.nrc.gov); select **Nuclear Materials; Medical, Industrial, and Academic Uses of Nuclear Material**; then **Regulations, Guidance, and Communications**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 7:00 a.m. to 8:00 p.m. EST, Monday through Friday (except Federal holidays).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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 Accessible Records (PARS) component of the 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 Mary Muessle***

Brian Holian, Director  
Division of Nuclear Materials Safety

Enclosure:

1. Inspection Report No. 03037214/2007001
2. NRC Information Notice 96-28

cc:

Commonwealth of Massachusetts  
State of Connecticut

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Brian Holian, Director  
Division of Nuclear Materials Safety

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cc:

Commonwealth of Massachusetts  
State of Connecticut

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

INSPECTION REPORT

Inspection No. 03037214/2007001  
Docket No. 03037214  
License No. 20-16401-03  
Licensee: PK Associates, Inc.  
dba Briggs Engineering & Testing  
Address: P.O. Box 369  
Rockland, Massachusetts 02370  
Locations Inspected: Mashantucket, Connecticut  
Inspection Dates: March 14-15, 2007

Inspector:	<b><i>Original signed by CGordon</i></b>	<b><i>7/3/07</i></b>
	_____ Craig Z. Gordon Senior Health Physicist	_____ date
Approved By:	<b><i>Original signed by MMiller</i></b>	<b><i>7/13/07</i></b>
	_____ Marie Miller, Chief Materials Security and Industrial Branch Division of Nuclear Materials Safety	_____ date

## **EXECUTIVE SUMMARY**

PK Associates, Inc.  
dba Briggs Engineering & Testing  
NRC Inspection Report No. 03037214/2007001

On March 14 and 15, 2007, Region I performed an unannounced safety inspection of PK Associates, Inc. (PKA) at the licensee's facility located at 12 Trolley Line Boulevard, Mashantucket, Connecticut. Upon arrival at the site the inspector found a Troxler Model 3430 portable moisture density gauge containing approximately cesium-137 and americium-241 left unattended in an outdoor construction area adjacent to a new parking garage. The portable nuclear gauge was left by itself near construction personnel and vehicles. Although the authorized gauge user was present in the general area, the inspector observed that on two separate occasions the gauge user walked around the corner of the parking garage away from the gauge and out of its direct line of sight.

Inspection of the gauge user's vehicle identified two concerns with the manner in which the gauge was maintained in the vehicle and transported on the construction site. The gauge was stored without two independent physical controls to secure it from unauthorized removal whenever the gauge was not under the control and constant surveillance of the user. In addition, the gauge was stored in the rear of an unlocked vehicle without the transport case, then transported in the vehicle without being blocked and braced properly.

Two apparent violations of NRC requirements were identified: (1) failure to use a minimum of two independent physical controls that form tangible barriers to secure the portable gauge from unauthorized removal when the portable gauge was not under the control and constant surveillance of the licensee, as required by 10 CFR 30.34(i); and (2) failure to block and brace a package (transport case) containing radioactive material, so that it cannot change position during conditions normally incident to transportation in accordance with 49 CFR 177.842(d), as required by 10 CFR 71.5(a)

## **REPORT DETAILS**

### **I. Organization and Scope of the Program**

a. Inspection Scope

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

b. Observations and Findings

NRC License No. 20-16401-03 (a new license) was issued to PK Associates, Inc. on June 6, 2006 to authorize the use of portable gauging devices containing sealed sources of cesium-137 (Cs-137) and americium-241 (Am-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 the licensee's Connecticut site and at temporary job sites where NRC maintains jurisdiction. Most work under this license was performed at the Mashantucket, Connecticut construction site using one Troxler and one Humboldt portable gauging devices. Corporate direction and management oversight of the program by the Radiation Safety Officer (RSO) was provided from the licensee's main office located in Rockland, Massachusetts.

Two Authorized Users (AUs) were assigned to the Connecticut site. They reported to a senior site staff member from PKA, who provided management of activities related to gauge use. The inspector observed that the portable nuclear gauges were properly stored and secured in a locked room inside a locked construction trailer. The AUs have keys to remove the gauges from this storage location when needed for field use.

c. Conclusions

No safety concerns or violations were identified.

### **II. Material Receipt, Use, Transfer, and Control**

a. Inspection Scope

The inspector reviewed the receipt, use, transfer, and control of licensed material.

b. Observations and Findings

On March 14 and 15, 2007, the inspector visited the licensee's Mashantucket, Connecticut office to inspect the radiation control program for maintaining portable gauges, equipment, and transport vehicles used in field operations.

Upon entry into the storage trailer the inspector found an empty case for the Troxler gauge and was informed by PKA staff that the gauge was being used in the field. When the inspector arrived at the work area the gauge was found to be left by itself adjacent to a new parking garage in close proximity to construction personnel and vehicles. Although the gauge user was present in the general area, he was not located near the gauge. While the inspector observed the operation, it was noted that on two separate occasions the AU walked around the corner of the parking garage away from the gauge and out of its direct line of sight. Each time, the AU was away from the gauge for approximately 5-10 minutes.

The AU was interviewed. He explained that he left the area, because he needed additional equipment and related materials stored in his vehicle. Employee parking was restricted throughout the site so he was required to park his vehicle in a designated area on the opposite side of the construction area. The inspector discussed the concern about leaving the gauge unattended in an unsecured area where there was a potential for unauthorized removal. Since work was nearly complete for the day, the gauge user removed the gauge from the construction area and placed it in his vehicle. The gauge remained in the vehicle, while the user performed other work back in the construction area until the work day was completed.

Before leaving the construction parking area, the AU demonstrated the method used to transport the gauge stored in his vehicle to different construction locations around the site. He stated that at the beginning of the work day, the gauge is removed from the storage area in the office trailer and taken out of the transport case, then placed in the rear of his vehicle and driven to the work location. Gauges are returned to the locked storage area at the end of each work day.

When not in use for extended periods at the job site, the gauge is stored in the rear of user's sport utility vehicle until needed. The AU indicated that the vehicle was not always locked when the gauge was stored inside, and, at the time of the inspection, the vehicle was found with the doors unlocked and a window ajar. In addition, the gauge was not blocked and braced in the vehicle prior to transferring it back to the office trailer. The concern over improperly securing the gauge during transport was also discussed with the gauge user. Two apparent violations of NRC requirements were identified. 10 CFR 30.34(i) requires that each portable gauge licensee 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. Failure to block and brace a package containing radioactive material so that it 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).

c. Conclusions

The Troxler gauge was not properly controlled or secured during field use. Two apparent violations were identified. The licensee failed 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, an apparent violation of 10 CFR 30.34(i). The licensee failed to block and brace a package containing radioactive material so that they cannot change position during conditions normally incident to transportation, an apparent violation of 10 CFR 71.5(a) and 49 CFR 177.842(d).

### **III. Exit Meeting**

On March 19, 2007, the inspector contacted the Radiation Safety Officer, who is also President of the Company by telephone to discuss the initial findings of the inspection and the apparent violations identified. He acknowledged the concerns related to security and control of gauges used in the field and indicated that he would review the issues with PKA staff and the two AUs, and would reinforce the requirements for gauge security and control. On July 13, 2007, the licensee summarized the corrective actions regarding the additional training for the two AUs and stated that all corrective actions were completed by March 19, 2007. The inspector informed the licensee that a written report of the inspection will be sent that will describe the inspection findings.

### **PARTIAL LIST OF PERSONS CONTACTED**

#### Licensee

B. Carter, Authorized User  
M. Maciag, Senior Technician  
P. Skorohod, Radiation Safety Officer\*

\*Denotes attendance at telephone exit meetings on March 19 and July 13, 2007.