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

July 14, 2006

Docket No. 03013255 License No. 47-17742-01
EA No. 06-150
NMED Item No. 060183

Dennis C. Chambers, P.E.
Vice President
Triad Engineering, Inc.
P. O. Box 889
Morgantown, WV 26505

SUBJECT: TRIAD ENGINEERING, INC., NRC SPECIAL INSPECTION REPORT NO. 03013255/2006001

Dear Mr. Chambers:

This refers to the special inspection conducted on May 8, and June 14, 2006, at your facilities in Winchester and Purcellville, Virginia. The purpose of the inspection was to review the circumstances surrounding the event that you reported to the NRC Operations Center on March 14, 2006. The event occurred when one of your portable nuclear density gauges fell off a pick-up truck being driven by a Triad employee and landed on a public road. The enclosed report presents the results of this inspection.

Based on the results of this inspection, two 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's Web site at www.nrc.gov; select **What We Do**, **Enforcement**, then **Enforcement Policy**. The apparent violations include (1) failure to secure a portable gauge from unauthorized removal by using a minimum of two independent physical controls that form tangible barriers, and (2) failure to secure the transport container to prevent shifting during normal transport conditions. Since the NRC has not made a final determination in this matter, no Notice of Violation is being issued for these inspection findings at this time. 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.

An open predecisional enforcement conference to discuss these apparent violations has been scheduled for August 9, 2006, at 1:00 p.m. 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 taken. This conference is being held to obtain information to assist the NRC in making an enforcement decision. This 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. The conference will provide an opportunity for you to provide your perspective on these matters and any other information that you believe the NRC should take into consideration in making an enforcement decision. 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 excerpt from 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 will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Sincerely,

/RA/

George Pangburn, Director
Division of Nuclear Materials Safety

Docket No. 030-13255
License No. 47-17742-01

Enclosures:
1. Inspection Report No. 03013255/2006001
2. Excerpt from NRC Information Notice 96-28

cc:
Roger A. Simar, Radiation Safety Officer
State of West Virginia
Commonwealth of Virginia

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REGION I

INSPECTION REPORT

EA No.	06-150
NMED Item No.	060183
Inspection No.	03013255/2006001
Docket No.	03013255
License No.	47-17742-01
Licensee:	Triad Engineering, Inc.
Address:	P.O. Box 889 Morgantown, WV 26505
Locations Inspected:	Winchester and Purcellville, VA
Inspection Dates:	May 8, 2006, and June 14, 2006

Inspector: ***/RA by Sattar Lodhi Acting For*** ***July 10, 2006***

Richard Ladun — date
Health Physicist

Approved By: ***Original signed by Judith A. Joustra*** ***July 10, 2006***

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

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EXECUTIVE SUMMARY

Triad Engineering, Inc.
NRC Inspection Report No. 03013255/2006001

NRC Region I conducted an special inspection on May 8, 2006, to review the circumstances surrounding the event that was reported to the NRC Operations Center (Event No. 42417, NMED Item No. 060183) on March 14, 2006, by the licensee. The event occurred on March 14, 2006, during transport of a portable nuclear density gauge from the licensee's Purcellville, VA field office to a temporary job site. An authorized user was transporting the gauge in an open-bed pickup truck. The gauge was stored in its locked transport container. The transport container had not been secured to the vehicle, and the tailgate of the vehicle was not closed. When the vehicle turned onto a public roadway from the facility's driveway, the transport container containing the gauge fell off the vehicle and landed on the public roadway. The authorized user (driver) did not realize that the transport container had fallen off his vehicle until two members of the public who were working nearby alerted him of the event. The members of the public also alerted the local police who called the local Fire Marshall.

The gauge was a Troxler Electronic Laboratories Model 3411 portable gauge and contained a 40 millicurie sealed source of americium 241, and an 8.7 millicurie sealed source of cesium 137. The container and the gauge were not damaged and there was no exposure to members of the public.

The licensee's corrective actions included providing mandatory refresher training to its employees. The details of the event, and the licensee's corrective actions are documented in the licensee's 30-day report (ML061150550) dated April 10, 2006.

The inspection identified two violations of NRC requirements: (1) Failure to use two independent physical controls that form tangible barriers to secure the portable gauge from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee (10 CFR 30.34(i)); and (2) Failure to block and brace the device so that it does not move during normal transportation (49 CFR173.448(a)).

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspection included a review of licensee's activities, and organizational structure.

b. Observations and Findings

The licensee is an engineering company and maintains NRC License No. 47-17742-01 that authorizes use of portable nuclear moisture/density gauges at temporary job sites within NRC jurisdiction. The license authorizes storage of gauges at the licensee's field offices located in Morgantown and St. Albans in West Virginia; and Winchester, Virginia. The licensee also has a field office in Purcellville, Virginia, but it is not an authorized storage location and gauges are not stored at this location. The licensee has a corporate Radiation Safety Officer (RSO), and each field office has a designated individual who acts as RSO for the office. The field office RSO responsible for radiation safety activities for this event has oversight of the Winchester, VA field office.

c. Conclusions

The inspection did not identify any violations or safety concerns.

II. Notification of the Event

a. Inspection Scope

The inspection included a review of the notification of the event (Event No. 42417, NMED Item No. 060183) and the required 30 day report (10 CFR 30.50(b)(2)).

b. Observations and Findings

On March 14, 2006, the licensee made the following notification to the NRC Operations Center:

> As a licensee employee was leaving the office in Purcellville, VA, in his truck, he was stopped at a nearby intersection by bystanders. They informed him that an object (a Troxler gauge in its case) had fallen from the open tailgate of his truck. Local police responded to the incident and contacted the fire marshal who told the officer that the device in its case was designed for that type of an impact. The gauge remained intact and no radiation exposures were reported. The Troxler moisture density gauge is a model # 3411, containing Am-241 (40 millicuries) and Cs-137 (8.7 millicuries) in sealed forms. The employee loaded and secured the case containing the gauge and proceeded to the job site. The licensee will perform a leak test on the gauge. The licensee is holding mandatory gauge refresher training for their employees as a corrective action to this incident.

On April 10, 2006, the licensee submitted to the NRC the required 30-day event report (ML061150550). The report described the event in detail and provided immediate and long term corrective actions which were implemented by the licensee.

c. Conclusions

The licensee made timely notification of the event and provided the written report within 30 days of the notification as required by 10 CFR 30.50(b)(2). The inspection did not identify any violations or safety concerns.

III. Follow-up of the Event by NRC

a. Inspection Scope

The inspection included an on-site visit to the Winchester and Purcellville field offices, interviews of personnel, and review of selected documents.

b. Observations and Findings

From the interviews of personnel and a review of licensee's records, the inspector developed the following sequence of events:

On the morning of March 14, 2006, an authorized user (AU) brought a Troxler Electronic Laboratories Model 3411 portable gauge from an authorized storage location in Winchester to provide it to another AU at the licensee's Purcellville field office. At approximately 7:45 a.m. the same morning, the designated AU took possession of the portable gauge in its locked container and loaded it in his assigned licensee-owned open-bed pickup for transport to a temporary job site. The AU did not block and brace the container to prevent it from moving within the vehicle during transport nor did he secure it to the pickup as is required by the NRC and DOT regulations.

49 CFR 173.448(a) requires that packages of radioactive materials be secured to prevent shifting during normal transportation conditions. 10 CFR 30.34(i) requires that licensee use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal whenever the device is not under the control and constant surveillance of the licensee.

Additionally, the AU did not close the tailgate of the pickup before leaving the loading area and drove approximately 500 yards on a driveway leading from the Purcellville field office to a public road. He stopped at a stop sign located at the intersection of the driveway and public road. As he proceeded to pull away from the stop sign onto the public road, the transport container containing the portable gauge fell off the pickup and landed on a public road. The AU continued on his way without realizing that the container had fallen off until he was alerted by two members of the public (city workers) who told him that the container had fallen off of his vehicle. The city workers also alerted the local police who happened to be in the area when the event occurred.

The AU turned around and retrieved the container. The police arrived at the scene as the AU finished reloading and securing the container. The police contacted the local Fire Marshall and also the licensee's field office manager. The AU also contacted the field office manager and informed him of the event. The field office manager then contacted the corporate RSO and informed him of the event.

The Fire Marshall surveyed and examined the container and the gauge and determined that neither the container or the gauge appeared to have been damaged in the fall and that they were safe for transport.

After the container was properly prepared and secured for transportation, another AU returned the pickup with the gauge to the Purcellville field office. Later that same day the gauge was transported back to the Winchester field office for storage until a leak test could be performed. The licensee did not use the gauge until it received the leak test results that confirmed that there was no leakage of licensed material from the gauge.

The inspector examined the gauge (#16) and its transport container and surveyed the gauge. The transportation container did not have visible signs of damage. The survey of the gauge also did not indicate any abnormal radiation levels at its surface or in its vicinity.

c. Conclusions

The inspection identified two violations. The AU did not use two physical barriers to secure the portable gauge from unauthorized removal when the device was not under his control and constant surveillance. This is a violation of 10 CFR 30.34(i). The AU did not secure the container to prevent it from shifting during transport. This is a violation of 49 CFR 173.448(a).

IV. Training of Workers

a. Inspection Scope

The inspection included discussions with personnel and review of training documentation to verify adequacy of the licensee's training program.

b. Observations and Findings

Discussions with the Purcellville field office manager indicated that the licensee provided adequate training to authorized users. The licensee maintained records of training of its authorized users. The field office RSO stated that the AU's performance in the past had been satisfactory and a review of licensee's records indicated that the individual had received the required initial and periodic refresher training.

The RSO stated that as a result of the event the technician's employment was terminated and refresher training was provided to all AUs. The refresher training was provided on March 16, 2006, and thirteen authorized users attended the training.

c. Conclusions

The inspector confirmed that the licensee provided refresher training to its authorized users at its Winchester field office. The inspection did not identify any violations or safety concerns.

V. Transportation

a. Inspection Scope

The inspection included the observation of vehicles returning from the licensee's temporary job sites.

b. Observations and Findings

The inspector observed licensee vehicles that are used by personnel to transport gauges to temporary job sites from the Winchester field office. The gauges in the vehicles that were returning to the field office from temporary job sites were appropriately stored in the vehicles and were properly secured from unauthorized removal. Each had two independent physical controls (chains and locks) that formed tangible barriers to secure portable gauges from unauthorized removal. The transport containers were properly secured to prevent movement during transport as required by the NRC and the DOT regulations.

c. Conclusions

The inspection did not identify any violations or safety concerns.

VI. Exit Meeting

a. Inspection Scope

The inspector summarized the preliminary findings.

b. Observations and Findings

The inspector discussed preliminary findings with the licensee on May 8, 2006, and on June 14, 2006, during a telephone discussion with the manager of the Purcellville field office. The inspector explained the two apparent violations that were identified during the inspection. The licensee stated that the gauge was always in control of the AU except for a short duration. The licensee further stated that immediate corrective actions were taken which included termination of the AU's employment and institution of a mandatory refresher training program.

c. Conclusions

The inspector explained to the licensee that NRC management will make final decision on these findings and any enforcement action.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Simar, Corporate RSO#
L. Winters, RSO, Winchester field office
R. Holstead, Manager, Purcellville field office*

contacted by phone
* attended exit meeting