



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

July 29, 2015

EA-15-141

Ms. Kathy Banicki, President  
Testing Engineers & Consultants, Inc.  
1343 Rochester Road  
Troy, MI 48083

SUBJECT: NRC SPECIAL INSPECTION REPORT NO. 03014016/2015001(DNMS) –  
TESTING ENGINEERS & CONSULTANTS, INC.

Dear Ms. Banicki:

On June 19, 2015, with continued in-office review through June 29, 2015, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a post escalated enforcement inspection to follow up on the corrective actions your staff implemented to prevent violations that were identified during the last inspection. The in-office review included receipt and review of information that was not available during the onsite inspection, including information about the annual audit of your radiation protection program. Mr. Robert Gattone of my staff held an exit meeting with Mr. Gary Putt of your staff on June 29, 2015, to discuss the inspection findings.

During this inspection, the NRC staff examined activities conducted under your license related to public health and safety. Additionally, the staff examined your compliance with the Commission's rules and regulations as well as 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.

Based on the results of this inspection, one apparent violation of NRC requirements was identified and is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violation concerned the licensee's failure to secure from unauthorized removal or access licensed materials that were stored in controlled or unrestricted areas and failure to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee at the licensee's Troy facility, as required by Title 10 of the *Code of Federal Regulations* (CFR) 20.1801 and 10 CFR 30.34(i).

Because the NRC has not made a final determination in this matter, the NRC is not issuing a Notice of Violation for this inspection finding at this time. The circumstances surrounding this apparent violation, the significance of the issue, and the need for lasting and effective corrective action were discussed with your aforementioned staff member at the inspection exit meeting on June 29, 2015.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond in writing to the apparent violation addressed in this inspection report within 30 days of the date of this letter; (2) request a Predecisional 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. **Please contact Aaron McCraw, Chief, Materials Inspection Branch, at 630-829-9650 within ten days of the date of this letter to notify the NRC of your intended response.**

If you choose to provide a written response, it should be clearly marked as "Response to the Apparent Violation in Inspection Report No. 03014016/2015001(DNMS); EA-15-141," and should include, for the 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 was or will be achieved. 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 violation. The guidance in NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," may be useful in preparing your response. You can find the information notice on the NRC website at: <http://www.nrc.gov/reading-rm/doc-collections/gen-comm/info-notices/1996/in96028.html>. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on the apparent violation and any other information that you believe the NRC should take into consideration before making an enforcement decision. The topics discussed during the conference may include the following: 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 to be taken.

In lieu of a PEC, you may also 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 third party neutral. The technique that the NRC has decided to employ is mediation. Mediation is a voluntary, informal process in which a trained neutral (the "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 Institute on Conflict Resolution (ICR) at Cornell University 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.

In addition, please be advised that the number and characterization of the 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.

Based on the results of this inspection, the NRC has determined that 2 Severity Level IV violations of NRC requirements occurred. The violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violations concerned the licensee's failure to affix Department of Transportation (DOT) labels on a package containing a gauge prior to transport as required by 10 CFR 71.5(a) and 49 CFR 172.403, and failure to block and brace a package containing a gauge during transport such that it could not change position during conditions normally incident to transportation as required by 10 CFR 71.5(a) and 49 CFR 177.842. The violations are cited in the enclosed Notice of Violation (Notice). The NRC is citing the violations in the enclosed Notice because the inspector identified them.

The inspector determined that the root cause of these violations were licensee oversight for the labels violation, and the authorized user (AU) previously using a different pickup truck for transporting gauges which required a different means to block and brace the package during transport. As corrective actions to restore compliance and to prevent recurrence, the licensee committed to ensure that all of its gauge packages have the required DOT labels. In addition, the licensee committed to verify that all of the gauge packages have the required DOT labels every 3 months and during its annual audit of its radiation protection program. The licensee also committed to use chains instead of cables to block and brace gauge packages during transport because the chains provide more options for loosening and tightening versus the cables to prevent package movement during normal transportation.

The NRC has concluded that information regarding the reason for the Severity Level IV violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance will be achieved is already adequately addressed on the docket in the enclosed inspection report. Therefore, you are not required to respond to these violations unless the description in the enclosed Inspection Report does not accurately reflect your corrective actions or your position. In that case, or if you choose to provide additional information, you should follow the instructions specified in the enclosed Notice.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made publicly available without redaction.

K. Banicki

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Please feel free to contact Robert Gattone of my staff if you have any questions regarding this inspection. Mr. Gattone can be reached at 630-829-9823.

Sincerely,

***/RA by Julio F. Lara Acting for/***

Patrick L. Loudon, Director  
Division of Nuclear Materials Safety

Docket No. 030-14016  
License No. 21-18668-01

Enclosures:

1. Notice of Violation
2. Inspection Report No. 03014016/2015001(DNMS)

cc w/encl: Gary Putt, Radiation Safety Officer  
State of Michigan

K. Banicki

-4-

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cc w/encl: Gary Putt, Radiation Safety Officer  
State of Michigan

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## NOTICE OF VIOLATION

Testing Engineers & Consultants, Inc.  
Troy, Michigan

License No. 21-18668-01  
Docket No. 030-14016  
EA-15-141

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted on June 19, 2015, with continued in-office review through June 29, 2015, two violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

Title 10 of the *Code of Federal Regulations* (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 107, 171-180, and 390-397.

- A. Title 49 CFR 172.403 requires, in part, with exceptions not applicable here, that Each package of radioactive material be labeled, as appropriate, with two RADIOACTIVE WHITE-I, RADIOACTIVE YELLOW-II, or RADIOACTIVE YELLOW-III labels on opposite sides of the package. The contents, activity, and transport index must be entered in the blank spaces on the label using a legible and durable, weather resistant means. The contents entered on the label must include the name or abbreviation (e.g., 99Mo) of the radionuclides as taken from the listing in 49 CFR 173.435, or for mixtures of radionuclides, those nuclides determined in accordance with the provisions of 49 CFR 173.433(f), with consideration of space available on the label. The activity must be expressed in terms of the appropriate SI units (e.g., Becquerel, Terabecquerel etc...), or in terms of appropriate SI units followed by customary units (e.g., curies, millicuries, or microcuries).

Contrary to the above, on June 18, 2015, the licensee transported outside the confines of its plant approximately 8 millicuries of cesium-137 and 40 millicuries of americium-241 in a portable gauge without the required RADIOACTIVE YELLOW-II labels.

This is a Severity Level IV violation (Section 6.8.d.5.).

- B. Title 49 CFR 177.842 requires, in part, that packages of radioactive materials be so blocked and braced that they cannot change position during conditions normally incident to transportation.

Contrary to the above, on June 18, 2015, the licensee transported a package containing approximately 8 millicuries of cesium-137 and 40 millicuries of americium-241 in a portable gauge, on a public highway, and the package was not blocked and braced such that it could not change position during conditions normally incident to transportation. Specifically, the licensee used two cables that were affixed

to the pickup truck bed and the package containing the gauge; however, the cables were loose enough to allow the package to slide laterally and about a foot forward from the truck's tail gate. In addition, the package was able to rotate 90 degrees on its long axis.

This is a Severity Level IV violation (Section 6.8.d.5.).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence, and the date when full compliance was achieved, is already adequately addressed on the docket in the subject inspection report. However, you are required to submit a written statement or explanation pursuant to 10 CFR 2.201 if the description therein does not accurately reflect your corrective actions or your position. In that case, or if you choose to respond, clearly mark your response as a "Reply to a Notice of Violation, Inspection Report No. 03014016/2015001 (DNMS)" and send it to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region III, within 30 days of the date of the letter transmitting this Notice.

If you choose to respond, your response will be made available electronically for public inspection in the NRC's Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>. Therefore, to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 29<sup>th</sup> day of July, 2015.

**U.S. Nuclear Regulatory Commission  
Region III**

Docket No.	030-14016
License No.	21-18668-01
Report No.	03014016/2015001(DNMS)
EA No.	EA-15-141
Licensee:	Testing Engineers & Consultants, Inc.
Facility:	1343 Rochester Road Troy, Michigan
Inspection Date:	June 19, 2015, with continuing in-office review through June 29, 2015
Exit Meeting Date:	June 29, 2015
Inspector:	Robert G. Gattone, Jr. Senior Health Physicist
Approved By:	Aaron T. McCraw, Chief Materials Inspection Branch Division of Nuclear Materials Safety



## **EXECUTIVE SUMMARY**

### **Testing Engineers & Consultants, Inc. NRC Inspection Report No. 03014016/2015001(DNMS)**

During the last inspection of Testing Engineers & Consultants, Inc. completed in November 2014, the licensee was cited with a Severity Level III violation of 10 CFR 20.1801 and 10 CFR 30.34(i) for failure to secure from unauthorized removal or access licensed materials that were stored in controlled or unrestricted areas and failure to use a minimum of two independent physical controls that form tangible barriers to secure the gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee at temporary job sites. As a result, on June 19, 2015, with continued in-office review through June 29, 2015, an inspector conducted a post escalated enforcement inspection to follow up on the licensee's corrective actions to prevent violations that were identified during the last inspection. The in-office review included receipt and review of information that was not available during the onsite inspection, including information about the licensee's annual audit of its radiation protection program.

The inspector noted that the licensee implemented corrective actions to comply with 10 CFR 20.1801 and 10 CFR 30.34(i) when the gauges were secured at temporary job sites; however, the inspector identified an apparent violation of 10 CFR 20.1801 and 10 CFR 30.34(i) involving licensee means to secure from unauthorized removal or access licensed materials that were stored in controlled or unrestricted areas and failure to use a minimum of two independent physical controls that form tangible barriers to secure the gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee at the licensee's Troy facility. The inspector determined that the root cause of the apparent violation was licensee oversight. As corrective action, the licensee committed to lock at all times, an interior door that allowed passage from the common area/lobby to the licensee's leased space in the building. In addition, the licensee was considering adding a second independent lock on the storage room door to establish an independent, second physical barrier to prevent unauthorized removal of the gauges from the storage room.

The inspector also identified two violations involving licensee failure to: (1) affix Department of Transportation (DOT) labels on a package containing a gauge prior to transport as required by 10 CFR 71.5(a) and 49 CFR 172.403; and (2) block and brace a package containing a gauge during transport such that it could not change position during conditions normally incident to transportation as required by 10 CFR 71.5(a) and 49 CFR 177.842. The inspector determined that the root cause of the labels violation was licensee oversight. As corrective action, the licensee committed to ensure that all of its gauge packages have the required DOT labels. In addition, the licensee committed to verify that all of the gauge packages have the required DOT labels every 3 months and during its annual audit of its radiation protection program. The inspector determined that the root cause of the block and brace violation was that the authorized user previously used a different pickup truck for transporting gauges which required a different means to block and brace the package during transport. As corrective action, the licensee committed to use chains instead of cables to block and brace gauge packages during transport because the chains provide more options for loosening and tightening versus the cables to prevent package movement during normal transportation.

In addition, the inspector noted that the licensee implemented corrective actions to prevent previously cited violations regarding failure to include the required shipping description for the licensed material including the identification number on shipping papers, and failure to audit its radiation protection program at least annually.

## **REPORT DETAILS**

### **1 Program Overview and Inspection History**

Testing Engineers & Consultants, Inc. (licensee) is authorized under U.S. Nuclear Regulatory Commission (NRC) Materials License No. 21-18668-01 to use licensed material for measuring physical properties of materials with nuclear gauging devices. Licensed material is authorized to be used at the licensee's facilities in Troy and Ann Arbor, Michigan and at temporary job sites of the licensee anywhere in the United States where the NRC maintains jurisdiction for regulating the use of licensed material. The licensee possessed and used 38 Troxler portable gauges for measuring physical properties of materials at authorized locations. The gauges had low millicurie quantities of cesium-137 and americium-241 in sealed sources. The licensee had 26 employees at the Troy facility, and 21 of them were authorized gauge users (AUs).

The licensee was last inspected by the NRC in Troy, Michigan on November 6, 2014. As a result of that inspection, on December 29, 2014, the NRC cited three Severity Level IV violations involving: (1) failure to review the radiation protection program content and implementation at least annually per Title 10 of the *Code of Federal Regulations* (CFR) section 20.1101(c); (2) transportation of radioactive material on a public highway with use of a shipping paper that did not include the proper identification number as required by 10 CFR 71.5(a) and 49 CFR 172.202(a)(1); and (3) failure to provide recurrent hazmat training in the last three years as required by 10 CFR 71.5(a) and 49 CFR 172.704(a). On February 24, 2015, the NRC cited a Severity Level III violation of 10 CFR 30.34(i) to the licensee for securing a portable gauge at a temporary job site with only one barrier (a single padlock on the transportation case) to prevent unauthorized removal of the portable gauge, and the NRC retracted the hazmat training violation based on information that was provided by the licensee after the inspection was completed.

This inspection was a post escalated enforcement inspection to follow up on the licensee's corrective actions to prevent violations that were identified during the last inspection.

### **2 Portable Gauge Security**

#### **2.1 Inspection Scope**

The inspector assessed how the licensee secured portable gauges at temporary job sites and at the licensee's Troy facility by touring the licensee's facility, interviewing selected licensee personnel, and observing an AU demonstrate how he had secured a portable gauge at a temporary job site in Michigan on June 18, 2015.

#### **2.2 Observations and Findings**

##### **a. Gauge Security at the Troy Facility**

The Troy facility was a multi-tenant office building with three tenants. Two of the tenants were companies other than the licensee.

The licensee stored several gauges in a storage room that was locked with access limited to authorized persons. The locked door to the storage room was a physical barrier to prevent unauthorized removal of the gauges. There was no additional physical barrier to prevent gauge removal from the storage room (e.g., gauges were not chained and locked to a pipe inside of the storage room, etc.). The inspector observed that, during on-duty hours, authorized licensee employees maintained constant surveillance of the locked door of the storage room. During off-duty hours, the licensee used locked exterior doors of the building as another physical barrier to prevent unauthorized removal of gauges in the locked storage room. Several of the locked exterior doors opened from the outdoors to the licensee's leased space within the multi-tenant building.

The inspector identified that one of the exterior doors opened from the outdoors to a common area/lobby, and it was locked during off-duty hours; however, that locked door was accessible to 12 individuals who were employed by the aforementioned non-licensee tenants and they were not authorized to access the gauges. As a result, unauthorized individuals could enter the common area/lobby during off-duty hours, walk through an interior, unlocked door to pass from the common area/lobby to the licensee's leased space in the building and get to the locked door of the storage room containing the gauges.

Title 10 CFR 20.1801 requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. Title 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. The licensee's failure to: (1) secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas; and (2) use a minimum of two independent physical controls that form tangible barriers to secure the gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee, is an apparent violation of 10 CFR 20.1801 and 10 CFR 30.34(i).

The inspector determined that the root cause of the apparent violation was licensee oversight. Specifically, the licensee did not realize that unauthorized individuals could enter the common area/lobby during off-duty hours, walk through an interior, unlocked door to pass from the common area/lobby to the licensee's leased space in the building and get to the locked door of the storage room containing the gauges.

As corrective action, the licensee committed to lock at all times, the interior door that allowed passage from the common area/lobby to the licensee's leased space in the building. The inspector observed the licensee lock that door and keep it locked during the onsite inspection. In addition, the licensee was considering adding a second independent lock on the storage room door to establish an independent, second physical barrier to prevent unauthorized removal of the gauges from the storage room.

b. Gauge Security at Temporary Job Sites

The licensee secured portable gauges at temporary job sites by control and constant surveillance by the authorized user. When gauges were unattended by authorized users, it was secured to the pickup truck bed with two independent physical controls that formed tangible barriers to secure the gauge from unauthorized removal from the transportation case. In addition, the transportation case was secured to the pickup truck bed with two independent physical controls that formed tangible barriers to secure the transportation case from unauthorized removal.

2.3 Conclusions

The inspector identified an apparent violation of 10 CFR 20.1801 and 10 CFR 30.34(i) involving licensee failure to secure from unauthorized removal or access licensed materials that were stored in controlled or unrestricted areas and failure to use a minimum of two independent physical controls that form tangible barriers to secure the gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee at the licensee's Troy facility. The licensee implemented immediate and long-term corrective actions to prevent violations of 10 CFR 20.1801 and 10 CFR 30.34(i). The inspector noted that the licensee implemented corrective actions to comply with 10 CFR 20.1801 and 10 CFR 30.34(i) when the gauges were secured at temporary job sites.

**3 Other Areas Inspected**

3.1 Inspection Scope

The inspector reviewed other areas of the licensee's radiation protection program by observing an AU demonstrate how he had transported a portable gauge to and from a temporary job site in Michigan on June 18, 2015, reviewing selected records, and interviewing selected staff members.

3.2 Observations and Findings

a. Transportation

1. Package Labeling

On June 18, 2015, an AU transported a gauge containing approximately 8 millicuries of cesium-137 and 40 millicuries of americium-241 to and from a temporary job site in Michigan. During transport, the gauge was within a proper Department of Transportation (DOT) Type A package; however, the package did not have any DOT labels affixed to it.

Title 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 107, 171-180, and 390-397.

Title 49 CFR 172.403 requires, in part, with exceptions not applicable here, that each package of radioactive material be labeled, as appropriate, with two RADIOACTIVE WHITE-I, RADIOACTIVE YELLOW-II, or RADIOACTIVE YELLOW-III labels on opposite sides of the package. The contents, activity, and transport index must be entered in the blank spaces on the label using a legible and durable, weather resistant means. The contents entered on the label must include the name or abbreviation (e.g., 99Mo) of the radionuclides as taken from the listing in 49 CFR 173.435, or for mixtures of radionuclides, those nuclides determined in accordance with the provisions of 49 CFR 173.433(f), with consideration of space available on the label. The activity must be expressed in terms of the appropriate SI units (e.g., Becquerel, Terabecquerel, etc...), or in terms of appropriate SI units followed by customary units (e.g., curies, millicuries, or microcuries).

The licensee's transport of a gauge that was in a package that did not have any DOT labels affixed to it is a violation of 10 CFR 71.5(a) and 49 CFR 172.403.

The inspector determined that the root cause of the violation was licensee oversight. Specifically, the authorized user did not realize that the DOT labels were not affixed to the package.

The inspector observed the AU affix RADIOACTIVE YELLOW-II labels on the package as required. The licensee committed to ensure that all of its gauge packages have the required DOT labels. In addition, the licensee committed to verify that all of the gauge packages have the required DOT labels every 3 months and during its annual audit of its radiation protection program.

## **2. Blocking and Bracing**

On June 18, 2015, an AU transported a gauge containing approximately 8 millicuries of cesium-137 and 40 millicuries of americium-241 to and from a temporary job site in Michigan. During transport, the AU used two cables that were affixed to the pickup truck bed and the package containing the gauge; however, the cables were loose enough to allow the package to slide laterally and about a foot forward from the truck's tail gate. In addition, the package was able to rotate 90 degrees on its long axis.

Title 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 107, 171-180, and 390-397.

Title 49 CFR 177.842 requires, in part, that packages of radioactive materials be so blocked and braced that they cannot change position during conditions normally incident to transportation.

The licensee's failure to block and brace a package containing a gauge during transport such that it could not change position during conditions normally incident to transportation is a violation of 10 CFR 71.5(a) and 49 CFR 177.842.

The inspector determined that the root cause of the violation was that the AU previously used a different pickup truck for transporting gauges which required a different means to block and brace the package during transport. When using that truck, the AU used a board to block and brace the gauge package. On June 18, 2015, the AU drove a different truck and used the cables instead of the board to block and brace the gauge package. When using the cables, the authorized user did not realize that the cables were loose enough to allow the package to slide laterally and about a foot forward from the truck's tail gate, and rotate 90 degrees on its long axis.

As corrective action, the licensee committed to use chains instead of cables to block and brace gauge packages during transport because the chains provide more options for loosening and tightening versus the cables to prevent package movement during normal transportation.

### 3. Shipping Papers

On June 18, 2015, an AU transported a gauge containing approximately 8 millicuries of cesium-137 and 40 millicuries of americium-241 to and from a temporary job site in Michigan. The inspector observed the licensee's shipping paper that was used on June 18, 2015. The inspector noted that the shipping paper contained the required shipping description for the licensed material including the identification number prescribed for the material as shown in Column 4 of the 49 CFR 172.101 table. As such, the previous violation of 10 CFR 71.5 and 49 CFR 172.202(a)(1) is closed.

#### b. Annual Audits

The licensee audited its radiation protection program in January 2015. The audit included several program areas including, in part, verification of authorized radioactive material possession, compliance with NRC reporting requirements, compliance with NRC license requirements, management oversight, radiation worker doses, staff training, observations of licensed activity, posting and labeling, security, operating and emergency procedures, transportation, safe use of licensed material, leak tests, inventories, gauge maintenance, survey instruments, and recordkeeping. As such, the previous violation of 10 CFR 20.1101(c) is closed.

### 3.3 Conclusions

The inspector identified two violations involving licensee failure to: (1) affix DOT labels on a package containing a gauge prior to transport as required; and (2) block and brace a package containing a gauge during transport such that it could not change position during conditions normally incident to transportation as required. The licensee implemented and planned corrective actions to prevent similar violations. In addition, the inspector noted that the licensee implemented corrective actions to prevent similar violations regarding failure to include the required shipping description for the licensed

material including the identification number on shipping papers, and failure to audit its radiation protection program at least annually.

#### **4 Exit Meeting Summary**

The NRC inspector presented preliminary inspection findings following the onsite inspection on June 19, 2015. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary. The licensee acknowledged the findings presented. On June 29, 2015, the inspector conducted a final exit meeting by telephone with the licensee's Radiation Safety Officer (RSO).

#### **LIST OF PERSONNEL CONTACTED**

Paul Anderson, Laboratory Technician  
#Mark McGuckin, Supervisor  
^Gary Putt, RSO  
James Trenum, Authorized User

# Attended preliminary exit meeting on June 19, 2015  
^ Participated in final telephonic exit meeting on June 29, 2015

#### **INSPECTION PROCEDURES USED**

87124: Fixed and Portable Gauge Programs