

November 26, 2010

Mr. John J. Hennessey
Vice President
Hennessey Engineers, Inc.
13500 Reeck Road
Southgate, Michigan 48195

SUBJECT: NRC INSPECTION REPORT NO. 030-31333/10-01(DNMS) AND NOTICE OF VIOLATION – HENNESSEY ENGINEERS, INC.

Dear Mr. Hennessey:

On October 14, 2010, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at your Southgate, Michigan facility, with continued NRC in-office review through November 1, 2010. The NRC in-office review included receipt and review of an amendment request regarding the addresses listed on your NRC license, as well as records of hazmat training. A telephone exit meeting between yourself, your Radiation Safety Officer (RSO) Ahmad Ali, and Andrew Bramnik of my staff was conducted on November 1, 2010, 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 verified 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, the NRC has determined that six 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 Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The violations involved the failure to: (1) confine the possession and use of byproduct materials to the locations authorized by the license; (2) either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in NUREG-1556, Volume 1, Revision 1; (3) test sealed sources for leakage and/or contamination at required intervals; (4) comply with U.S. Department of Transportation (DOT) requirements for including the correct identification number on the shipping paper; (5) comply with DOT requirements for hazmat training; and (6) periodically review the radiation protection program content and implementation.

The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in detail in the subject inspection report. The violations are being cited in the Notice because they were identified by the NRC inspector.

J. Hennessey

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The NRC has concluded that information regarding the reasons for the violations, the corrective actions taken and planned to correct the violations and prevent recurrence is already adequately addressed on the docket in NRC Inspection Report No. 030-31333/10-01(DNMS). Therefore, you are not required to respond to this letter unless the description herein 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 Title 10 of the Code of Federal Regulations Part 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 Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site 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 available to the Public without redaction.

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

/RA/

Tamara E. Bloomer, Chief
Materials Inspection Branch

Docket No. 030-31333
License No. 21-26066-01

Enclosure:

1. Notice of Violation
2. Inspection Report 030-31333/10-01(DNMS)

cc w/encl: Ahmad Ali, RSO
State of Michigan

J. Hennessey

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cc w/ encl: Ahmad Ali, RSO
State of Michigan

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NOTICE OF VIOLATION

Hennessey Engineers, Inc.
Southgate, Michigan

Docket No. 030-31333
License No. 21-26066-01

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted October 14, 2010, with continued NRC in-office review through November 1, 2010, six violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

- A. Title 10 of the Code of Federal Regulations (CFR) Part 30.34(c) requires, in part, that each licensee confine his possession and use of byproduct materials to the locations and purposes authorized by the license.

Condition 10 of NRC License No. 21-26066-01 requires that licensed material be used or stored at the licensee's facilities located at 19366 Allen Road, Trenton, MI.

Contrary to the above, on October 14, 2010, the licensee possessed two portable moisture/density gauges containing sealed sources of cesium-137 and americium-241 at 13500 Reeck Road, Southgate, MI., a location not authorized by the license. Specifically, the licensee moved the gauges from its Trenton location to Southgate without prior Commission approval in March 2008.

This is a Severity Level IV Violation (Section 6.3.d.7).

- B. Condition 22 of NRC License No. 21-26066-01 requires, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in its application dated March 24, 2005.

Item 10 "Radiation Survey Program – Survey Instruments" of the licensee's application dated March 24, 2005 states that "We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled 'Radiation Survey Program – Instruments' in NUREG-1556, Volume 1, Revision 1, dated November 2001."

Contrary to the above, as of October 14, 2010, the licensee neither possessed nor had access to a radiation survey meter.

This is a Severity Level IV Violation (Section 6.3.d.3).

- C. Condition 14.A. of NRC License No. 21-26066-01 states that "Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by NRC under 10 CFR 32.210 or by an Agreement State."

Certificate No. NC-646-D-130-S of the Registry of Radioactive Sealed Sources and Devices, dated April 4, 2007, states, in part, that the leak test frequency for Troxler Electronic Laboratories model number 3430 portable surface moisture and density gauges is 12 months.

Certificate No. NC-646-D-830-S of the Registry of Radioactive Sealed Sources and Devices, dated April 4, 2007, states, in part, that the leak test frequency for Troxler Electronic Laboratories model number 3411 and 3411-B portable surface moisture and density gauges is 12 months.

Contrary to the above, the licensee failed to test Troxler Electronic Laboratories Model Number 3430 and 3411-B portable surface moisture and density gauges containing sealed sources of cesium-137 and americium-241 for leakage and/or contamination between August 19, 2009 and October 14, 2010, an interval that is greater than 12 months.

This is a Severity Level IV Violation (Section 6.7.d.4).

- D. 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 170 through 189.

Title 49 CFR 177.817(a) requires that a carrier not accept hazardous material for transportation or transport unless it is accompanied by a shipping paper prepared in accordance with 49 CFR 172.200-203. Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material.

Title 49 CFR 172.202(a) and (b) require in part, with exceptions not applicable here, that the shipping description of a hazardous material on the shipping paper include, in the following sequence: (1) the proper shipping name prescribed for the material in 172.101 (2) the hazard class prescribed for the material as shown in Column 3 of the 172.101 Table, and (3) the identification number prescribed for the material as shown in Column 4 of the 172.101 Table.

Contrary to the above, on multiple occasions between September 21, 2006, and October 12, 2010, the licensee transported outside the confines of its plant Troxler portable moisture/density gauges containing sealed sources of cesium-137 and americium-241, and the shipping description on the shipping paper that accompanied the shipment did not include the correct identification number. Specifically, the shipping paper listed an incorrect identification number of UN 2974, instead of the correct number of UN 3332.

This is a Severity Level IV Violation (Section 6.8.d.4)

- E. 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 170 through 189.

Title 49 CFR 172.702 requires that each hazmat employer shall ensure that each hazmat employee is trained and tested, and that no hazmat employee performs any

function subject to the requirements of 49 CFR Parts 171-177 unless trained, in accordance with Subpart H of 49 CFR Part 172. The terms Hazmat Employer and Hazmat Employee are defined in 49 CFR 171.8.

Title 49 CFR 172.704(a) specifies the elements of hazmat employee training as: (1) general awareness/familiarization training; (2) function-specific training; and (3) safety training. Title 49 CFR 172.204(c) requires, in part, that a hazmat employee receive initial training, and recurrent training at least once every three years.

Contrary to the above, between June 12, 2006, and October 12, 2010, the licensee did not provide training for its hazmat employees, which satisfied the requirements in Subpart H to 49 CFR Part 172, in that a hazmat employee continued to transport licensed material on numerous occasions after his training had expired on June 11, 2006, and the licensee otherwise meets the definition of hazmat employer in 49 CFR 171.8.

This is a Severity Level IV Violation (Section 6.3.d.4).

- F. Title 10 CFR 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation.

Contrary to the above, between October 12, 2005, and October 14, 2010, an interval that is greater than one year, the licensee had not reviewed the radiation protection program content and implementation.

This is a Severity Level IV Violation (Section 6.3.d.3).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to be taken to correct the violation and prevent recurrence, and the date when full compliance will be achieved, is already adequately addressed on the docket in NRC Inspection Report No. 030-31333/10-01(DNMS). 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," 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 Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site 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.

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

Dated this 26th day of November 2010.

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No.: 030-31333

License No.: 21-26066-01

Report No.: 030-31333/10-01(DNMS)

Licensee: Hennessey Engineers, Inc.

Facilities: 13500 Reeck Road
Southgate, Michigan 48195

Inspection Dates: October 14, 2010
Continued in-office review through
November 1, 2010

Preliminary Exit Meeting: October 14, 2010

Final Exit Meeting: November 1, 2010

Inspector: Andrew M. Bramnik, Health Physicist

Approved By: Tamara E. Bloomer, Chief
Materials Inspection Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Hennessey Engineers, Inc. NRC Inspection Report 030-31333/10-01(DNMS)

During a routine inspection, the inspector identified six violations involving the failure to: (1) confine the possession and use of byproduct materials to the locations and purposes authorized by the license; (2) either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in NUREG-1556, Volume 1, Revision 1; (3) test sealed sources for leakage and/or contamination at required intervals; (4) comply with U.S. Department of Transportation (DOT) requirements for including the correct identification number on the shipping paper; (5) comply with DOT requirements for hazmat training; and (6) periodically review the radiation protection program content and implementation.

The licensee's corrective actions to prevent similar violations included: (1) submitting a license amendment request removing previous locations from their license and adding their current location; (2) purchasing a radiation survey meter and becoming familiar with its use; (3) performing required leak tests; (4) updating shipping papers with the correct identification number; (5) completing recurrent DOT hazmat training; (6) completing an audit of the radiation protection program; and (7) creating a job aid with recurring responsibilities to be completed under their NRC license.

Report Details

1 Program Overview

Licensed Activities and Inspection History

The U.S. Nuclear Regulatory Commission (NRC) License No. 21-26066-01 authorizes Hennessey Engineers, Inc. (licensee) to use sealed sources of cesium-137 and americium-241 in Troxler Model 3400 Series portable gauges devices for measuring physical properties of materials. The licensee possessed one Troxler Model 3440 gauge and one Troxler Model 3411-B gauge, which were in storage at the licensee's permanent storage facility at 13500 Reeck Road, Southgate, Michigan. The licensee employed between one and two gauge operators at any time, in addition to the Radiation Safety Officer (RSO).

The NRC previously conducted a routine inspection on October 12, 2005. As a result, the NRC cited three Severity Level IV violations involving the failure to: (1) comply with U.S. Department of Transportation (DOT) requirements for entering the correct identification "RQ" number on the shipping paper; (2) comply with DOT requirements for entering "RQ" on the shipping paper; and (3) comply with the requirements in Title 10 of the Code of Federal Regulations (CFR) 30.34(i) to use two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal. A prior inspection on April 26, 2000, identified no violations.

2 Authorized Locations of Use

2.1 Inspection Scope

The inspector unsuccessfully attempted to inspect the licensee at both the mailing address and authorized location of use listed on their NRC license. The inspector succeeded in conducting the inspection at the licensee's new location.

2.2 Observations and Findings

On October 14, 2010, the inspector attempted to conduct an inspection at the licensee's facilities. Both the mailing address and authorized location of use listed on NRC License No. 21-26066-01 were vacant. Through interviews with neighbors at both locations, the inspector determined that the licensee had not utilized these locations for at least two years. Through an internet search, the inspector located the licensee's web page, which listed their address at 13500 Reeck Road, Southgate, Michigan. Interviews with licensee personnel at this location revealed that the licensee had consolidated their offices and portable gauge storage location to Southgate in March 2008. The licensee had not contacted the NRC to request an amendment to their license prior to moving.

Title 10 CFR 30.34(c) requires, in part, that each licensee confine his possession and use of byproduct materials to the locations and purposes authorized by the license. Condition 10 of NRC License No. 21-26066-01 requires that licensed material be used or stored at the licensee's facilities located at 19366 Allen Road, Trenton, Michigan.

As previously stated in Section 1, on October 14, 2010, the licensee possessed two portable gauges containing sealed sources of cesium-137 and americium-241 at their facility in Southgate, Michigan. The licensee's failure to confine the possession and use

of byproduct materials to the locations and purposes authorized by the license is a violation of 10 CFR 30.34(c).

The RSO stated that the licensee was not aware of the requirements to receive the NRC approval before moving, and conceded that a lack of oversight contributed to the failure to request the removal of their previous locations from the license. The licensee also stated that on February 24, 2009, they successfully changed their address with the NRC's Accounts Receivable Team, located in St. Louis, Missouri.

As corrective actions, the licensee submitted an amendment request to the NRC to change their mailing address and authorized location of use to their new address in Southgate, Michigan. The request also asked to remove their previous location of use in Trenton, Michigan. The NRC Region III office received this request on October 19, 2010. As long term corrective actions, on October 29, 2010, the licensee generated a job aid summarizing some of their responsibilities under their NRC license. The licensee does not anticipate adding any locations of use or moving in the near future.

One previous violation for failure to comply with the requirements in 10 CFR 30.34(i) to use two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal was closed. The inspector observed that both of the licensee's portable gauges were adequately secured with two independent barriers to removal while in storage. Interviews with licensee personnel demonstrated adequate knowledge of physical security requirements while portable gauges are in storage or in transport and not under the control or constant surveillance of the licensee.

2.3 Conclusions

The inspector identified a violation involving the failure to confine the possession and use of byproduct materials to the locations and purposes authorized by the license. The NRC received a license amendment request to update NRC License No. 21-26066-01 on October 19, 2010. One previous violation for failure to comply with the requirements in 10 CFR 30.34(i) was closed.

3 Radiation Survey Measurements

3.1 Inspection Scope

The inspector conducted independent survey measurements to assess compliance with limits in 10 CFR Part 20. The inspector attempted to confirm the licensee's possession or access to a survey meter.

3.2 Observations and Findings

The inspector conducted independent radiation survey measurements in restricted and unrestricted areas in order to determine the licensee's compliance with public dose limits in 10 CFR Part 20. Surveys in restricted areas included the room where the licensee stored its portable gauges. Unrestricted areas included offices and adjacent areas closest to the portable gauges where members of the public may work or travel. Independent measurements did not indicate readings in excess of 10 CFR Part 20 limits in restricted or unrestricted areas.

The RSO informed the inspector that the licensee did not possess a radiation survey meter. When asked if the licensee had any means to access a survey meter, the RSO stated that the licensee did not have any arrangements or agreements with other entities to use a survey meter.

Condition 22 of NRC License No. 21-26066-01 requires, in part, that the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in its application dated March 24, 2005. Item 10 "Radiation Survey Program – Survey Instruments" of the licensee's application dated March 24, 2005, states "We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled 'Radiation Survey Program – Instruments' in NUREG-1556, Volume 1, Revision 1, dated November 2001." The licensee's failure to either possess or have access to a radiation survey meter is a violation of Condition 22 of their license.

The RSO stated that he was not aware of the requirement in the license application to either possess or have access to a survey meter. As corrective action, the RSO ordered a survey meter that meets the Criteria in the section entitled "Radiation Survey Program – Instruments" in NUREG-1556, Volume 1, Revision 1, and dated November 2001. The licensee received the meter on October 29, 2010. As long-term corrective actions, the licensee will test this meter as part of their annual program audit.

3.3 Conclusions

The inspector identified a violation involving failure either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in NUREG-1556, Volume 1, Revision 1. The licensee received a survey meter that meets the Criteria on October 29, 2010.

4 **Program Oversight**

4.1 Inspection Scope

The inspector reviewed selected records and interviewed licensee management representatives to evaluate the licensee's oversight of the radiation protection program.

4.2 Observations and Findings

The RSO stated that some documentation from the radiation protection program was not available and may have been lost during the licensee's March 2008 move to their new address. The inspector reviewed available records of leak tests the licensee had performed since the previous inspection. The most recent leak test record on file for one of the licensee's gauges was dated August 19, 2009. The RSO stated that leak tests had been performed on the licensee's other gauges at that time. However, the RSO could not produce documentation of these tests. The previous leak test record on file for another of the licensee's gauges was dated December 22, 2008. None of the licensee's leak test records indicated leakage or contamination in excess of 0.005 microcuries.

Condition 14.A. of NRC License No. 21-26066-01 states that "Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the NRC under 10 CFR 32.210 or by an Agreement State." Certificate no. NC-646-D-130-S of the Registry of Radioactive

Sealed Sources and Devices, dated April 4, 2007, states, in part, that the leak test frequency for Troxler Electronic Laboratories Model Number 3430 portable surface moisture and density gauges is 12 months. Certificate no. NC-646-D-830-S of the Registry of Radioactive Sealed Sources and Devices, dated April 4, 2007, states, in part, that the leak test frequency for Troxler Electronic Laboratories Model Number 3411 and 3411-B portable surface moisture and density gauges is 12 months.

The licensee's failure to test Troxler Electronic Laboratories Model Number 3430 and 3411-B portable surface moisture and density gauges containing sealed sources of cesium-137 and americium-241 for leakage and/or contamination between August 19, 2009 and October 14, 2010, is a violation of Condition 14.A of their license.

The RSO stated that the root cause of this violation was an oversight by the licensee in not conducting the leak tests within a 12 month interval. A contributing cause of this violation was poor recordkeeping by the licensee. The licensee did not have complete records of leak tests conducted during the previous three years, as required by Condition 14.F. of their NRC license.

As corrective actions, the licensee immediately performed leak tests on sealed sources in both of the portable gauges they possessed, and sent the wipes for analysis. On October 15, 2010, the licensee contacted the manufacturer (Troxler) to request copies of leak test records from the previous three years. As long term corrective actions, on October 29, 2010, the licensee added leak test requirements to a job aid with recurring responsibilities to be completed under their NRC license.

The licensee informed the inspector that they do not perform any non-routine maintenance on their portable gauges. In addition, the RSO provided copies of utilization logs for both portable gauges to the inspector. These logs accounted for the gauges' locations over the previous three years. The RSO used these logs, in combination with physical observations and communications with gauge operators, to complete required six-month physical inventories.

The inspector interviewed the RSO and licensee management regarding annual program audits. The licensee responded that they had not completed annual program audits other than leak tests and physical inventories. Title 10 CFR 20.1101(c) states that the licensee shall periodically (at least annually) review the radiation protection program content and implementation. The licensee's failure to conduct annual audits between October 12, 2005, and October 14, 2010, is a violation of 10 CFR 20.1101(c).

The RSO stated that he was not aware of the requirement in 10 CFR 20.1101(c) to perform periodic reviews of the radiation protection program. As corrective actions, the licensee completed a program review on October 15, 2010. As long term corrective actions, on October 29, 2010, the licensee added annual audit requirements to a job aid with recurring responsibilities to be completed under their NRC license.

4.3 Conclusions

The inspector identified two violations involving the failure to: (1) test sealed sources for leakage and/or contamination at required intervals; and (2) periodically review the radiation protection program content and implementation. The licensee completed leak tests and an annual audit by October 15, 2010, and added both requirements to a job aid with recurring responsibilities to be completed under their NRC license.

5 Transportation of Radioactive Materials

5.1 Inspection Scope

The inspector reviewed selected records, interviewed licensee management representatives, and observed demonstrations of licensee personnel transporting radioactive materials to evaluate the licensee's compliance with U.S. Department of Transportation (DOT) requirements.

5.2 Observations and Findings

The inspector reviewed the licensee's shipping papers used for transporting radioactive materials. The shipping papers were appropriately stored in a pocket on the drivers-side door of the gauge operator's pickup truck. One of the documents had been edited by hand to include a "RQ" designation before the basic description, and to change the identification number from UN 2974 to UN 3332. However, the Bill of Lading listed the incorrect identification number of UN 2974 in addition to the licensee's previous address, an incorrect telephone number for the NRC, and outdated listing of company personnel.

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 170 through 189.

Title 49 CFR 177.817(a) requires that a carrier not transport a hazardous material unless it is accompanied by a shipping paper prepared in accordance with 49 CFR 172.200-203. Pursuant to 49 CFR 172.101, radioactive material is classified as a hazardous material. Title 49 CFR 172.202(a) and (b) require in part, with exceptions not applicable here, that the shipping description of a hazardous material on the shipping paper include, in the following sequence: (1) the proper shipping name prescribed for the material in 172.101; (2) the hazard class prescribed for the material as shown in Column 3 of the 172.101 Table; and (3) the identification number prescribed for the material as shown in Column 4 of the 172.101 Table.

The licensee's failure to list the correct identification number in compliance with DOT requirements for shipping papers is a violation of 49 CFR 172.202(a). Specifically, the licensee's utilization logs documented that licensee personnel transported portable gauges outside the confines of its plant on multiple occasions between September 21, 2006 and October 12, 2010, and used the incorrect number UN 2974 on the shipping paper.

This violation is similar to a violation previously cited during the prior inspection on October 12, 2005. However, when the NRC identified that violation the licensee employed a different RSO. Therefore, this violation is not being considered a repeat violation. The root cause of this violation was incomplete corrective actions from the previous violation, in that the licensee did not identify and update all documents with the incorrect identification number. Specifically, the inspector identified multiple documents stapled together, where the top page had been updated by pen with the correct UN number, but subsequent pages (including the Bill of Lading) had not been changed. In addition, the shipping papers listed other information that was out of date, including: the licensee's address; a telephone number for the NRC; and a telephone listing of company

personnel. Due to the similarity between this violation and the previous violation, the previously-cited violation for failure to list the correct identification number in compliance with DOT requirements for shipping papers cannot be closed.

As corrective actions, the licensee immediately re-typed required shipping papers with updated information, and printed a new Emergency Response Information sheet from the manufacturer. The licensee laminated these documents and bound them together for easier access. Lastly, the licensee placed a copy of these documents in the gauge operator's vehicle as well as the room where portable gauges are stored. These actions were completed on October 14, 2010.

The inspector reviewed records of DOT hazmat training for licensee personnel. The most recent training certificate for the licensee's portable gauge operator was dated June 11, 2003, and expired on June 11, 2006. During interviews, the operator could not recall whether or not he had completed hazmat training more recently. On October 15, 2010, the licensee contacted the training vendor (Troxler Electronic Laboratories) to determine whether or not the gauge operator had completed hazmat training since 2003. The vendor was unable to locate more recent training documentation for this individual.

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 170 through 189.

Title 49 CFR 172.702 requires that each hazmat employer shall ensure that each hazmat employee is trained and tested, and that no hazmat employee performs any function subject to the requirements of 49 CFR 171-177 unless trained, in accordance with Subpart H of 49 CFR Part 172. The terms Hazmat Employer and Hazmat Employee are defined in 49 CFR 171.8. Title 49 CFR 172.704(a) specifies the elements of hazmat employee training as: (1) general awareness/familiarization training; (2) function-specific training; and (3) safety training. Title 49 CFR 172.204(c) requires, in part, that a hazmat employee receive initial training, and recurrent training at least once every three years.

The licensee's failure to ensure that a hazmat employee completed recurrent hazmat training between June 11, 2006 and October 12, 2010, is a violation of 49 CFR 172.702. The root cause of this violation was an oversight by the licensee in not conducting the hazmat training at the required frequency. Specifically, the licensee believed that the portable gauge operator had completed the training in both June 2006 and June 2009, at the same time as another gauge operator. As corrective actions, the gauge operator completed the hazmat training online on October 19, 2010. As long term corrective actions, on October 29, 2010, the licensee added hazmat training requirements to a job aid with recurring responsibilities to be completed under their NRC license.

The licensee demonstrated how portable gauges are transported to temporary job sites while maintaining control and constant surveillance, and utilizing two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal. Portable gauge transport cases were appropriately marked and labeled in accordance with DOT requirements.

One previous violation for failure to comply with DOT requirements for entering "RQ" on the shipping paper before or after the basic description was closed. The inspector observed that all of the licensee's shipping papers contained the letters "RQ" before or after the basic description.

5.3 Conclusions

The inspector identified two violations involving the failure to comply with DOT requirements for: (1) entering the correct identification number on the shipping paper; and (2) hazmat training. The licensee updated all shipping papers with required information on October 14, 2010, and licensee staff completed recurrent hazmat training on October 19, 2010. One previous violation for failure to comply with DOT requirements for entering the correct identification number on the shipping paper was not closed. One previous violation for failure to comply with DOT requirements for entering "RQ" on the shipping paper before or after the basic description was closed.

6 Other Areas Inspected

6.1 Inspection Scope

The inspector reviewed other areas of the licensee's radiation protection program by interviewing selected staff, observing licensed activities, and reviewing selected records. Areas reviewed included dosimetry, training, and emergency and operating procedures.

6.2 Observations and Findings

Personal whole body dosimetry was observed being worn by licensee staff during the inspection, and records did not indicate doses in excess of 10 CFR Part 20 limits. During interviews, the licensee's portable gauge operator described how he wore dosimetry any time he transported or used a gauge. Records indicated that the maximum whole body dose was below the minimum detectable level during calendar year 2010, and was 105 millirem (mrem) for 2009, and was 152 mrem for 2008.

Licensee personnel, including the RSO and a portable gauge operator, had successfully completed nuclear gauge safety training through Troxler Electronic Laboratories. During interviews, the licensee's staff was familiar with the safe handling and operation of portable gauges.

The RSO and portable gauge operator provided information about proposed emergency situations involving a portable gauge, including a gauge being damaged or destroyed while in use. Licensee personnel described emergency actions they would take in accordance with their emergency and operating procedures.

6.3 Conclusions

The licensee effectively implemented other areas of its radiation safety program.

7 Exit Meeting

At the completion of the on-site inspection, the inspector discussed the preliminary inspection findings in this report with licensee management and the RSO during a preliminary exit meeting. The licensee did not identify any information reviewed during the inspection and proposed for inclusion in this report as proprietary in nature. A final telephone exit meeting was conducted on November 1, 2010.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

- *& Ahmad Ali – Construction Operations Manager, RSO
- Tommy Reyna – Survey Project Manager
- Steve Dainich – Portable Gauge Operator
- Lori Kennedy – Accounting / Human Resources Manager
- *& John Hennessey – Vice President

* Individual(s) present at October 14, 2010, preliminary on-site exit meeting
& Individual(s) present at November 1, 2010, telephone exit meeting

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
CFR	Code of Federal Regulations
DNMS	Division of Nuclear Materials Safety
DOT	U.S. Department of Transportation
MREM	Millirem
NRC	U.S. Nuclear Regulatory Commission
RSO	Radiation Safety Officer