



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

June 3, 2014

EA-14-077

Mr. Claude Davis, Technical Director
TUV Rheinland Industrial Solutions Inc.
100 Industrial Boulevard
Aliquippa, PA 15001

SUBJECT: NRC INITIAL INSPECTION REPORT NO. 03038685/2014001(DNMS) –
TUV RHEINLAND INDUSTRIAL SOLUTIONS, INC.

Dear Mr. Davis:

On April 29 and 30, 2014, with continued in-office review through May 12, 2014, a U.S. Nuclear Regulatory Commission (NRC) inspector conducted an initial inspection at your facility located in Caledonia, Michigan, and at a temporary jobsite in Holland, Michigan. The in-office review included receipt and review of security information that was unavailable during the onsite inspection. The purpose of the inspection was to determine whether activities authorized under your license were conducted safely and in accordance with NRC requirements. The enclosures present the results of this inspection.

During this inspection, the NRC staff examined activities conducted under your license as they relate to public health and safety, compliance with the Commission's rules and regulations, and compliance with 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, 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 website at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. The apparent violations are of a security-related nature. Details about the apparent violations are available in the Security Addendum to Inspection Report, enclosed with this letter (Enclosure 2). The circumstances surrounding the apparent violations, the significance of the issues, and the need for lasting and effective corrective actions were discussed with you during the inspection exit meeting on May 12, 2014.

Enclosure 2 contains Sensitive
Unclassified Non-Safeguards Information.
When separated from Enclosure 2, this
transmittal letter and Enclosure 1 are
decontrolled.

~~OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION~~

C. Davis

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Before the NRC makes its enforcement decision, we are providing you an opportunity to: (1) respond in writing to the apparent violations addressed in the Security Addendum to Inspection Report No. 03038685/2014001(DNMS) within 30 days of the date of this letter, or (2) request a Pre-decisional Enforcement Conference (PEC). If a PEC is held, the NRC will issue a press release to announce the time and date of the conference; however, the conference will be closed to public observation because security-related information will be discussed. The NRC normally tries to schedule a PEC within 30 days of the date of the letter. **Please notify Aaron T. McCraw, Chief of the Materials Inspection Branch, at 630-829-9650 of your intentions within 10 days of the date of this letter.**

If you choose to provide a written response, it should be clearly marked as "Response to Apparent Violations in the Security Addendum to Inspection Report No. 03038685/2014001(DNMS); EA-14-077," 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 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 violations. In addition, if you choose to provide a written response, please mark your entire response, "Security-Related Information – Withhold from Public Disclosure Under Title 10 of the *Code of Federal Regulations* (CFR) 2.390." In accordance with 10 CFR 2.390(b)(ii), the NRC is waiving the affidavit requirements for your response to this letter. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information. Your response may reference or include previously 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 or schedule a PEC.

If you choose to request a PEC, the conference will afford you the opportunity to provide your perspective on the apparent violations 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.

Because your facility has not been the subject of escalated enforcement actions within the last two inspections, and based on our understanding of your preliminary corrective actions, a civil penalty may not be warranted in accordance with Section 2.3.4 of the Enforcement Policy. As such, it may not be necessary to conduct a PEC in order to enable the NRC to make an enforcement decision. The final decision will be based on your confirming on the license docket that the corrective actions previously described to the staff have been or are being taken.

Please be advised that the characterization of the apparent violations may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on these matters.

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C. Davis

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In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and Enclosure 1 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>. Enclosure 2 contains security-related information and its disclosure to unauthorized individuals could present a security vulnerability; therefore, Enclosure 2 will not be made available electronically for public inspection.

Please feel free to contact Mr. Robert Gattone of my staff if you have any questions concerning this matter. You can reach Mr. Gattone at 630-829-9823.

Sincerely,

/RA/

Patrick L. Loudon, Director
Division of Nuclear Materials Safety

Docket No. 030-38685
License No. 37-32340-02

Enclosures:

1. NRC Inspection Report No. 03038685/2014001(DNMS) (Public)
2. Security Addendum to Inspection Report (Non-Public)

cc w/encls: State of Michigan
Chris Dugan, RSO

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C. Davis

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Chris Dugan, RSO

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**U.S. NUCLEAR REGULATORY COMMISSION
REGION III**

Docket No. 03038685

License No. 37-32340-02

Report No. 03038685/2014001(DNMS)

EA No. EA-14-077

Licensee: TUV Rheinland Industrial Solutions. Inc.

Locations Inspected: 8181 Broadmoor S.E., Caledonia, Michigan
Temporary Jobsite in Holland Michigan

Dates: April 29 and 30, 2014, with continued in-office
review through May 12, 2014

Exit Meeting Date: May 12, 2014

Inspector: Robert G. Gattone, Jr., Senior Health Physicist

Approved By: Aaron T. McCraw, Chief
Materials Inspection Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

**TUV Rheinland Industrial Solutions Inc.
NRC Inspection Report No. 03038685/2014001(DNMS)**

On April 29 and 30, 2014, with continued in-office review through May 12, 2014, a U.S. Nuclear Regulatory Commission inspector conducted an initial inspection. The in-office review included receipt and review of security information that was unavailable during the onsite inspection. The inspector identified apparent violations involving security issues. The apparent violations are documented in the Security Addendum to Inspection Report. No safety-related violations were identified during this inspection.

Report Details

1 Program Overview

As of the inspection, TUV Rheinland Industrial Solutions Inc. (licensee) was authorized under the U.S. Nuclear Regulatory Commission (NRC) Materials License No. 37-32340-02 to store licensed material at a facility in Caledonia, Michigan, and to conduct industrial radiography and store licensed material at a Field Station in Flint, Michigan and at temporary job sites where the NRC maintains jurisdiction for regulating the use of licensed material. The licensee had two radiographers and three radiographer's assistants.

The NRC License No. 37-32340-02 was issued on December 2, 2013, incident to termination of the licensee's previous NRC License Number 21-32340-01 due to a change in the licensee's mailing address.

The inspector noted that the licensee had a pending license amendment request to remove the Field Station in Flint, Michigan from the license. About five months before this inspection, all licensed material had been removed from the Field Station in Flint, Michigan, and licensed material was stored in, and dispatched to temporary job sites from the facility in Caledonia, Michigan.

On January 30, 2013, with continuing in-office review through February 12, 2013, the NRC conducted a routine inspection of the licensee. Based on the results of the inspection, the NRC issued a Notice of Violation on February 27, 2013, citing a Severity Level IV violation involving a security issue. Details about that cited Severity Level IV violation are available in the Security Addendum to Inspection Report, which is Enclosure 2 of the letter transmitting this inspection report.

On January 25 and 26, 2012, the NRC conducted a routine inspection of the licensee. No violations of NRC regulatory requirements were identified.

2 Radiography at Temporary Jobsite

2.1 Inspection Scope

The inspector observed a radiographer and a radiographer's assistant prepare for, and conduct radiography at a temporary jobsite in Holland, Michigan. In addition, the inspector interviewed radiography staff members, reviewed selected records, and conducted independent and confirmatory radiation surveys with an NRC-owned and calibrated survey instrument.

2.2 Observations and Findings

a. Radiation Surveys

The inspector conducted an independent radiation survey at selected surfaces adjacent to the room containing licensed material, and the maximum result was indistinguishable from 0.05 milliroentgen per hour. The inspector also conducted a confirmatory radiation survey near the licensee's radiographic exposure device that contained licensed material

and the inspector and the licensee's radiographer measured 35 milliroentgens per hour at the same location.

The crew used rope to bound the restricted area and, based on calculations of expected radiation exposure rates, posted the boundary of the restricted area with "Caution Radiation Area" signs. In addition, the crew posted a "High Radiation Area" sign as required. The inspector also observed a radiographer conduct a restricted area perimeter survey and the radiographer and the inspector measured a maximum of 4.5 milliroentgens per hour during a 6 minute radiograph exposure.

The inspector noted that the radiography crew conducted radiation surveys as required, including surveys to verify that the licensed material was fully shielded after it was retracted into the radiographic exposure device. The inspector conducted a confirmatory survey to verify that the licensed material was fully shielded after it was retracted into the radiographic exposure device.

The inspector noted that both of the licensee's survey instruments used for the work were calibrated as required. The inspector also observed the radiographer's assistant demonstrate how he had conducted survey instrument operability checks prior to use on a given day and both survey instruments passed.

Based on scenarios posed by the inspector, the radiographer's assistant responded conservatively to conflicting indications of radiation exposure rates. Specifically, the radiographer's assistant appropriately responded assuming the worst case.

b. Dosimetry

Based on review of dosimetry badge records, the highest annual whole body dose received by monitored individuals between January 2012 and March 31, 2014, was 641 millirems.

The inspector observed that the radiographer and the radiographer's assistant wore calibrated direct reading dosimeters featuring the required dose range, and both dosimeters were zeroed prior to conducting radiography. In addition, the inspector observed that the radiographer and the radiographer's assistant wore calibrated alarming ratemeters and dosimeter badges that were assigned to them. Based on a demonstration of how daily alarming ratemeter operability checks were done, the checks were done correctly. In addition, the staff knew how to respond to failed checks.

Based on scenarios posed by the inspector, the radiographer's assistant knew how to respond to an off-scale direct reading dosimeter. In addition, the radiographer's assistant knew how to respond to an alarming ratemeter.

c. Transportation

The inspector observed that the licensee used proper shipping papers. Packages were blocked and braced during transport. The licensee posted NRC Form 3 and the licensee's emergency call list in the darkroom. Based on a transportation accident

scenario posed by the inspector, a radiographer's assistant knew how to respond to traffic accidents involving damage to radiographic exposure devices containing licensed material.

d. Emergency Response

The licensee's Radiation Safety Officer (RSO) stated that a revised emergency response procedure was in concurrence. The revisions were in response to the inspector's identification of verbiage that could be interpreted to authorize licensee staff to retrieve sources stuck in the unshielded position. When the revised procedure is completed, the RSO planned to submit a license amendment request to add the new emergency response procedure to the NRC license. In addition, the inspector noted that the RSO had communicated to applicable staff that they are not authorized to retrieve sources stuck in the unshielded position.

Based on an emergency scenario posed by the inspector, a radiographer's assistant knew how to respond to a source stuck in the unshielded position. The radiographer's assistant knew he and the accompanying radiographer were not authorized to retrieve sources that are stuck in the unshielded position.

e. Equipment Checks

A radiographer's assistant demonstrated how he had done daily checks of radiography equipment. The inspector noted that misconnect tests were done and the equipment used at the jobsite passed the test. Other checks included distal drive cable condition, guide tube condition, and Go/No Go checks.

2.3 Conclusions

No violations of NRC regulatory requirements were identified.

3 Exit Meeting Summary

On April 30, 2014, the inspector presented preliminary inspection findings following the onsite inspection. The licensee did not identify any documents or processes reviewed by the inspector as proprietary. A telephonic exit meeting was conducted on May 12, 2014. The licensee acknowledged the findings presented.

PARTIAL LIST OF PERSONNEL CONTACTED

- *^ Claude Davis, Technical Director
- *^ Chris Dugan, Radiation Safety Officer
- Ryan Hurst, Radiographer
- Mike Roberts, Radiographer's Assistant
- Louisa Twaddell, Reviewing Official

* Attended preliminary exit meeting on April 30, 2014

^ Participated in the telephonic exit meeting on May 12, 2014

INSPECTION PROCEDURES (IP) USED

IP 87121, Industrial Radiography Program