



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

June 18, 2015

Docket No. 03037501
EA-15-095

License No. 37-31259-01

Ralph H. Hill
Chief Operating Officer
Diamond Technical Services
9152 Route 22
Blairsville, PA 15717

SUBJECT: NRC INSPECTION REPORT NO. 03037501/2014003, NRC OFFICE OF INVESTIGATIONS CASE NO. 1-2014-015, DIAMOND TECHNICAL SERVICES, BLAIRSVILLE, PENNSYLVANIA SITE AND THE MONROE, MICHIGAN SITE, AND NOTICE OF VIOLATION

Dear Mr. Hill:

On April 23, 2014, through June 5, 2015, Michael Reichard of this office conducted a safety inspection at the above address and at the field station located at 330 Detroit Avenue, Suite B, Monroe, Michigan of activities authorized by the above listed NRC license. The inspection was limited to a review of training, personnel dosimetry use, transportation, and industrial radiography operations performed inside the licensee's facility. The findings of the inspection were discussed with Greg S. Prebish, Radiation Safety Officer of your organization, at the conclusion of the inspection. The enclosed report presents the results of this inspection.

The inspection was performed concurrently with an investigation by the NRC's Office of Investigations (OI). The investigation was conducted to determine whether Diamond Technical Services employees were deliberately (1) instructed to falsify records indicating they had received radiographer's assistants training when they did not actually receive the training; (2) required to perform the duties of assistant radiographer without receiving the required training; (3) not assigned personnel radiation badges and directed to share badges with coworkers; and (4) not provided information about their occupational radiation exposure, in accordance with NRC requirements. Based on testimonial and documentary evidence obtained by OI, there was insufficient evidence for NRC to substantiate the concerns.

However, based on the results of the inspection and the investigation, and in accordance with the NRC Enforcement Policy, the NRC has determined that four Severity Level IV violations of NRC requirements occurred. The violations involved Diamond Technical Services' failure to: 1) train an individual that served as a radiographer's assistant prior to his/her working as a radiographer's assistant; 2) have a second qualified radiographer or radiographer's assistant present during radiographic operations at a temporary job site; 3) maintain estimates of exposures as a result of missing dosimeters; and, 4) maintain records of direct reading dosimetry results for three years after the record is made.

The violations are cited in the enclosed Notice of Violation (Notice), because the violations were identified by the NRC. The NRC concluded that the violation involving the failure to have a

second qualified radiographer or radiographer's assistant present during radiographic operations was caused by the failure to train an individual as a radiographer's assistant before using the individual in that capacity. Therefore, given the cause and effect relationship between the issues, those two violations are categorized together as a single, Severity Level IV problem.

During our inspection exit meeting on June 5, 2015, you acknowledged the violations. You stated that you have taken corrective and preventative actions to address each violation and that Diamond Technical Services is committed to radiation safety and to compliance with NRC regulations and licensed conditions. Further, you stated that you have taken the following corrective and preventative actions:

- 1) The Radiation Safety Officer retrained the licensee's Michigan staff, which was completed on September 5, 2014;
- 2) All new radiographers or radiographer's assistants will be trained by the Radiation Safety Officer or their training will be specifically reviewed by the Radiation Safety Officer, and a letter granting them permission to act as a radiographer or radiographer's assistant will be written;
- 3) For individuals with missing dosimetry results, exposure estimates have been calculated and will be submitted for inclusion into the individuals' exposure records within 30 days;
- 4) The Radiation Safety Officer will review quarterly dose reports and compare them to use records; and
- 5) The operations manager will check use logs daily and ensure that the survey records have been submitted.

The NRC has concluded that information regarding: (1) the reason for the violations; (2) the actions planned or already taken to correct the violations and prevent recurrence; and, (3) the date when full compliance was achieved is already adequately addressed in our records. Therefore, you are not required to respond to this letter unless the description therein 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 enclosures, and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC Public Document Room or from the NRC document system (ADAMS), accessible from the NRC 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 available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such information, you must specifically identify the portions of your response that you seek to have withheld, and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by

10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

Please note that final NRC investigation documents, such as the OI report described above, may be made available to the public under the Freedom of Information Act (FOIA) subject to redaction of information appropriate under the FOIA. Requests under the FOIA should be made in accordance with 10 CFR 9.23, Requests for Records, a copy of which is enclosed for your information.

Current NRC regulations and guidance are included on the NRC's website at www.nrc.gov; select **Nuclear Materials; Med, Ind, & Academic Uses**; then **Regulations, Guidance and Communications**. The current Enforcement Policy is included on the NRC's website at www.nrc.gov; select **About NRC, Organizations & Functions; Office of Enforcement; Enforcement documents**; then **Enforcement Policy (Under 'Related Information')**. You may also obtain these documents by contacting the Government Printing Office (GPO) toll-free at 1-866-512-1800. The GPO is open from 8:00 a.m. to 5:30 p.m. EST, Monday through Friday (except Federal holidays).

Please contact Michael Reichard at 610-337-6945, if you have any questions regarding this matter.

Sincerely,

/RA T. J. Jackson for/

Blake D. Welling, Chief
Commercial, Industrial, R&D
and Academic Branch
Division of Nuclear Materials Safety

Enclosures:

1. Notice of Violation
2. Inspection Report No. 03037501/2014003
3. 10 CFR 9.23, Request for Records

cc w/Enclosures: Greg S. Prebish, Radiation Safety Officer
Commonwealth of Pennsylvania
State of Michigan

10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information).

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cc w/Enclosures: Greg S. Prebish, Radiation Safety Officer
Commonwealth of Pennsylvania
State of Michigan

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DATE	06/12/15		06/12/15		06/15/15		06/18/15	

OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Diamond Technical Services
Blairsville, PA

Docket No. 03037501
License No. 37-31259-01
EA-15-095

During an NRC inspection conducted on April 23, 2014, through June 5, 2015, four violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

A.

1. 10 CFR 34.43(c) requires, in part, that the licensee may not permit any individual to act as a radiographer's assistant until the individual has demonstrated understanding of the instructions under (c)(1) of this section by successfully completing a written test on the subjects covered.

Contrary to the above, on April 17, 2013, and April 23, 2013, the licensee permitted an individual to act as a radiographer's assistant without successfully completing a written test.

2. 10 CFR 34.41(a) requires, in part, that whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of 10 CFR 34.43(c).

Contrary to the above, on April 17, 2013, and April 23, 2013, radiography was performed at a location other than a permanent radiographic installation and the radiographer was not accompanied by one other qualified radiographer or an individual who had at a minimum met the requirements of 10 CFR 34.43(c). Specifically, DTS performed radiography outside of its Monroe, Michigan office (not in a permanent radiographic installation), and the radiographer was accompanied by an individual that was not a qualified radiographer or an individual who met the requirements of 10 CFR 34.43(c).

These violations represent a SL IV violation (Enforcement Policy Section 6.3).

- B.**
- 10 CFR 34.83 requires, in part, that the licensee shall maintain the following exposure records specified in 34.47: (d) Records of estimates of exposures as a result of lost or damaged personnel dosimeters until the Commission terminates the license.

Contrary to the above, as of June 5, 2015, the licensee did not maintain records of estimates of exposures as a result of lost or damaged personnel dosimeters until the Commission terminates the license. Specifically, four individuals worked as radiographers or radiographer's assistants between April 1, 2013, through June 30, 2013, and no exposure records were maintained for that period for those employees. Landauer, their dosimetry service provider, stated that they did not receive any dosimeters for those individuals for that timeframe. No estimates were provided as of June 5, 2015.

This is a SL IV violation (Enforcement Policy Section 6.3).

- C. 10 CFR 34.83 requires, in part, that each licensee shall maintain the following exposure records specified in 34.47: (a) Direct reading dosimeter readings and yearly operability checks required by 34.47 (b) and (c) for three years after the record is made.

Contrary to the above, as of April 23, 2014, the licensee did not maintain the exposure records of direct reading dosimeter readings for three years after the records were made. Specifically, records of the direct reading dosimeter readings for April 17, 2013, and April 23, 2013, were not in the licensee's possession on April 23, 2014, a period of less than three years.

This is a SLIV violation (Enforcement Policy Section 6.3).

The NRC has concluded that information regarding the reason for the violations, the corrective actions taken and planned to correct the violation and prevent recurrence and the date when full compliance will be achieved is already adequately addressed on the docket. 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, D.C. 20555 with a copy to the Regional Administrator, Region I, 2100 Renaissance Boulevard, Suite 100, King of Prussia, PA 19406, within 30 days of the date of the letter transmitting this Notice of Violation (Notice).

If you contest this enforcement action, you should also provide a copy of your response to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, any response which contests an enforcement action shall be submitted under oath or affirmation.

Your response will be placed in the NRC Public Document Room (PDR) and on the NRC Web site. To the extent possible, it should, therefore, not include any personal privacy, proprietary, or safeguards information so that it can be made publically available without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

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

Dated This 18th day of June 2015

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No. 03037501/2014003
Docket No. 03037501
License No. 37-31259-01
Licensee: Diamond Technical Services
Address: 9152 Route 22
Blairsville, Pennsylvania 15717
Field Office Location: 330 Detroit Avenue, Suite B
Monroe, Michigan 48162
Inspection Dates: April 23, 2014, through June 5, 2015

Inspector:	<u>/RA/</u> Michael Reichard, Health Physicist Commercial, Industrial, R&D and Academic Branch Division of Nuclear Materials Safety	<u>06/12/15</u> date
Approved By:	<u>/RA T. J. Jackson for/</u> Blake Welling, Chief Commercial, Industrial, R&D and Academic Branch Division of Nuclear Materials Safety	<u>06/18/15</u> date

EXECUTIVE SUMMARY

Diamond Technical Services
NRC Inspection Report No. 03037501/2014003

This was a limited scope inspection performed jointly with an investigation conducted by the NRC Office of Investigations (OI). The inspection focused on training, personnel dosimetry use, transportation of radioactive material, and industrial radiography operations performed at the licensee's Monroe, Michigan facility.

Based on the results of the inspection, four violations were identified.

The first two violations are being treated as a single Severity Level IV problem, because they share a common root cause. The first violation pertains to permitting an individual to work as a radiographer's assistant without having completed the training required in 10 CFR 34.43(c). The second violation pertains to radiography being performed where the radiographer was not accompanied by an individual who has met the requirements of 10 CFR 34.43(c), which is a violation of 10 CFR 34.41(a).

The third violation was a failure to maintain records of estimates of exposures as a result of lost personnel dosimeters, which is a violation of 10 CFR 34.83(d). The fourth violation was a failure to maintain records of personal direct reading dosimeters for three years after the record is made, which is a violation of 10 CFR 34.83(a).

REPORT DETAILS

I. Organization and Management Oversight

a. Inspection Scope

The inspector reviewed the licensee's organization and management oversight through interviews of applicable staff.

b. Observations and Findings

Diamond Technical Services' (DTS) main location is in Blairsville, Pennsylvania. They also have a field station in Monroe, Michigan. DTS's NRC license authorizes industrial radiography activities at temporary job sites anywhere in NRC jurisdiction and authorizes them to store radioactive material at the licensee's Monroe, Michigan facility.

DTS senior management, including the Radiation Safety Officer (RSO), work from the licensee's Blairsville, Pennsylvania location. Some of the routine duties of the RSO were delegated to the staff at the Michigan location due to practical considerations. During the period of this inspection, DTS increased the RSO's direct oversight of the Michigan location, and removed some of his other unrelated responsibilities.

c. Conclusions

Oversight of DTS's Michigan location by senior management, including the RSO, was limited. During the period of this inspection the licensee removed some of the RSO's collateral duties, which will allow him to spend more time overseeing the Michigan program.

II. Training of Radiographers and Radiographer's Assistants

a. Inspection Scope

The inspector reviewed the licensee's training program against the requirements of 10 CFR 34.43 and the license conditions. The inspector reviewed training records, timesheets, and survey records, and interviewed applicable staff.

b. Observations and Findings

The inspector reviewed the licensee's training program and determined that it met applicable requirements. The licensee's training program included a 40 hour course for radiographers and a twelve hour course for radiographer's assistants.

The inspector reviewed timesheets and identified one individual that was listed as a radiographer's assistant on two separate dates, but could not locate the applicable training record. The licensee also could not locate the applicable training record, but was unaware of the individual having ever worked as a radiographer's assistant.

Licensee management questioned the accuracy of the timesheet. The inspector and the licensee

attempted to locate the corresponding survey records, but the records could not be found.

Based on interviews of the three individuals that would have direct knowledge of the work (the former Site Radiation Safety Officer (Site RSO), the radiographer, and the individual listed as the radiographer's assistant on the timesheets), the inspector determined that the individual listed as the radiographer's assistant did serve in that capacity on two dates. The former Site RSO indicated that he thought the individual listed as the radiographer's assistant had been trained as a radiographer's assistant prior to the former Site RSO assuming the responsibilities of Site RSO. The radiographer believed, to the best of his memory, that the individual listed as a radiographer's assistant on the timesheets served in that capacity with him. The individual serving as a radiographer's assistant reported that he had not received training for the position, but had received training to be a radiographer's assistant by previous employers. The inspector concluded, based on the information described above, that one individual served as a radiographer's assistant on April 17, 2013, and April 23, 2013, and the individual had not received the required training.

This occurrence was isolated in nature. The individual had been trained as a radiographer's assistant by former employers, worked with a fully qualified radiographer, and there was confusion during this time of transition regarding who was responsible for providing training. The RSO subsequently decided to provide retraining for staff at the Michigan location. The training was completed on September 5, 2014.

c. Conclusions

Two violations were identified and are being characterized as one Severity Level (SL) IV problem. These violations would ordinarily be characterized as SLIII violations, but due to the specific circumstances discussed above, were determined to be a SL IV problem.

A.

1. 10 CFR 34.43(c) requires, in part, that the licensee may not permit any individual to act as a radiographer's assistant until the individual has demonstrated understanding of the instructions under (c)(1) of this section by successfully completing a written test on the subjects covered.

Contrary to the above, on April 17, 2013, and April 23, 2013, the licensee permitted an individual to act as a radiographer's assistant without successfully completing a written test.

2. 10 CFR 34.41(a) requires, in part, that whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must

be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of 10 CFR 34.43(c).

Contrary to the above, on April 17, 2013, and April 23, 2013, radiography was performed at a location other than a permanent radiographic installation and the radiographer was not accompanied by one other qualified radiographer or an individual who had at a minimum met the requirements of 10 CFR 34.43(c). Specifically, DTS performed radiography outside of its Monroe, Michigan office (not in a permanent radiographic installation), and the radiographer was accompanied by an individual that was not a qualified radiographer or an individual who met the requirements of 10 CFR 34.43(c).

These violations represent a SL IV problem (Enforcement Policy Section 6.3).

III. Personnel Dosimetry Use

a. Inspection Scope

The inspector reviewed the licensee's personnel dosimetry program against the requirements of 10 CFR 34.83. The inspector reviewed personnel dosimetry reports, timesheets, and survey records, and interviewed applicable staff.

b. Observations and Findings

The inspector identified that five individuals worked as radiographers or radiographer's assistants from April 1, 2013, through June 30, 2013. The Radiation Dosimetry Reports from Landauer reported a dosimetry result for one individual. A representative from Landauer indicated that only one dosimeter was turned in for that quarter. The licensee was not able to locate the other dosimeters. Estimates of exposures were not added to the individuals' personnel exposure records as of June 5, 2015.

The inspector reviewed the licensee's survey records, which included direct reading dosimetry results, and found two survey records that were missing, April 17, 2013, and April 23, 2013.

c. Conclusions

Two violations were identified.

- D. 10 CFR 34.83 requires, in part, that the licensee shall maintain the following exposure records specified in 34.47: (d) Records of estimates of exposures as a result of lost or damaged personnel dosimeters until the Commission terminates the license.

Contrary to the above, as of April 23, 2014, the licensee did not maintain records of estimates of exposures as a result of lost or damaged personnel dosimeters until the Commission terminates the license. Specifically, four individuals worked as radiographers or radiographer's assistants between April 1, 2013, through June 30,

2013, and no exposure records were maintained for that period for those employees. Landauer, their dosimetry service provider, stated that they did not receive any dosimeters for those individuals for that timeframe. No estimates were provided as of June 5, 2015.

This is a SLIV violation (Enforcement Policy Section 6.3).

- E. 10 CFR 34.83 requires, in part, that each licensee shall maintain the following exposure records specified in 34.47: (a) Direct reading dosimeter readings and yearly operability checks required by 34.47 (b) and (c) for three years after the record is made.

Contrary to the above, as of April 23, 2014, the licensee did not maintain the exposure records of direct reading dosimeter readings for three years after the records were made. Specifically, records of the direct reading dosimeter readings for April 17, 2013, and April 23, 2013, were not in the licensee's possession on April 23, 2014, a period of less than three years.

This is a SLIV violation (Enforcement Policy Section 6.3).

IV. Transportation

a. Inspection Scope

The inspector reviewed radioactive material transportation documentation and interviewed applicable staff.

b. Observations and Findings

The inspector reviewed the licensee's transportation records and determined that they met applicable requirements. Through interviews and demonstrations by various DTS staff members, the inspector determined that DTS transported their radioactive material in compliance with applicable requirements.

c. Conclusions

No violations were identified.

V. Industrial Radiography at the Licensee's Facility

a. Inspection Scope

The inspector reviewed applicable survey records and interviewed applicable staff. Licensee staff provided a tour of the facility to explain their methodology.

b. Observations and Findings

The licensee, on rare occasions, performs radiography within the licensee's Michigan location. Typically, this involves radiographic exposures for radiographers' qualification programs. The inspector reviewed survey records and determined that exposures in unrestricted areas met applicable requirements. Licensee staff explained how they post and maintain boundaries during radiographic operations inside their facility. The inspector determined that the licensee met the applicable requirements.

c. Conclusions

No violations were identified.

VI. Exit Meeting

On June 5, 2015, an exit meeting was held by telephone to discuss the violations and findings. The licensee acknowledged the inspector's findings.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

- * Atwater, Tim, Operations Manager
- * Connors, Jim, Site Radiation Safety Officer, Pennsylvania facility, DTS
- Hill, Ralph H., Chief Operating Officer, DTS
- * Prebish, Greg S., Radiation Safety Officer and General Manager, DTS
- # Schuchert, Kiel R., Site Radiation Safety Officer and Operations Manager, Michigan facility, DTS
- Smith, Anthony R., former Site Radiation Safety Officer and Assistant Manager, Michigan facility, DTS
- Smith, Michael, Division Manager, DTS

- # Present at Entrance Meeting
- * Present at Exit Meeting

INSPECTION PROCEDURES USED

Inspection Procedure 87121, Industrial Radiography Programs

LIST OF DOCUMENTS REVIEWED

DTS Training Records
Applied Health Physics Certificate of Radiological Training, issued to Anthony Smith
Landauer Dosimetry Reports for DTS-Monroe
Landauer Packing Slips
DTS Daily Time Sheets
DTS Radiation Survey and Shipping Records
DTS Office Survey Records

LIST OF ACRONYMS USED

DTS	Diamond Technical Services
OI	Office of Investigation
RSO	Radiation Safety Officer
Site RSO	Site Radiation Safety Officer
SL	Severity Level