UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

November 18, 2021

EA-21-133

Mr. Bruce F. Karie
Radiation Safety Officer
Acuren Inspection, Inc.
4566 Abrahamson Rd.
Duluth, MN 55811

SUBJECT: NRC ROUTINE INSPECTION REPORT NO. 03038913/2021004(DNMS) – ACUREN INSPECTION, INC.; ADBA/WIT PIPELINE; ADBA/TEI; ADBA/ACUREN PIPELINE; ADBA/LEHIGH TESTING LABORATORIES

Dear Mr. Karie:

On August 3, 2021, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted a routine inspection at your Portage, Michigan, location with continued in-office review through September 23, 2021. The purpose of the inspection was to review activities performed under your NRC license to ensure that activities were being performed in accordance with NRC requirements. The in-office review included a review of the circumstances surrounding an incident that occurred at a temporary job site near Bay City, Michigan, on June 11, 2021, that involved a member of the public entering the restricted area and high radiation area during a radiographic exposure. Mr. Jason Draper of my staff conducted a final exit meeting by telephone with you on October 20, 2021, 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, three apparent violations of NRC requirements 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 first apparent violation concerned your failure to ensure that radiography conducted at a temporary job site

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

near Bay City, Michigan, a location other than a permanent radiographic installation, was conducted with a radiographer accompanied by at least one other qualified individual, as required by Title 10 of the *Code of Federal Regulations* (CFR) 34.41(a). The second apparent violation concerned your failure to maintain continuous direct visual surveillance of a radiographic operation to protect against unauthorized entry into a high radiation area, as required by 10 CFR 34.51. The third apparent violation concerned your failure to ensure that a radiographer's assistant was under the personal supervision of a radiographer while using a radiographic exposure device, as required by 10 CFR 34.46(c).

Because the NRC has not made a final determination in this matter, the NRC is not issuing a Notice of Violation for these inspection findings at this time. The circumstances surrounding these apparent violations, the significance of the issues, and the need for lasting and effective corrective actions were discussed with you at the inspection exit meeting on October 20, 2021.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) respond in writing to the apparent violations 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). **Please contact Michael Kunowski, Chief, Materials Inspection Branch, at 630-829-9618 or Michael.Kunowski@nrc.gov 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 Violations in NRC Inspection Report No. 03038913/2021004(DNMS); EA-21-133," 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. 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's 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 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. 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.

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, if you choose ADR, please also contact Mr. Kunowski at the telephone number or email address listed above.**

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.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and 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. 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.

Please feel free to contact Jason Draper of my staff if you have any questions regarding this inspection. Mr. Draper can be reached at 630-829-9839.

Sincerely,

Signed by Pelton, David
on 11/18/21

David L. Pelton, Director
Division of Nuclear Materials Safety

Docket No. 030-38913
License No. 22-27593-01

Enclosures:
1. IR No. 03038913/2021004(DNMS)
2. Security Addendum to Inspection Report (Non-public)

cc w/encl: Ricky Lillard, Portage Radiation Safety Officer – OUO (non-public)
State of Michigan (public)
State of Minnesota (public)

Letter to Bruce Karie from David Pelton dated, November 18, 2021.

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DATE	11/16/21		11/17/21		11/17/21		11/18/21	11/18/21	

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U.S. Nuclear Regulatory Commission
Region III

Docket No(s).:	030-38913
License No.:	22-27593-01
Report No.:	03038913/2021004(DNMS)
EA No.:	EA-21-133
Licensee:	Acuren Inspection, Inc.
Facility:	4460 Commercial Ave. Ste. D Portage, Michigan
Inspection Dates:	August 3, 2021, with in-office review through September 23, 2021
Exit Meeting Date:	October 20, 2021
Inspector:	Jason Draper, Health Physicist
Approved By:	Michael Kunowski, Chief Materials Inspection Branch Division of Nuclear Materials Safety

Enclosure 1

EXECUTIVE SUMMARY

Acuren Inspection, Inc.
NRC Inspection Report 03038913/2021004(DNMS)

This was a routine inspection of licensed activities involving the use of byproduct material for use in industrial radiography. Acuren Inspection, Inc., is a non-destructive testing company with multiple field offices in NRC jurisdiction, including one in Portage, Michigan. The U.S. Nuclear Regulatory Commission (NRC) License No. 22-27593-01 authorizes Acuren Inspection, Inc., to use a variety of radiographic exposure devices and related equipment to perform industrial radiography.

During the routine inspection on August 3, 2021, the inspector identified three apparent violations associated with an incident that occurred during radiographic operations at a temporary jobsite near Bay City, Michigan, on June 11, 2021. During this radiographic operation, an employee of the licensee's client bypassed the cones and signs the licensee had erected at the restricted area boundary and got within the area calculated by the licensee to be designated as the high radiation area before a member of the radiography crew noticed the individual in the restricted area.

The first apparent violation the inspector identified was an apparent violation of Title 10 of the *Code of Federal Regulations* (CFR) 34.41(a) involving the licensee's failure to ensure that radiography conducted at a temporary job site near Bay City, Michigan, a location other than a permanent radiographic installation, was conducted with a radiographer accompanied by at least one other qualified radiographer or an individual who has met the requirements of 10 CFR 34.43(c). Specifically, while the licensee conducted radiography, one radiographer was in the cab of the licensee's radiography rig, the other radiographer was not in the vicinity of the restricted area, and neither was observing the operations or capable of providing immediate assistance to prevent unauthorized entry.

The second apparent violation the inspector identified was an apparent violation of 10 CFR 34.51 involving the licensee's failure to maintain continuous direct visual surveillance of the radiographic operation to protect against unauthorized entry into a high rad area. Specifically, the two radiographers and the radiographer's assistant who were onsite were not observing the restricted area during the radiographic operation and failed to recognize that a member of the public had entered the restricted area and high radiation area until the individual was within the high radiation area.

The third apparent violation the inspector identified was an apparent violation of 10 CFR 34.46(c) involving the licensee's failure to ensure that the radiographer's assistant was under the personal supervision of a radiographer while using a radiographic exposure device. Specifically, the assistant radiographer conducted radiographic operations while one radiographer was in the cab of the licensee's radiography rig, the other radiographer was not in the vicinity of the restricted area, and neither was able to observe the assistant's performance.

As immediate corrective action upon identifying the member of the public in the high radiation area, the radiographer's assistant yelled to the member of the public to exit the restricted area, which the person did. The licensee then performed a safety stand down and recalled the crew

back to the Portage, Michigan, office for safety retraining, removed from the project the radiographer who was sitting in the cab of the truck, and erected yellow and magenta ropes as additional barriers along the restricted area boundary when radiography resumed at this jobsite.

REPORT DETAILS

1 Program Overview and Inspection History

Acuren Inspection, Inc., is authorized under NRC Materials License No. 22-27593-01 to use licensed material for activities related to industrial radiography. Licensed material is authorized to be used and stored at numerous licensee facilities in non-agreement states, including in Portage, Michigan, as well as at temporary jobsites anywhere in the United States in areas of NRC jurisdiction.

2 Temporary Job Site Operation

2.1 Inspection Scope

On August 3, 2021, the inspector performed an onsite inspection of the licensee's field office in Portage, Michigan. During this onsite inspection the inspector observed radiographic operations onsite as well as toured the licensee's facility, interviewed licensee staff, and reviewed records associated with temporary job site operations.

During interviews, the inspector learned about an incident that occurred on June 11, 2021, at a temporary job site at their client's facility, a pipe yard near Bay City, Michigan. The inspector also reviewed several documents related to the licensee's investigation into the incident.

2.2 Observations and Findings

On June 11, 2021, the licensee had a radiography crew at the Bay City, Michigan, temporary job site that consisted of two radiographers and one radiographer's assistant. Besides the radiography crew, there were also welders for the client present at the pipe yard. The radiography crew had set up a restricted area in a remote part of the pipe yard that consisted of cones and signs marked with "Caution – Radiation Area." The licensee also utilized two licensee trucks and existing stacks of piping as physical barriers for portions of the restricted area boundary. At the high radiation area boundary, the licensee posted "High Radiation Area" signs and a flashing amber light. The pipes being inspected were on stands inside the restricted area, and the guide tube of the radiographic exposure device with a 4 half-value-layer collimator was attached to the weld being exposed. The crank for the radiographic exposure device was located near the tailgate of one of the licensee's trucks.

The licensee's crew was taking exposures of multiple welds, and each exposure lasted approximately 8 minutes. Approximately halfway through one of these 8-minute exposures, one of the radiographers was talking with an employee of the client approximately 75 yards away from the restricted area; the other radiographer was sitting in the cab of the truck, which was facing away from the restricted area; and the radiographer's assistant was sitting on the ground near the crank, assigned to watch the restricted area boundary. During this time, an employee of the client—a member of the

public—bypassed the cones and signs and entered the restricted area. The individual continued to within 4-8 feet of the collimated source (inside the calculated high radiation area) before the radiographer's assistant noticed the individual and yelled for the individual to leave the restricted area, to which the individual complied.

Due to the positioning of the collimator, the individual was shielded by the collimator while inside the restricted area. Based on the licensee's recreations of the event, the licensee estimated the individual had been inside the restricted area for approximately 13 seconds and near the collimator for approximately 4 seconds. Based on these assumptions, the licensee calculated that the individual received approximately 1.49 millirem during the restricted area boundary breach. The inspector performed independent calculations that yielded similar results. Based on this calculation, the licensee determined that the member of the public did not receive an overexposure and the incident was not reportable per 10 CFR 20.2203(a)(2)(iv).

As corrective actions for this incident, the radiography crew performed a safety stand down and returned to the Portage field office for safety retraining. The crew received additional training on control of the restricted area and the radiographer who was sitting in the cab of the truck was removed from the project and given a letter of reprimand. When the crew resumed radiographic operations at the temporary job site, they added yellow and magenta ropes to the restricted area boundary in addition to the cones and signs.

Based on the details of the incident provided in the interviews and the licensee's investigation records, the inspector determined that the licensee's restricted area and high radiation area were constructed in accordance with the NRC regulations and the licensee's procedures. The inspector also determined that the licensee's decision to not report the event to the NRC was supported by the licensee's calculation and verified by the inspector's independent calculations.

2.3 Conclusions

As a result of this incident, the inspector identified three apparent violations of NRC requirements as outlined below.

The inspector identified an apparent violation of 10 CFR 34.41(a) for the licensee's failure to ensure that radiography conducted at a temporary job site, a location other than a permanent radiographic installation, was conducted with a radiographer accompanied by at least one other qualified radiographer or an individual who has met the requirements of 10 CFR 34.43(c). This regulation requires the additional qualified individual to observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. During this incident, one of the radiographers was away from the restricted area and the other was in the cab of the truck which was facing away from the restricted area. This resulted in the licensee conducting radiography while no radiographers were present.

The inspector also identified an apparent violation of 10 CFR 34.51 for the licensee's failure to maintain continuous direct visual surveillance of the radiographer operation to

protect against unauthorized entry into a high radiation area. During this incident, none of the three licensee qualified individuals present maintained continuous direct visual surveillance of the operation resulting in a member of the public entering the restricted area and the high radiation area before being detected.

The inspector also identified an apparent violation of 10 CFR 34.46 for the licensee's failure to provide the radiographer's assistant with personal supervision of a radiographer while the radiographer's assistant used a radiographic exposure device. During this incident, one of the radiographers was away from the restricted area and the other radiographer was inside the cab of the truck, resulting in the radiographer's assistant using a radiographic exposure device without the personal supervision of a radiographer.

3 Other Areas Inspected

3.1 Inspection Scope

The inspector reviewed other portions of the licensee's radiation safety program and field office activities, including security and access control, shielding of material, comprehensive safety measures, occupational dose monitoring, instrumentation, and radiation safety procedures and training, and radiation safety program oversight. This review consisted of a tour of the licensee's facility, independent surveys, interviews with licensee staff, and records reviews.

3.2 Observations and Findings

The inspector determined that the licensee maintained the facility secure and limited access to authorized personnel. The licensee also performed necessary maintenance on the radiographic exposure devices and associated equipment and performed leak tests at the required periodicity. The licensee ensured byproduct material was protected from external hazards, and appropriately monitored the occupational dose to employees. The licensee also provided the necessary radiation safety had hazmat employee training at the required periodicities. In addition, the licensee implemented a radiation safety program, reviewed the program at least annually, and documented the results of these reviews.

3.3 Conclusions

The inspector reviewed elements of the licensee's radiation safety program and did not identify any additional findings in these areas.

4 Exit Meeting Summary

The NRC inspector presented preliminary inspection findings via teleconference on October 20, 2021. The licensee did not identify any documents or processes reviewed by the inspectors as proprietary. The licensee acknowledged the findings presented.

LIST OF PERSONNEL CONTACTED

Bruce Karie, Corporate Radiation Safety Officer
Kyle Kirby, Division Manager
Ricky Lillard, Portage Site Radiation Safety Officer
Kyle Miller, Radiographic Technician

Attended exit meeting on October 20, 2021.

INSPECTION PROCEDURES USED

87121: Industrial Radiography Programs