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

April 20, 2022

EN: 55662
NMED No. 220007 (Closed)
EA-22-018

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

SUBJECT: NRC INSPECTION REPORT NO. 03014016/2021001(DNMS) – TESTING ENGINEERS & CONSULTANTS, INC.

Dear Ms. Banicki:

On December 1 through 3, 2021, an inspector from the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at your Troy, Michigan office. On December 17, 2021, your office reported the loss of two portable moisture/density gauges (EN 55662). The NRC expanded the scope of this inspection effort on January 3 and 4, 2022, to review the circumstances of the loss of these devices. This inspection included continued in-office review through March 21, 2022. The purpose of this 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 information related to your radiation safety program, including your written report dated January 17, 2022, describing the missing gauges. Ms. Deborah A. Piskura of my staff conducted a final exit meeting by videoconference with you and members of your staff on March 21, 2022, 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 NRC's rules and regulations as well as the conditions of your license. Within these areas, the inspections consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, 16 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 apparent violations concerned the licensee's failures to: (1) control and maintain surveillance of two gauges that were in storage or in use in 2021 and that were reported lost on December 17, 2021, as required by Title 10 of the Code of Federal Regulations (10 CFR) 20.1801/20.1802 and 30.34(i); (2) secure licensed material (a portable gauge) when not under the licensee's control and constant surveillance as required by 10 CFR 30.34(i) and 10 CFR 20.1802; (3) use a minimum of two independent physical controls to form a tangible barrier to secure 22 portable gauges stored within the licensee's storage room at the Troy field office from unauthorized removal

whenever the gauges were not under the licensee's control and constant surveillance as required by 10 CFR 30.34(i); (4) have the individual named on the NRC license serve as the Radiation Safety Officer as required by License Condition 11; (5) review the radiation protection program content and implementation at least annually as required by 10 CFR 20.1101(c); (6) ensure that each container (portable gauge) of licensed material bears a durable, clearly visible label as required by 10 CFR 20.1904(a); (7) conduct leak tests of sealed sources, as required by License Condition 13.C, in 10 gauges that have been in storage for a period greater than 10 years; (8) conduct physical inventories every 6 months of all sources and devices as required by License Condition 15; (9) lock the gauge source rod or the outer container when the gauges are in transport or storage, or when not under the direct surveillance of an authorized user as required by License Condition 16; (10) maintain documentation demonstrating that the dose to members of the public was not likely to exceed the allowable limits in 10 CFR Part 20 as required by 10 CFR 20.2107(a); (11) sign-in and sign-out gauges on the licensee's utilization log (sign-out sheet) as required by License Condition 19.A; (12) use an approved Type A package to transport hazardous material (a portable gauge) as required by 10 CFR 71.5(a)/49 CFR 173.22(a)(2); (13) secure a gauge during shipment to prevent shifting during normal transportation conditions as required by 10 CFR 71.5(a)/49 CFR 173.448(a); (14) provide initial and refresher training to hazmat employees, as required by 10 CFR 71.5(a)/49 CFR 172.704(a), and (c)(1); and ensure that each of its employees transporting radioactive materials has received recurrent hazmat training at least once every three years, as required by 10 CFR 71.5(a)/49 CFR 172.704(c)(2); (15) have the shipping paper readily visible and within the driver's reach during transport as required by 10 CFR 71.5(a)/49 CFR 177.817(e); and (16) transport hazardous material outside the passenger compartment of a vehicle as required by 10 CFR 71.5(a)/49 CFR 173.448(c).

Since one of the apparent violations involves the loss of four sealed sources within two devices, each device containing 8 millicuries of cesium-137 and 44 millicuries of americium-241, the NRC is considering proposing imposition of a civil monetary penalty. Consistent with Section 2.3.4, Civil Penalty, of the NRC Enforcement Policy, for violations where a licensee has lost required control of its regulated licensed material for any period of time, the NRC normally will impose at least a base civil penalty. The base civil penalty amount is based on approximately three times the expected average cost of authorized disposal; however, the NRC may exercise its discretion to mitigate or escalate a civil penalty amount based on the merits of a specific case. Therefore, you may provide information regarding the actual expected cost of authorized disposal for the NRC to consider in making a final enforcement decision. However, the NRC will not normally decrease the civil penalty to an amount below the lowest base civil penalty for such cases.

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 during the exit meeting on March 21, 2022.

Before the NRC makes its enforcement decision, we are providing you an opportunity to either: (1) request a Predecisional Enforcement Conference (PEC); or (2) request Alternative Dispute Resolution (ADR). **Please contact Michael A. Kunowski at 630-829-9650 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 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 Alternative Dispute Resolution (ADR) with the NRC in an attempt to resolve these issues. 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.

Collectively, the number and variety of apparent violations are of concern to the NRC because they indicate ineffective management oversight of your radiation safety program that cannot solely be attributed to the departure of your Radiation Safety Officer in 2021. During the PEC or the ADR, you are requested to describe: (1) how you plan to improve the management oversight of your radiation safety program; (2) how you plan to assess the effectiveness of this improvement effort in oversight; and (3) why you believe your corrective actions for these violations will be successful in preventing similar violations in the future.

In addition, please be advised that the number and characterization of the apparent violations described in the enclosed inspection report may change as a result of further NRC review. You will be advised by separate correspondence of the results of our deliberations on this matter.

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

Please feel free to contact Deborah A. Piskura of my staff if you have any questions regarding this inspection. Ms. Piskura can be reached at 630-829-9867.

Sincerely,

Kathryn M. Brock Signed by Brock, Kathryn
on 04/20/22

Kathryn M. Brock, Acting Director
Division of Nuclear Materials Safety

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

Enclosure: IR No. 03014016/2021001
(DNMS)

cc w/encl: State of Michigan

Letter to Katherine Banicki from Kathryn M. Brock dated, April 20, 2022.

SUBJECT: NRC INSPECTION REPORT NO. 03014016/2021001(DNMS) – TESTING ENGINEERS & CONSULTANTS, INC.

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NAME	DPiskura		MKunowski		PSnyder		JPeralta	
DATE	03/31/22		04/12/22		04/12/22		04/18/22	
OFFICE	NMSS		OGC (NLO)		RIII-EICS		RIII-DNMS	
NAME	RSun		MSimon		KLambert for SLewman		KBrock	
DATE	04/12/22		04/18/22		04/19/22		04/20/22	

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U.S. Nuclear Regulatory Commission
Region III

Docket No.:	030-14016
License No.:	21-18668-01
Report No.:	03014016/2021001(DNMS)
EA No.:	EA-22-018
Licensee:	Testing Engineers & Consultants, Inc.
Facilities:	1343 Rochester Road Troy, Michigan 1333 Rochester Road Troy, Michigan 3985 Varsity Drive Ann Arbor, Michigan
Inspection Dates:	December 1-3, 2021, and January 3-4, 2022, with continued in-office review through March 21, 2022
Exit Meeting Date:	March 21, 2022
Inspector:	Deborah A. Piskura, Senior Health Physicist
Approved By:	Michael A. Kunowski, Chief Materials Inspection Branch Division of Nuclear Materials Safety

Enclosure

EXECUTIVE SUMMARY

Testing Engineers & Consultants, Inc.
NRC Inspection Report 03014016/2021001(DNMS)

This was an inspection conducted on December 1-3, 2021, to review the activities at the Troy, Michigan office. The NRC then expanded the scope of the inspection on January 3, 2022, in response to the licensee's December 17, 2021, notification of two missing portable gauges. The inspection included in-office review through March 21, 2022, of information related to the radiation safety program that was unavailable at the time of the on-site inspection and the licensee's written report dated January 17, 2022. The inspection also included a review of licensed activities at its Ann Arbor office. The purpose of the inspection was to evaluate the licensee's performance and compliance with NRC regulations and license conditions. The inspector reviewed several program areas, including security, radiation protection, transportation, posting and labeling, and training.

The inspector identified an apparent violation involving the licensee's failure to secure two portable gauges from unauthorized removal that were stored in a controlled or unrestricted area as required by Title 10 of the *Code of Federal Regulations* (10 CFR) 20.1801 and 20.1802. The two gauges were discovered missing during an inventory conducted between December 4-17, 2021, following an inquiry by the inspector. On December 17, 2021, the licensee informed the NRC of the loss of the two gauges. The licensee's attempts to recover these missing gauges were unsuccessful. According to the licensee's records, these gauges were last tested for sealed source leakage in January 2021. It was unknown if these gauges were used since the previous leak tests.

The inspector identified two examples of an apparent violation involving the licensee's failure to use a minimum of two independent physical controls that form tangible barriers to secure a portable gauge from unauthorized removal, whenever the gauge was not under the control and constant surveillance of the licensee as required by 10 CFR 30.34(i). The inspector identified that the licensee had stored its gauges at the Troy, Michigan field office within a room with only one functional barrier to prevent access to the gauges in the room. Although the storage room was equipped with two locks on the door, at the time of the December 1, 2021, on-site inspection, only one lock was operational. The second lock was broken for an unknown period of time, prior to this inspection. The inspector identified a second example of a violation involving 10 CFR 30.34(i) and 10 CFR 20.1801, where the inspector observed a portable gauge within an unlocked vehicle with the engine running and without licensee personnel maintaining constant visual surveillance of the gauge or vehicle.

The inspector identified a fourth apparent violation involving the licensee's failure to have the named individual listed as the Radiation Safety Officer (RSO) in License Condition 11 serve as the RSO.

The inspector also identified additional apparent violations involving the licensee's failures to:
(1) review the radiation protection program content and implementation at least annually, as required by 10 CFR 20.1101(c);
(2) ensure that each container (portable gauge) of licensed material bears a durable, clearly visible label, as required by 10 CFR 20.1904(a);
(3) conduct leak tests of sealed source within 10 gauges that had been in storage for a period greater than 10 years, as required by License Condition 13.C;

(4) conduct physical inventories every 6 months of all sources and devices possessed under the NRC license, as required by License Condition 15;
(5) lock the gauge source rod or the outer container when the gauges are in transport or storage, or when not under the direct surveillance of an authorized user, as required by License Condition 16;
(6) maintain documentation demonstrating that dose to members of the public was not likely to exceed the allowable limits in 10 CFR Part 20, as required by 10 CFR 20.2107(a);
(7) sign-in and sign-out gauges on the licensee's utilization log (sign-out sheet), as required by License Condition 19.A;
(8) use an approved Type A package to transport hazardous material (a portable gauge) as required by 10 CFR 71.5(a)/49 CFR 173.22(a)(2);
(9) secure a shipment of radioactive materials to prevent shifting during normal transportation conditions, as required by 10 CFR 71.5(a)/49 CFR 177.448(a);
(10) provide initial and refresher training to hazmat employees as, required by 10 CFR 71.5(a)/ 49 CFR 172.704(a) and (c)(1); and ensure that each of its employees transporting radioactive materials has received recurrent hazmat training at least once every three years, as required by 49 CFR 172.704(c)(2);
(11) have the shipping paper readily visible and within the driver's reach during transport, as required by 10 CFR 71.5(a)/49 CFR 177.817(e); and
(12) transport hazardous material outside the passenger compartment of a vehicle, as required by 10 CFR 71.5(a)/49 CFR 173.448(c).

The licensee implemented measures to restore compliance with the respective requirements. Collectively, these violations represented a lack of management oversight of the radiation safety program.

REPORT DETAILS

1 Program Overview and Inspection History

Testing Engineers & Consultants, Inc. (licensee) is a private construction, engineering, and environmental consulting firm employing 80 individuals. The company operates two offices in Michigan with the main office located in Troy, Michigan, and a satellite office in Ann Arbor. Collectively, the company possesses 54 portable moisture/density gauges containing cesium-137 and americium-241 sealed sources that are used for measuring the properties of construction materials at various temporary job sites and are stored at the offices in Troy and Ann Arbor. The gauges are used daily during the construction season. The licensee designated approximately 30 individuals as authorized gauge users.

The NRC conducted a routine inspection of the licensee's activities at both of its field offices on June 28 through August 12, 2019. The inspection included a review of the licensee's activities, using one of its portable gauges, at a temporary job site. No violations of NRC requirements were identified during this routine inspection.

The NRC conducted a non-routine inspection on April 14, 2016, to review the licensee's corrective actions taken in response to escalated enforcement identified during an inspection conducted on June 19 to July 19, 2015; no violations of NRC requirements were identified during the April 2016 non-routine inspection.

An inspection conducted on June 19 to July 19, 2015, was also a non-routine inspection to review the licensee's corrective actions taken in response to escalated enforcement identified during a prior inspection completed in 2014. During the 2015 special inspection, the NRC identified one apparent violation involving the licensee's failure to secure gauges that were stored in controlled or unrestricted areas from unauthorized removal or access and the failure to use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal when the gauges were not under the direct control and constant surveillance of the licensee at its Troy, Michigan field office, as required by Title 10 of the Code of Federal Regulations (10 CFR) 20.1801 and 10 CFR 30.34(i). The violation involving 10 CFR 30.34(i) had also been identified during a routine inspection between November 6 to December 4, 2014.

2 Management Oversight of the Radiation Safety Program

2.1 Inspection Scope

The inspector reviewed the licensee's management of the radiation safety program and the annual radiation protection program reviews. The inspector interviewed the company president, vice president, the construction manager, and the interim RSO. The inspector also reviewed the license's audit reports from 2018 to 2021 year-to-date.

2.2 Observations and Findings

As of January 6, 2022, the individual named on the license in Amendment No. 21 as the RSO was not the RSO, having departed the company on July 30, 2021. The former RSO was based at the Troy office and was responsible for implementing the entire

radiation safety program, which included the activities at the Troy and Ann Arbor, Michigan offices. An individual, also no longer employed by the licensee and based in Troy, assisted the former RSO by performing sealed source leak tests on the gauges. The RSO position reported directly to the Vice President of Engineering and Construction Services who, in turn, reported to the President and Chief Executive Officer of the company. An individual based in Ann Arbor assisted the RSO by performing sealed source leak tests, maintaining files, managing the personnel monitoring, etc. for the Ann Arbor office.

The licensee staff was prompted in November 2021, by an upcoming due date for dosimetry exchange, to file an amendment to its NRC license to change the RSO. As the licensee's staff exchanged dosimetry for the upcoming monitoring period, it recognized that the RSO, who was the individual who had previously distributed the dosimetry to the gauge users, was no longer employed by the company. This prompted the licensee to appoint another individual to the role as RSO and to request an amendment of its NRC license. In a letter to the NRC dated November 11, 2021, the licensee requested this change. The NRC license was amended on January 6, 2022, listing a current employee with experience using gauges as the RSO.

Condition 11 of License No. 21-18668-01 named a specific individual to fulfill the duties and responsibilities of the RSO for the license. The inspector identified that from July 30, 2021, until January 6, 2022, the named individual was not the RSO because he had left the company. Therefore, the named individual on the license was not acting as the RSO, in apparent violation of License Condition 11.

According to the information in the former RSO's files, the inspector determined that the licensee conducted its most recent review of its radiation protection program in March 2018, for program activities since the previous audit in January 2017. The audit report, entitled, "Radiation Protection Program Audit Checklist," which did not specify if both field offices were assessed under this review, was conducted by an individual who assisted the RSO in his duties. The auditor identified program deficiencies requiring correction that included: (1) updating the list of authorized gauge users; (2) updating the inventory list; (3) adding locks on transportation cases; and (4) replacing worn labeling on transportation cases. The audit report indicated that corrective actions were taken on the audit findings and the report was signed by the RSO, who also served as a "management review." Apparently, no member of the licensee's senior management reviewed the March 2018 annual audit report. The inspector determined that no reviews of the radiation protection program had been conducted since the review in March 2018.

Title 10 CFR 20.1101(c) requires that a licensee shall periodically (at least annually) review the radiation protection program content and implementation. The licensee's failure to review the radiation protection program on an annual basis since March 2018 is an apparent violation 10 CFR 20.1101(c).

Although the former RSO gave two weeks' notice in July 2021 for his resignation, the licensee did not file an amendment until prompted by the need to collect and redistribute dosimetry to the gauge users in November 2021, and neither the RSO before he left nor the licensee after the RSO left conducted an annual assessment of the radiation protection program since the previous assessment in March 2018. The inspection prompted the licensee to review its files maintained by the former RSO to assess the

radiation safety program. The licensee committed to complete a review of its radiation protection program for activities conducted in 2021 by April 30, 2022.

2.3 Conclusions

The inspector identified an apparent violation of NRC requirements involving the licensee's failure to have the individual listed in License Condition 11 as the RSO be the RSO. On January 6, 2022, the NRC amended the license to name a new individual as RSO. The inspector also identified an apparent violation of 10 CFR 20.1101(c) for the licensee's failure to conduct annual reviews of its radiation protection program since March 2018.

3 Sequence of Events and Licensee Investigation

3.1 Inspection Scope

The inspection included a review of the sequence of events that resulted in the loss of two portable gauges. The inspection included a tour of the licensee's storage facility at the Troy, Michigan office where the two gauges had been stored. The inspector interviewed selected licensee personnel and assessed the licensee's efforts to recover the missing gauges and the licensee's root cause determination.

3.2 Observations and Findings

At the conclusion of the on-site inspection on December 3, 2021, the inspector requested the licensee to conduct a physical inventory of all gauges in its possession; according to the licensee's records, the last documented physical inventory was performed in 2016. The licensee initiated a physical inventory on December 4, 2021. These inventory efforts took several days because gauges were stored at the two offices in Troy and Ann Arbor, and some were stored at the residences of gauge users. In addition, there was no gauge sign-in/sign-out record for the gauges stored at the Troy office, requiring the licensee to individually contact each gauge user to verify the inventory. For this inventory effort, the licensee management required each authorized user who had a gauge in his possession to return the gauge to the field office for a visual verification and inspection.

On December 17, 2021, the licensee completed its physical inventory and reported the loss of two Troxler portable gauges (serial numbers 14195 and 14198), both based for dispatch out of the Troy office. The gauges (Troxler Model 3411B, each containing 8 millicuries of cesium-137 and 44 millicuries of americium-241 sealed sources) were last leak tested on January 18, 2021. It is unknown if the cesium-137 source rods were locked in their shielded position or if the gauges were stored within locked transport cases. The loss of the gauges presumably occurred sometime after the leak tests performed on January 18, 2021; it is unknown if the gauges were used since the last leak tests.

The licensee attempted to recover the two missing gauges by alerting the manufacturer and a local gauge service provider of the loss. The licensee also searched its business property and storage trailers staged in the business parking lot for the missing gauges, and contacted the former RSO and several current and former employees. The

licensee's inquiries provided no new information on the whereabouts of the missing gauges and the circumstances of their loss.

Title 10 CFR 20.1801 requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. Title 10 CFR 20.1802 requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. As defined in 10 CFR 20.1003, *controlled area* means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason; and *unrestricted area* means an area, access to which is neither limited nor controlled by the licensee. The licensee's failure to control and maintain constant surveillance and to secure two Troxler portable gauges from unauthorized removal or access is an apparent violation of 10 CFR 20.1801 and 10 CFR 20.1802.

To ensure accountability of its gauges, the licensee changed the lock codes for the Troy storage room to allow access only to members of management. This change required gauge users to directly contact a member of management to access the gauge storage room. The inspector determined that gauge users previously accessed the storage room and took a gauge without signing it out on the licensee's utilization log sheet. The gauge users routinely kept gauges in their possession, including storing gauges within vehicles parked at their residences. As part of its corrective actions for this issue, the manager of construction services now maintained a locator for the job site, the gauge user and the make, model and serial number of the gauge that was assigned to the authorized gauge user. Apparent violations for the licensee's failure to maintain a sign-in/sign-out record (utilization log or log book) and to conduct periodic inventories are discussed further in sections 4.2 and 6.2, respectively, of this inspection report.

The inspector determined that the root cause of the lost gauges was inadequate oversight of the radiation protection program and the authorized gauge users. The inspector also identified several contributing causes to the loss of the gauges, including the licensee's failures to implement its procedures for signing out gauges from the storage room and to conduct a physical inventory.

3.3 Conclusions

One apparent violation of 10 CFR 20.1801 and 20.1802 was identified involving the licensee's failure to secure and to maintain constant surveillance of two portable gauges containing sealed sources, which resulted in the loss of the gauges. The licensee's attempts to recover the two missing gauges were unsuccessful to date. It is unknown when these devices were lost. The circumstances surrounding the loss of these gauges is also unknown. The licensee implemented corrective actions in response to the apparent violation.

4 Security of Portable Gauges

4.1 Inspection Scope

The inspector toured the licensee's field offices in Troy and Ann Arbor and observed the licensee's method of securing its portable gauges in the respective storage rooms. The inspector also interviewed selected licensee staff and managers. The inspection

included the review of security practices by one gauge user who returned from a temporary job site on December 2, 2021.

4.2 Observations and Findings

At the Troy and Ann Arbor offices, the licensee stored several gauges in a dedicated room locked with access limited to authorized gauge users. The Troy office was unlocked during the day; other tenants occupied the business building, who would not have authorized access to the gauges. During off-hours, the licensee locked the exterior doors to the business. Two locks on the door to the storage room served as the physical barriers to prevent unauthorized removal of the gauges; however, only one was functional at the time of the December 1, 2021, inspection. The second lock had been inoperable for an undetermined period. No additional physical barriers were in place to prevent the removal of gauges from the storage room. For example, gauges were not secured within the storage room with an additional barrier such as chains or locks. The inspector observed authorized licensee employees maintain constant surveillance of the storage room intermittently.

Following the on-site inspection, the licensee contacted a locksmith to repair the one lock on the storage room door; the repair was completed on December 6, 2021. The licensee limited the disclosure of the new lock codes to members of management to restrict access to the storage and permit better accountability for the gauges.

Title 10 CFR 30.34(i) requires that each portable gauge licensee use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee. The licensee's failure until December 6, 2021, to use a minimum of two independent physical controls that form tangible barriers to secure approximately 20 gauges at its Troy, Michigan office is an apparent violation of 10 CFR 30.34(i).

On December 2, 2021, the inspector reviewed the practices of one gauge user who had just walked into the Troy office after returning from a temporary jobsite located in Detroit, Michigan. The inspector, who met the user in the office, accompanied him back outside to the vehicle he had used at the jobsite, which was parked in the licensee's parking lot. At the vehicle, the inspector noted that it was unlocked and the engine was running. The gauge user opened the passenger door to the pickup truck to reveal a gauge stowed on the floorboard and out of its transportation case, which was in the bed of the truck. The cesium source rod of the gauge was not locked and the labeling on the gauge base was illegible. The gauge user had been inside the Troy office for several minutes and would have been unable to maintain control and constant surveillance of the gauge within his pickup truck. The gauge user informed the inspector of his practice to store the gauge out of its approved transportation case and within the passenger compartment because he believed the gauge was better secured with him inside the vehicle when he performed work in Detroit. The inspector informed the licensee management that storing the gauge in the observed configuration, in the unlocked passenger compartment of his pickup truck, did not provide an adequate level of security when the gauge was not under constant surveillance by authorized licensee personnel.

The gauge user stated that for other jobsites, outside the city of Detroit, he stowed the gauge inside the transportation case in the truck bed. The gauge user demonstrated how the transportation case was secured in an open-bed pickup truck with one independent physical control, a single cable plus a single padlock on the case; the gauge user asserted that he maintained control and constant surveillance at all times.

Title 10 CFR 20.1801 requires that the licensee secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas. Title 10 CFR 20.1802 requires that the licensee control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage. Title 10 CFR 30.34(i) requires that each portable gauge licensee use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee.

The licensee's failure on December 2, 2021, to use a minimum of two independent controls that form tangible barriers to secure a portable gauge in an unlocked vehicle from unauthorized removal when the gauge was not under the control and constant surveillance of the licensee is an apparent violation of 10 CFR 20.1801/20.1802 and 10 CFR 30.34(i).

The inspector determined that the root cause of the apparent violations of 10 CFR 20.1801/20.1802 and 10 CFR 30.34(i) was attributable to the licensee's failure to provide adequate oversight to the radiation safety program. It is unknown if the former RSO was aware of the status of the inoperable locking mechanism on the Troy storage room door. Since the departure of the former RSO, the licensee relied on the Troy construction manager to oversee the daily portable gauge activities at this field office. However, the manager for this location did not have prior experience in managing a portable gauge program and was unaware of the NRC requirements related to radioactive material. The inspector directed the manager to the guidance in Appendix G to NUREG 1556, Consolidated Guidance about Materials Licensees, Volume 1, Program-Specific Guidance about Portable Gauge Licensees, for acceptable methods to secure the gauges in the field offices and in vehicles.

The licensee also obtained additional chains and locks to secure gauges within the vehicles during transportation activities. The licensee management provided instruction to its gauge personnel at the Troy office on methods to secure gauges with two tangible barriers. The licensee instructed its personnel on the proper locations (with emphasis not to store a gauge in the passenger compartment) within a vehicle to stow the gauges.

The inspector also observed 22 gauges stored within the licensee's gauge storage room at the Troy field office: 7 of these devices were equipped with locks on the gauge source rods and/or transportation cases, but 15 of these devices did not have locks on either the gauge source rod or the transportation case. The licensee obtained additional padlocks to secure the gauge source rods and the transportation cases.

Condition 16 of License No. 21-18668-01, Amendment No. 21, requires that each portable nuclear gauge have a lock or outer locked container (i.e., transportation case) designed to prevent unauthorized or accidental removal of the sealed cesium-137 source from its shielded position, and that the gauge or its container must be locked

when in transport, storage, or when not under the direct surveillance of an authorized user. The licensee's failure, until December 2, 2021, to have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position when in transport, storage, or when not under the direct surveillance of an authorized user is an apparent violation of License Condition 16. The licensee obtained additional padlocks to secure the gauge source rods and the transportation cases. The licensee provided instruction to its gauge personnel on the use of the padlocks on either the transportation case or the gauge source rod.

The licensee maintained a hard copy log sheet for gauge users to complete, indicating the name of the gauge user, the location of the job site, and the serial number of the gauge used for testing; however, only one or two individuals at the Troy field office would fill out the log, and then only intermittently. At the Ann Arbor field office, the inspector noted that the staff routinely completed the utilization log sheet. In the event of an emergency, the licensee could locate a Troy-based gauge user through their dispatcher.

Condition 19.A. of NRC License No. 21-18668-01, Amendment 21, requires, in part, that the licensee conduct its program in accordance with the statements, representations, and procedures contained in the listed documents, including the licensee's application dated December 27, 2016. Item 10.6, "Radiation Safety Program-Operating, Emergency, and Security Procedures," of the application states that the licensee will implement and maintain the operating, emergency, and security procedures in Appendix G to NUREG-1556, Vol. 1, Rev. 2.

Appendix G to NUREG-1556 states, in part, that the licensee is to sign out the gauge in a log book (that remains at the storage location), including the date(s) of use, name(s) of the authorized users who will be responsible for the gauge, and the temporary job site where the gauge will be used. The licensee's failure, as of December 2, 2021, to sign- out the gauges at its Troy office in a log book is an apparent violation of License Condition 19.A. The inspector identified that this failure to sign out gauges contributed to the loss of two gauges due to the lack of information available to the licensee on the last known whereabouts of these gauges. The licensee's practice of allowing users to store gauges at their residences overnight may have also contributed to the loss of the two gauges. The licensee took measures to restore compliance by creating an inventory log sheet maintained by the construction manager. This log sheet was updated daily to list the specific gauge units and the assigned gauge users for the respective device. The inspector determined that the root cause of the apparent violations of License Conditions 16 and 19.A. was attributable to the licensee's failure to provide adequate oversight of the radiation safety program.

4.3 Conclusions

The inspector identified four apparent violations concerning the security of the licensee's gauges. The inspector identified two examples of apparent violations involving NRC security requirements. One apparent violation of 10 CFR 30.34(i) was identified involving the licensee's failure to use a minimum of two independent physical controls that form tangible barriers to secure 22 portable gauges stored at its Troy office. The licensee repaired the inoperable lock on December 7, 2021. A second apparent violation of 10 CFR 20.1801, 10 CFR 20.1802 and 10 CFR 30.34(i) in which the licensee failed to use a minimum of two independent physical controls that form tangible barriers to secure a portable gauge, occurred when the gauge was not under the control and

constant surveillance of the authorized gauge user when he returned to the office from a jobsite in Detroit. Two additional security-related violations were identified for the licensee's failures to ensure that gauges or the transportation cases had locks as required by License Condition 16 and to have gauge users sign out their gauges using the log book as required by License Condition 19.A. The licensee implemented measures to restore compliance for the respective apparent violations.

5 Transportation Activities

5.1 Inspection Scope

The inspector interviewed two authorized gauge users and observed two demonstrations of the transportation of a gauge. During the inspection on December 2, 2021, one gauge user returned from a temporary job site. The inspector reviewed demonstrations by a second gauge user on January 4, 2022, who prepared his gauge for transport to a temporary job site.

5.2 Observations and Findings

The gauge users transported gauges in personal and company-owned vehicles. For the gauge user who returned from a temporary job site (discussed above in section 4.2), the inspector observed that he had placed the gauge unit (out of its shipping case, which is the approved Type A package) on the floor of the passenger side of the vehicle. The transportation case for this gauge was in the truck bed. The gauge user provided no additional securements to prevent the gauge from moving around the floorboard area while the user drove the vehicle from the jobsite to the Troy office. The gauge user informed the inspector that for jobs in certain parts of the city, he was concerned about storing the gauge in the transportation case in an open bed pickup truck. His practice was to stow the gauge unit out of the transportation case in the passenger compartment because he believed the device was more secure from theft in this manner. The gauge user informed the inspector that for other job site locations, where he felt the surroundings were safer, he stowed the gauge unit within its transportation case in the truck bed. The inspector observed the gauge user demonstrate how the gauge was stored within the transportation case with a lock securing the transportation case; the gauge user demonstrated how the transportation case was secured at one end with a thin cable approximately 12 inches in length, which was looped through the carrying handle and locked to the bed of the vehicle. The inspector determined that this gauge user's method for securing a gauge within the truck bed would have been insufficient to prevent movement during transport.

The inspector determined that when transporting licensed material, this same individual routinely carried the shipping paper, with other paperwork, in a small plastic milk crate type container on the passenger side seat of the vehicle. Though conveniently located for the user, the shipping paper in the crate would not be readily visible or recognizable by authorities entering the vehicle in the event of accident or inspection.

The former RSO maintained training files on each gauge user and a spreadsheet with the dates of gauge user training. However, this spreadsheet did not include the dates for initial and recurrent hazmat training. The inspector's review of selected gauge users identified four gauge users (including the former RSO) who had not received initial hazmat training, and three gauge users (including the user who transported the gauge

within the passenger compartment as described above) who had not received recurrent hazmat training within three years of their initial training.

Title 10 CFR 71.5(a) requires, in part, 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, comply with the applicable requirements of the Department of Transportation (DOT) regulations appropriate to the mode of transport in 49 CFR Parts 170 through 189.

Title 49 CFR 173.22(a)(2) requires, in part, that before a person may offer a hazardous material for transportation in a packaging or container required by part 173, the person shall determine that the packaging or container is an authorized packaging, including part 173 requirements and that it has been manufactured assembled and marked in accordance with listed specifications. The licensee's failure on December 2, 2021, to offer a hazardous material (a portable gauge) for transportation in an authorized package (Type A) that meets the DOT's specifications is an apparent violation of 10 CFR 71.5(a) and 49 CFR 173.22(a)(2).

Title 49 CFR 173.448(c) states, in part, that packages or overpacks bearing labels prescribed in § 172.403 may not be carried in compartments occupied by passengers, except in those compartments exclusively reserved for couriers accompanying those packages. The licensee's gauge cases are labelled RADIOACTIVE YELLOW-II in accordance with 49 CFR 172.403. The licensee's transport on December 2, 2021, of a portable gauge, a device containing Class 7 (radioactive) material, on the floorboard within the front passenger compartment of a pickup truck that was occupied by the driver (an authorized gauge user) of the vehicle is an apparent violation of 10 CFR 71.5(a) and 49 CFR 173.448(c).

Title 49 CFR 173.448(a) requires that each shipment of radioactive materials be secured to prevent shifting during normal transportation conditions. The licensee's failure on December 2, 2021, to secure a portable gauge containing radioactive materials within a vehicle to prevent shifting during normal transportation conditions is an apparent violation of 10 CFR 71.5(a) and 49 CFR 173.448(a).

Title 49 CFR 177.817(e) requires, in part, that the driver of a motor vehicle containing hazardous material (i.e., radioactive material) shall ensure that the shipping paper is readily available to, and recognizable by, authorities in the event of accident or inspection. Section 177.817(e)(2)(ii) states that when the driver is not at the vehicle's controls, the shipping paper shall be: (a) in a holder which is mounted to the side of the door on the driver's side of the vehicle; or (b) on the driver's seat in the vehicle. The licensee's failure on December 2, 2021, to ensure that the shipping paper was readily available to, and recognizable by, authorities by maintaining the shipping paper in a holder on the driver's side door or on the driver's seat in the vehicle is an apparent violation of 10 CFR 71.5(a) and 49 CFR 177.817(e).

Title 49 CFR 172.704(a) specifies the elements of hazmat employee training as: (1) general awareness/familiarization training, (2) function-specific training, (3) safety training, (4) security awareness training, and (5) in-depth security training. Section 172.704(c) requires, in part, that a hazmat employee receive initial training, and recurrent training at least once every three years. The licensee's failure, as of

December 1, 2021, to provide initial training to three hazmat employees and recurrent training to four hazmat employees is an apparent violation of 10 CFR 71.5(a) and 49 CFR 172.704(c).

The inspector attributed the root cause of these transportation violations to the licensee's failure to provide adequate oversight to the radiation safety program specific to transportation of its portable gauges. Several gauge users did not receive recurrent training in the DOT requirements which contributed to the individuals' lack of knowledge of the DOT requirements. The licensee provided instruction to its gauge personnel at the Troy office on methods to properly block and brace a package and the proper location to stow a shipping paper during transport.

5.3 Conclusions

The inspector identified multiple DOT violations involving the licensee's failures to: (1) offer a hazardous material (a portable gauge) for transportation in an authorized package (Type A) that meets the DOT's specifications (49 CFR 173.22(a)(2)); (2) transport a portable gauge, a device containing Class 7 (radioactive) material, outside of the passenger compartment of a vehicle that was occupied by the driver (49 CFR 173.448(c)); (3) secure a portable gauge containing radioactive materials within a vehicle to prevent shifting during normal transportation conditions (49 CFR 173.448(a)); (4) ensure that the shipping paper was readily recognizable (49 CFR 177.817(e)); and (5) provide initial and recurrent training to portable gauge users who are hazmat employees (49 CFR 172.704(c)).

6 Labeling of Containers, Physical Inventory, and Sealed Source Leak Tests

6.1 Inspection Scope

The inspector reviewed records of sealed source leak tests and inventories at the Troy and Ann Arbor offices. The inspector also interviewed selected licensee staff. The inspector examined the labeling of a selected sampling of gauges stored at the Troy and Ann Arbor offices.

6.2 Observations and Findings

According to the licensee's records, leak tests of the gauges actively used by the staff at the Troy office were conducted annually and most recently in 2021; this is in accordance with License Condition 13.A, which requires that the leak test frequency is not to exceed the intervals specified in the certificate of registration issued by NRC under 10 CFR 32.210.

Approximately 10 gauges were red-tagged as not in use since 2009. According to the licensee's records, these gauges were last leak tested at various dates in 2008. However, License Condition 13.C requires, in part, that no sealed source be stored for a period of more than 10 years without being tested for leakage and/or contamination. The licensee's failure, as of the date of the inspection, to test sealed sources in 14 gauges which had been maintained in storage since approximately 2009, a period of more than 10 years, is a violation of License Condition 13.C. The licensee was unaware

of this requirement and committed to perform leak tests on its gauges that have been in storage since 2009 by March 1, 2022.

Physical inventories of the gauges stored at the Troy office had not been documented since the previous NRC routine inspection in 2019. The licensee had established an inventory form which the former RSO maintained in the computer files; however, from the update stamp on the computer files, the inspector determined that this form was last updated in 2016. According to the licensee's past process for performing the physical inventory, the licensee also checked the labeling on the gauge shipping cases, the locks on the gauge source rod, and the shipping case, and examined the general condition of each gauge.

License Condition 15 requires the licensee to conduct a physical inventory of its gauges every 6 months. The licensee's failure to perform a physical inventory of its gauges every 6 months from 2019 to December 17, 2021, is an apparent violation of License Condition 15. The staff at the Troy field office was unaware of this license requirement. The inspector attributed the root cause of the violation to the licensee's failure to provide adequate oversight to the radiation safety program. The licensee committed to perform a physical inventory of its gauges immediately after the onsite inspection in December 2021. This follow-up inventory identified two missing gauges, which the licensee reported to the NRC on December 17, 2021.

The inspector noted that the labeling on several Troxler Model 3411B portable gauges stored at the licensee's Troy and Ann Arbor field offices was illegible and worn smooth. The gauge source rod handles were affixed with clear, durable labels identifying the cesium-137 source, apparently replaced during a previous service. However, for numerous gauges, the engraved information on the original metal source identification plate on the base of the gauge was worn smooth and illegible. The original source identification plate would have listed both sources (cesium-137 and americium-241) contained within the gauge. Therefore, the labels on these gauges only identified the cesium-137 source within the gauge and not all the licensed material in the gauge as required by 10 CFR 20.1904(a). According to the licensee staff, the gauges were approximately 10-20+ years old and used frequently.

Title 10 CFR 20.1904(a) requires the licensee to ensure that each container of licensed material bears a durable, clearly visible label bearing the words "CAUTION, RADIOACTIVE MATERIAL," or "DANGER, RADIOACTIVE MATERIAL." The label must also provide sufficient information (such as the radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, etc.) to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures. The licensee's failure, as of January 4, 2022, to ensure that each container (portable gauge) of licensed material bears a durable, clearly visible label to provide sufficient information (such as the radionuclide(s) present, the quantity of radioactivity, the date for which the activity is estimated) is an apparent violation of 10 CFR 20.1904(a).

The root cause of the violation was that licensee staff did not recognize the location of the original labeling on the base of the gauge (which identified both sealed sources within the gauge) and that this labeling was worn and illegible. The licensee committed to transfer gauges to the device manufacturer or an authorized service provider to replace the worn labeling with legible labels.

6.3 Conclusions

Three apparent violations of NRC requirements were identified involving the licensee's failures to: (1) perform sealed source leak tests of sources which were in storage for a period greater than 10 years as required by License Condition 13.C; (2) perform a physical inventory of its gauges at 6-month intervals as required by License Condition 15; and (3) ensure that each container (portable gauge) of licensed material bears a durable, clearly visible label as required by 10 CFR 20.1904(a).

7 Personnel Monitoring

7.1 Inspection Scope

The inspector interviewed the vice president, the construction manager, and selected licensee personnel and reviewed select records and the personnel exposure reports from the dosimetry vendor.

7.2 Observations and Findings

The inspector reviewed radiation exposure dosimetry records on file from July 2019 to August 2021 and discussed those records with licensee representatives to determine if the licensee's dosimetry program complied with regulatory and license requirements. The inspector observed the use of personnel dosimetry by licensee personnel who either returned from or were dispatched to a temporary job site. Based on these reviews and discussions, the inspector determined that each gauge user was issued a whole body badge exchanged on a quarterly frequency.

The licensee established notification levels with the dosimetry vendor of 400 millirem whole body and 5,000 millirem extremity. If a badged individual received a radiation dose in excess of these notification levels for the monitoring period, then the dosimetry vendor would contact the RSO to inform him so that he could investigate. The most recent dosimetry report for personnel at the Troy office was for the 2nd quarter of 2021 (through July 4, 2021). The inspector noted that the maximum annual whole body personnel exposures for 2019 and 2020 were reported as 1,446 millirem and 3,348 millirem respectively. These exposures were not typical compared to other exposure data where the average annual exposure was recorded between 300-500 millirem for 2019, 100 millirem for 2020, and 250-500 millirem up to the second quarter 2021. The inspector noted several occasions where the reported dose for a gauge user would exceed the notification levels for the whole body exposure. According to the licensee's files, there was no review or follow up with the gauge users whose exposures exceeded this notification level by the licensee or the former RSO. Typically, high doses reported for gauge users are attributable to improper storage of dosimeters near gauges or improper/unnecessary handling of the gauges by users. Also, licensees typically review abnormal reported doses to their workers shortly after the dosimetry reports are received, or at least annually during the annual review of the radiation protection program.

Interviews with Troy personnel could not determine whether the licensee investigated these exposures. The individual who received the elevated exposures during the 2019

and 2020 monitoring periods was unavailable for interview due to illness/surgical recovery.

7.3 Conclusions

Although no gauge user exceeded the regulatory limits specified in 10 CFR 20.2201, the inspector noted that the exposures reported in 2019 and 2020 for some gauge users were atypical for this type of radiation worker. Apparently, neither the licensee nor the former RSO conducted any follow-up review or investigation of these atypical exposures. The NRC is concerned about the licensee's apparent lack of investigation and follow up on these atypical exposures to its gauge users based at the Troy office.

8 Public Dose Assessment and Inspector's Independent Surveys

8.1 Inspection Scope

The inspector conducted independent and confirmatory surveys of the licensee's storage rooms at the Ann Arbor and Troy field offices. The inspector reviewed selected records and interviewed selected licensee staff.

8.2 Observations and Findings

The licensee is required to maintain documentation demonstrating that members of the public are not likely to receive a radiation dose in excess of 100 millirem in a year in order to demonstrate compliance with 10 CFR 20.1301. The inspector identified that the licensee did not maintain documentation of its evaluation of public dose to members of its staff (non-gauge users) who worked in the vicinity of the outside of the gauge storage rooms. The inspector performed surveys outside of the doors to the rooms where a member of the licensee staff (considered a member of the public) would likely stand to perform work unrelated to licensed activities. The maximum radiation exposure rate was measured as 0.1 mR/hr at a workbench approximately 3 feet from the door to the Troy gauge storage room (containing 40 gauges within). The inspector's estimate of 26 millirem in a year revealed that the licensee would not likely exceed the dose limits (100 millirem in a year) for a member of the public.

Title 10 CFR 20.2107(a) requires in part that each licensee maintain records sufficient to demonstrate compliance with the dose limit for members of the public (see section 20.1301). The licensee's failure as of January 4, 2022, to maintain documentation demonstrating that individual members were not likely to receive in excess of 100 millirem in a year in order to demonstrate compliance with 10 CFR 20.1301 is an apparent violation of 10 CFR 20.2107(a).

The inspector made a side-by-side comparison of the licensee's survey instrument and the inspector's instrument while performing surveys of a Troxler gauge; these survey instruments were within 20 percent agreement. The inspector also performed direct radiation surveys around the gauge storage rooms at the Ann Arbor and the Troy offices.

8.3 Conclusions

The inspector identified one apparent violation of 10 CFR 20.2107(a) involving the licensee's failure to maintain documentation demonstrating that individual members

were not likely to receive in excess of 100 millirem in a year in order to demonstrate compliance with 10 CFR 20.1301. Based on the inspector's independent radiation surveys and calculations, it was unlikely that a member of the public would have likely exceeded the dose limited in 10 CFR 20.1301.

9 Notifications and Reports

9.1 Inspection Scope

The inspector interviewed selected licensee personnel to determine what notifications and reports had been made. The inspector reviewed the licensee's written report of the missing gauges dated January 17, 2022.

9.2 Observations and Findings

Upon the completion of its physical inventory on December 17, 2021, the licensee determined that two portable gauges were missing and presumed lost. The licensee notified the NRC Operations Center by telephone of these lost portable gauges and provided a written report dated January 17, 2022. The licensee's written report contained the information required by 10 CFR 20.2201(b).

9.3 Conclusions

The licensee promptly notified the NRC of these missing gauges as required by 10 CFR 20.2201(a)(1)(i), with a 30-day written report provided to the NRC as required by 10 CFR 20.2201(b). The telephone notification and the written report included all of the information required by the NRC.

10 Other Areas Inspected

10.1 Inspection Scope

The inspector reviewed other aspects of the licensee's radiation protection program, including radiation safety training for gauge users, survey instrumentation, sealed source leak tests, and postings. The inspector interviewed selected individuals, toured the licensee's facilities, and reviewed selected records.

10.2 Observations and Findings

The inspector determined that the licensee provided radiation safety and gauge user training to all authorized gauge users through a program sponsored by the device manufacturer or a service firm. The licensee performed leak tests of the sealed sources within its actively used gauges every 12 months as authorized under the device manufacturer's sealed source and device registration. In the event of an emergency, the Troy office possessed a calibrated and operable survey meter.

The inspector observed that the licensee posted the most current copy of NRC Form-3. The inspector also observed that the rooms where the gauges were stored, were posted with "CAUTION-RADIOACTIVE MATERIALS" signs.

10.3 Conclusions

Based on record reviews, interviews with personnel, and the observations described above, the inspector identified no violations of NRC requirements.

11 Exit Meeting

The NRC inspector presented preliminary inspection findings following the onsite inspection on December 3, 2021. A second on-site exit meeting on January 4, 2022, re-summarized the inspection findings from the December 2021 inspection with a discussion of the additional inspection findings and licensee's report of the two missing gauges. A final exit videoconference held on March 21, 2022, summarized the inspection findings, the apparent violations and the areas of concern identified during this inspection effort. The licensee did not identify any documents reviewed by the inspector as proprietary. The licensee acknowledged the findings presented.

LIST OF PERSONNEL CONTACTED

^Katherine Banicki, President and Chief Executive Officer
^#*David M. Bergman, P.E., Manager, Construction Services
Phil DeClue, Field Engineering Technician
Brent Galczynski, Field Engineering Technician
Sandra McCormick, Construction Services Coordinator
Jesse McDaniel, Field Engineering Technician
#Gary Putt, P.E., Senior Project Manager, Acting Radiation Safety Officer
^#*Ruben E. Ramos, P.E., Vice President & Principal, Engineering & Construction Services

\# Attended exit meeting on December 3, 2021
* Attended exit meeting on January 4, 2022

^ Individuals contacted by phone on March 21, 2022, for final exit videoconference

INSPECTION PROCEDURES USED

IP 87103 "Inspection of Materials Licensees Involved in an Incident or Bankruptcy Filing"
IP 87124 "Fixed and Portable Gauge Programs"

LIST OF ACRONYMS USED

ADAMS	Agency-wide Documents Access and Management System
ADR	Alternative Dispute Resolution
CFR	*Code of Federal Regulations*
DOT U.S.	Department of Transportation
EST	Eastern Standard Time
HOO [NRC]	Headquarters Operations Officer
NRC U.S.	Nuclear Regulatory Commission
RSO	Radiation Safety Officer
TEC	Testing Engineers & Consultants, Inc.