

INSPECTION RECORD

Region: III

Inspection Report No. 2019001

License No. 21-32687-01

Docket No. 030-37659

Licensee: Surveying Solutions, Inc.
4471 M-61
Standish, MI 48658

Locations Inspected: Main Office and St. Johns locations

Licensee Contact: Adam Ball, RSO

Telephone No.: 989-484-0358

Program Code: 03121

Priority: 5

Type of Inspection: () Initial (X) Routine () Announced
() Special (X) Unannounced

Last Inspection Date: March 13, 2014

Date of This Inspection: April 8-10, 2019

Next Inspection Date: April 8, 2024

(X) Normal () Reduced

Summary of Findings and Actions:

- () No violations cited, clear U.S. Nuclear Regulatory Commission (NRC) Form 591 or regional letter issued
- () Non-cited violations (NCVs)
- () Violation(s), Form 591 issued
- (X) Violation(s), regional letter issued
- () Follow-up on previous violations

Inspector: Jason Draper, Health Physicist

/RA/

Signature

Date: 05/28/2019

Approved: Aaron T. McCraw, Chief, MIB

/RA/

Signature

Date: 05/31/2019

PART I – LICENSE, INSPECTION, INCIDENT/EVENT AND ENFORCEMENT HISTORY

1. AMENDMENTS AND PROGRAM CHANGES SINCE LAST INSPECTION:

<u>AMENDMENT #</u>	<u>DATE</u>	<u>SUBJECT</u>
6	04/20/2018	License Renewal and increase in possession limits
5	09/26/2014	Add additional gauge model

2. INSPECTION AND ENFORCEMENT HISTORY:

The last inspection of this licensee was on March 13, 2014. No violations of NRC requirements were identified.

3. INCIDENT/EVENT HISTORY:

No open items or events since the last routine inspection.

PART II – INSPECTION DOCUMENTATION

1. ORGANIZATION AND SCOPE OF PROGRAM:

Surveying Solutions, Inc. is authorized under NRC Materials License No. 21-32687-01 to use licensed material for measuring physical properties of materials with nuclear gauging devices. Licensed material is authorized to be used anywhere in the United States in areas of NRC jurisdiction. The licensee uses the gauges throughout the construction season for construction engineering projects throughout the Michigan area. The licensee uses Troxler Model 3400 Series portable gauges, containing cesium-137 and americium-241.

2. SCOPE OF INSPECTION:

Inspection Procedure(s) Used: 87124

Focus Areas Evaluated: All

The inspector toured the licensee's main office in Standish, Michigan, and field office in St. Johns, Michigan, to evaluate the licensee's measures for material security, posting and labeling, and exposure control. The inspector was unable to visit any temporary job sites as part of the inspection, as the gauges were not being used near the offices.

Through interviews with the radiation safety officer (RSO) and two gauge users, the inspector found that the licensee's staff was knowledgeable and conscientious of radiation protection principles and licensee procedures for use, storage, and transportation of portable gauges. The inspector observed demonstrations by authorized gauge users related to transportation security, blocking and bracing, and emergency response. The inspector also interviewed the RSO with regard to how the licensee performs their periodic radiation safety program review.

The inspector reviewed a selection of licensee records for inventories, leak tests, use logs, and dosimetry. The inspector also reviewed the licensee's training materials and shipping papers.

3. INDEPENDENT AND CONFIRMATORY MEASUREMENTS:

Using a Thermo Scientific Radeye G Gamma Survey Meter (Serial Number 30336) calibrated on July 30, 2018, the inspector conducted independent surveys at each of the locations inspected. The inspector found no readings that would indicate residual contamination or exposures to members of the public in excess of regulatory limits.

4. VIOLATIONS, NCVs, AND OTHER SAFETY ISSUES:

Single Barrier at Storage Location

On April 8, 2019, the inspector identified a violation of 10 CFR 30.34(i) for a failure to 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.

Specifically, the inspector arrived at the licensee's St. Johns, Michigan facility and found the gauge storage building door open. Before approaching the building, the inspector observed it for some time and did not observe any licensee employees in or near the building. After this observation, the inspector approached the building and looked inside the door and did not locate any licensee employees, even after calling out and announcing the inspector's presence. The inspector noticed that inside the building, the door to the gauge storage room was open.

Because the inspector could not locate any licensee employees in the gauge storage building, the inspector went to the adjacent office building where he found one of the portable gauge users. The gauge user and the inspector went back out to the gauge storage room where they verified that all gauges were accounted for and secured with one physical control (inside locked transportation cases that were chained to the wall). The gauge user informed the inspector that he had been in and out of the gauge storage room multiple times that day and inadvertently left the door open when leaving the area. The inspector reminded the gauge user that the gauges are required to be secured with two barriers when they are not under the control and constant surveillance of the licensee.

As corrective action for the apparent violation, the gauge user took immediate control of the gauges and closed and locked the door upon leaving the area. Additionally, on April 12, 2019, the licensee installed an automatically locking keypad on the storage room door and displayed signage reminding licensee employees to close and lock the door.

Vulnerability associated with "Nuclear Gauge Containment System"

While performing the inspection at the licensee's St. Johns, Michigan location on April 8, 2019, the inspector observed the licensee's demonstration of how they secure portable nuclear gauges while in transport. The licensee's method of transporting the gauges involved putting the gauge in its transportation case and putting that case in a

“nuclear gauge containment system” box that was attached to the bed of the truck with two barriers. With the transportation case in the containment system box, the licensee then locked the box with one padlock that had a plate covering it which partially obstructed access to the padlock. The inspector questioned this method as it appeared that, even though the plate partially obstructed access to the padlock, the padlock was still accessible, and was, therefore, the only barrier to removing the gauge transportation case from the box. After further review, the NRC determined that this setup would not meet the requirements of 10 CFR 30.34(i).

The inspector informed the licensee of the issue, and the licensee consulted with their gauge vendor from whom they had purchased the “nuclear gauge containment system” boxes. The vendor informed the licensee that in order for the containment system to meet the requirements of 10 CFR 30.34(i), their written instructions directed the licensees to attach the transportation case to the inside of the containment system box. The licensee was unaware of these instructions, and by May 3, 2019, installed a second padlock on all their containment system boxes to add a second physical control to accessing the transportation case. Because this issue was identified as part of a demonstration, and the inspector was not aware of any instances where the licensee relied on these containment system boxes for security of the gauges (i.e. when gauges were not under the control and constant surveillance of the licensee), the NRC did not cite an additional example of a 10 CFR 30.34(i) violation.

5. PERSONNEL CONTACTED:

- # Adam Ball, RSO
Dustin Coulter, Authorized Gauge User
- # Attended exit meeting via telephone on May 6, 2019.

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