



Materials Inspection Report

1. Licensee/Location Inspected: Tech Services To Go Incorporated d/b/a TSi Engineering, Inc. 1340 North Price Rd. Olivette, MO 63123 (Locations Inspected: KC, Olivette, TJS in Ferguson) Report Number(s) 2022001	2. NRC/Regional Office Region III U. S. Nuclear Regulatory Commission 2443 Warrenville Road, Suite 210 Lisle, IL 60532-4352
---	--

3. Docket Number(s) 030-35197	4. License Number(s) 24-32205-01	5. Date(s) of Inspection 5/18/22 through 10/18/22
---	--	---

LICENSEE:
 The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

1. Based on the inspection findings, no violations were identified.

2. Previous violation(s) closed.

3. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements, and were assessed at Severity Level IV, in accordance with the NRC Enforcement Policy.

A. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy were satisfied.
 (Non-cited violation(s) was/were discussed involving the following requirement(s))

B. The following violation(s) is/are being cited in accordance with NRC Enforcement Policy. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
 (Violations and Corrective Actions)
 Title 10 CFR 71.5(a) requires 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, or who delivers licensed material to a carrier for transport, comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation (DOT) in 49 CFR Parts 107, 171-180, and 390-397.

(continued on Page 2)

Statement of Corrective Actions

I hereby state that, within 30 days, the actions described by me to the Inspector will be taken to correct the violations identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to NRC will be required, unless specifically requested.

TITLE	PRINTED NAME	SIGNATURE AND DATE
LICENSEE'S REPRESENTATIVE	Andrew DeChe	11-15-22
NRC INSPECTOR	Jason Draper, Health Physicist	Jason D. Draper <small>Digitally signed by Jason D. Draper Date: 2022.11.14 13:14:54 -06'00'</small>
BRANCH CHIEF	Michael A. Kunowski	Michael A. Kunowski <small>Digitally signed by Michael A. Kunowski Date: 2022.11.14 14:48:09 -06'00'</small>

Materials Inspection Report (Continued)

(continued from Page 1)

Title 49 CFR 177.817(e) requires, in part, that the driver of a motor vehicle containing hazardous material ensure that the shipping paper required by 49 CFR 177.817(a) is readily available to, and recognizable by, authorities in the event of accident or inspection. Specifically, (i) when the driver is at the vehicle's controls, the shipping paper shall be: (a) within the driver's immediate reach while the driver is restrained by the lap belt; and (b) either readily visible to a person entering the driver's compartment or in a holder which is mounted to the inside of the door of the driver's side of the vehicle; (ii) when the driver is not at the vehicle's controls, the shipping paper shall be: (a) in a holder which is mounted of the side of the door on the driver's side of the vehicle; or (b) on the driver's seat in the vehicle. Pursuant to 49 CFR 172.101, radioactive material is classified as hazardous material.

Contrary to the above, on May 18, 2022, and May 20, 2022, the licensee transported licensed material, specifically, Humboldt Model 5001 Series portable gauging devices on public highways, and the drivers of the vehicles did not ensure that the shipping paper was readily available in the driver's compartment, as required. Specifically, the licensee's Bill of Lading, which serves as the shipping paper, was either not in the truck or stored inside the transport case for the portable gauge in the back of the licensee's pickup truck, and therefore, was not accessible when the driver was at the vehicle's controls, nor in a holder mounted to the side of the driver's side door or on the seat when the driver was not at the vehicle's controls.

The root cause of this violation was inadequate training of authorized users and inadequate oversight by the radiation safety staff in ensuring this requirement was met. As corrective actions, as of October 21, 2022, the RSO will ensure that all company vehicles used for transporting portable gauges will have a Bill of Lading stored inside the cab of the vehicle, and gauge users were reminded of the requirement to make sure the Bill of Lading is accessible and visible when transporting 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.

Contrary to the above, on multiple occasions prior to May 18, 2022, the licensee failed to use a minimum of two independent controls that form tangible barriers to secure portable gauges from unauthorized removal when the gauges were not under the control and constant surveillance of the licensee. Specifically, a gauge user secured the transportation case to the bed of the licensee's pickup truck with two independent physical controls that formed tangible barriers, but only secured the lid of the transportation case closed with one padlock. The gauge user stated that this was the way the user normally transported the gauge, and that the gauge was not always under the control and constant surveillance of the licensee when the gauge was secured in this manner.

The root cause of this violation was inadequate training of radiation safety staff and gauge users. As corrective actions, as of October 21, 2022, the Radiation Safety Officer (RSO) educated the field office radiation safety officer on the proper procedure to secure gauges and instructed the field office radiation safety officer to retrain the gauge users.

License Condition 19.A of NRC License 24-32205-01, Amendment 14, requires the licensee, in part, to conduct its program in accordance with the statements, representations, and procedures contained in the licensee's license renewal application received by the NRC on February 27, 2020.

Section 10 of this license renewal application states, in part, that the licensee will either maintain documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a) or provide and require the use of individual monitoring devices (dosimetry).

(continued on Page 3)

Materials Inspection Report (Continued)

(continued from Page 2)

Contrary to the above, on May 18, 2022, the licensee failed to provide dosimetry to multiple gauge users at the licensee's Kansas City field office and did not have documentation demonstrating that unmonitored individuals were not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a). Specifically, the licensee failed to procure dosimetry for new gauge users such that some gauge users did not use dosimetry while using gauges.

The root cause of this violation was inadequate training of the licensee's radiation safety staff. As corrective action, as of October 21, 2022, the RSO educated the field office radiation safety officer on the process for ordering dosimetry and implemented a procedure to review dosimetry at least every 6 months to ensure that all gauge users have dosimetry.



Materials Inspection Record

1. Licensee Name: Tech Services To Go Incorporated		2. Docket Number(s): 030-35197		3. License Number(s) 24-32205-01	
4. Report Number(s): 2022001			5. Date(s) of Inspection: 5/18/22-5/20/22 with in-office review through 10/18/22		
6. Inspector(s): Jason Draper		7. Program Code(s): 03121	8. Priority: 5	9. Inspection Guidance Used: IP 87139	
10. Licensee Contact Name(s): Andrew DeClue, RSO		11. Licensee E-mail Address: adeclue@tsigeotech.com		12. Licensee Telephone Number(s): (314) 373-4052	
13. Inspection Type: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Announced <input type="checkbox"/> Non-Routine <input checked="" type="checkbox"/> Unannounced		14. Locations Inspected: <input checked="" type="checkbox"/> Main Office <input checked="" type="checkbox"/> Field Office <input checked="" type="checkbox"/> Temporary Job Site <input type="checkbox"/> Remote		15. Next Inspection Date (MM/DD/YYYY): 05/18/2027 <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Extended <input type="checkbox"/> Reduced <input type="checkbox"/> No change	

16. Scope and Observations:

This was an unannounced routine inspection of an engineering firm authorized to use portable nuclear gauges at their facilities in Olivette and Kansas City, MO, and at temporary job sites anywhere in NRC jurisdiction. At the time of the inspection, the licensee possessed six Humboldt Model 5001 portable moisture density gauges at each of its two locations. The licensee used the gauges for road and construction projects in Missouri in the Kansas City and St. Louis metropolitan areas. The licensee employed approximately 15 authorized gauge users who routinely used the gauges.

During the on-site inspection, the inspector toured the licensee's Kansas City location on May 18, 2022, and Olivette location on May 20, 2022, to ensure the gauges were secured appropriately and performed independent radiation surveys to verify the presence of appropriate postings. The inspector also observed gauge use at a temporary job site near the 700 block of South Florissant Road, Ferguson, MO, on May 20, 2022. At the Kansas City location, the inspector interviewed two gauge users regarding gauge check-out procedures, transportation of gauges, dosimetry usage, and gauge use at temporary job sites. The inspector also reviewed records including utilization logs, leak tests, and training. At the Olivette location, the inspector interviewed the RSO regarding gauge use, storage, maintenance, leak tests, and transport, as well as reviewed records associated with leak tests, training, dosimetry and periodic program reviews. At the temporary job site, the inspector observed the gauge user use a gauge and maintain control of the gauge while in use. The inspector also observed the gauge user secure the gauge for transport and interviewed the gauge user regarding the licensee's emergency response procedures. The inspector performed in-office review of records that were not available during the on-site inspections.

During the inspection of the Kansas City office and the temporary job site, the inspector identified multiple issues associated with the use of shipping papers for transporting hazardous material. In three instances, gauge users either did not have shipping papers or had them in the transportation case and not the cab of the vehicle. This is contrary to 49 CFR 177.817. As immediate corrective action, the RSO ensured that shipping papers were available in the cabs of all vehicles that will be used for transporting gauges, and reminded gauge technicians the requirement for accessibility and visibility of the shipping papers while transporting gauges. During the previous inspection in 2016 (IR 2016-001), the licensee was cited for a similar violation involving shipping papers, so that violation remains open as well.

Additionally, at the Kansas City office, the inspector identified that one of the gauge users did not secure gauges with two barriers as required by 10 CFR 30.34(i). While the inspector observed the gauge user's demonstration of securing a gauge for transport, the inspector identified that while the gauge user used two barriers to secure the

Materials Inspection Record (Continued)

case to the vehicle, the user only used one padlock to lock the case shut and there were no other barriers preventing removal of the gauge from the case. The gauge user indicated that this was how the user normally secured the gauge and had to acquire another padlock for the other hasp. The gauge user also indicated that they did not maintain control and constant surveillance of the gauge at all times while the gauge was secured in this manner. As corrective action, the RSO instructed the "assistant radiation safety officer" of the Kansas City location of the proper procedure to secure gauges in vehicles and instructed the assistant radiation safety officer to retrain the gauge technicians.

Also at the Kansas City office, the inspector identified that gauge users who routinely used gauges did not wear dosimeters while using the gauges. This is contrary to Section 10 of the licensee's license renewal application (tied down by License Condition 19 of Amendment 14 of the license) where the licensee stated that the licensee would maintain documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a) or the licensee would provide and require the use of individual monitoring devices (dosimetry). The licensee did not maintain documentation demonstrating that unmonitored individuals were not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a). As corrective action, the licensee ordered dosimetry for the newer gauge users and planned to implement a procedure to review the dosimetry list every six months to ensure that all gauge users have dosimetry and to discontinue dosimetry for individuals no longer employed by the licensee.

The licensee determined that the root cause for these violations was inadequate turnover and training of the licensee's designated "assistant radiation safety officer" at the Kansas City field office. In addition to actions related to the specific violations, as overall corrective action to prevent recurrence, the licensee committed to implementing processes to ensure that incoming assistant radiation safety officers are properly trained and up-to-date on company procedures and standards, and the Radiation Safety Officer will perform yearly, at a minimum, trips to the field offices to provide refresher training and to verify requirements are being followed, the first of which was planned for November 2022.

Three Severity Level IV violations were identified as a result of this inspection.