

49-50MATERIALS & RENTALS

Electronic Reply to Notice of Violation

Date: 11 June 2024

To: Nuclear Materials Inspection Branch.....Attn: Lizette Roldan-Oter
U.S. Nuclear Regulatory Commission, Region IV

Subject: NRC Inspection Report 030-20575/2024-001; and Notice of Violation
License No. 50-21374-01

Re: Reply to Notice of Violation

From: 49-50
Cody McLane, PE, RSO

On April 16th 2024 the NRC made a scheduled inspection of 49-50 facilities related to the possession, use and storage of regulated devices. Four Severity Level IV violations were documented by NRC Inspector. These violations involved failures to: (1) perform and document physical inventories in accordance with license conditions; (2) perform annual radiation protection program audits; (3) perform leak tests in accordance with license conditions; and (4) complete hazardous materials transportation training. This memo is a response to notice of violation (docket no. 030-20575/2024-001).

- 1) Licensee failed to perform and document physical inventories every six months to account for all sealed sources possessed in accordance with license requirements.
 - a. RSO did conduct physical inventories during annual leak testing and during use but failed to document per NUREG-1556 8.10.3 Material Receipt and Accountability.
 - b. Physical inventory conducted and documented on 4/16/2024 during NRC inspection and 4/30/2024 during supplemental leak testing (see item no. 3).
 - c. Full compliance was achieved on 4/16/2024.
 - d. Violation primarily attributed to RSO's unfamiliarity with license requirements.
 - e. RSO took corrective action by: (1) reviewing license requirements; and (2) creating a computerized calendar/planner with physical inventory events to assist RSO in tracking previous inventory audits and providing advance warning of future inventory audit deadlines. Calendar events are set to provide advanced notification prior to deadline.
 - f. Future inventory audit will be conducted in collaboration with annual device leak testing and annual radiation protection program audit in April and during November at a minimum.
- 2) Licensee failed to perform annual radiation protection program audits in accordance with license requirements.

- a. RSO failed to periodically review 49-50's radiation protection program. Failure to conduct annual audit, in part, lead to other program deficiencies as documented by NRC inspection on 4/16/2024.
 - b. RSO reviewed NUREG-1556 8.10.6 Operating, Emergency and Security Procedures and regulation 10 CFR 20.1101 Radiation Protection Programs and completed annual audit on 4/17/2024. In addition to the four violations here-on, the audit also revealed non-compliance with NRC form 4 "Cumulative Occupational Exposure History" reporting. RSO arranged with dosimeter supplier Landauer to provide NRC form 4 in addition to NRC form 5 "Occupational Dose Record for a Monitoring Period" on 6/11/2024.
 - c. Full compliance will be achieved upon receipt of NRC form 4 from Landauer.
 - d. Violation primarily attributed to RSO's unfamiliarity with 10 CFR regulations.
 - e. RSO took corrective action by: (1) reviewing applicable procedures and regulations; (2) arranging additional dosimeter reporting (see item 2.b); and (3) creating a computerized calendar/planner with annual radiation protection program audit event to assist RSO in tracking previous program audits and providing reminder of future annual program audit schedule. Calendar events are set to provide advanced notification prior to scheduled audit.
 - f. Future radiation protection program audits will be conducted in collaboration with annual device leak testing and device inventory audit in April, at a minimum, and if changing conditions related to program warrant reassessment.
- 3) Licensee failed to perform leak tests in accordance with license conditions.
- a. All regulated devices were leak tested at twelve month intervals. This interval was specified in ADOT Alaska Radiation Protection Program manual (Troxler publications NC-646-D-130S and NC-646-D-128-S Registry of Radioactive Sealed Sources and Devices Safety Evaluation of Devices for the 3430/3440 and 3421 gauges.
 - b. Leak testing procedure for the 3421 gauge was performed correctly according to Troxler Model 3241 Series "Manual of Operation and Instruction".
 - c. Leak testing procedure for the 3430 and 3440 gauges was performed incorrectly according to Troxler Model 3241 Series "Manual of Operation and Instruction", with no sampling of the yellow radiation label source. RSO failed to ensure proper testing procedure as testing was delegated and not actively monitored to verify accuracy.
 - d. Leak test records were monitored and maintained as required by license conditions.
 - e. RSO reviewed NUREG-1556 8.10.7 Leak Tests, cited 10 CFR regulations and Troxler "Manual of Operation and Instruction" for each gauge for correct leak test procedure. RSO created leak testing procedure manual complete with graphical exhibits on 4/16/2024. RSO reviewed manual with approved gauge operators who may be delegated to conduct leak testing. RSO conducted supplemental leak testing on the 3430 and 3440 gauges on 4/30/2024. Results were satisfactory with both devices registering less than 185 Bq.

- f. Full compliance was achieved on 5/21/2024 documented by Troxler leak test certificates.
 - g. Violation primarily attributed to RSO's in-experience with leak test procedure.
 - h. RSO took corrective action by: (1) reviewing leak test regulations, license requirements, and leak testing procedure as detailed by device manufacturer; (2) creating leak test procedure manual; reviewing manual with approved gauge operators and instructed on proper sampling procedure; (3) conducted supplemental testing on affected devices; and (4) creating a computerized calendar/planner with device specific leak testing events to assist RSO in tracking leak testing program and providing advance warning of upcoming leak testing deadlines. Calendar events are set to provide advanced notification prior to deadline.
 - i. Troxler 3421 gauge will be tested upon removal from storage in anticipation of use during Alaska paving season (June to September). This device is rarely used and spends most of its time in storage. Future leak testing will be synchronized for all regulated devices and be performed annually in April.
- 4) Licensee failed to complete hazardous materials transportation training.
- a. RSO failed to verify all approved gauge operators had up to date hazardous materials transportation training. In particular both primary gauge operators (including the RSO) had allowed their training certification to expire within the past year.
 - b. RSO and other approved operators updated their training certification utilizing Troxler provided online training class.
 - c. Full compliance achieved on 5/21/2024.
 - d. Violation primarily attributed to a lack of institutional controls concerning training recertification reminder notifications for individual operators.
 - e. RSO took corrective action by: (1) reviewing all approved operators training certifications; (2) notifying all operators with expired training to complete recertification; (3) ensuring successful recertification of all operators; and (4) creating a computerized calendar/planner with operator specific training recertification events to assist RSO in tracking training compliance and providing advance warning of upcoming training certification expiration. Calendar events are set to provide advanced notification prior to expiration.

49-50 recently underwent a change in ownership and RSO. Current RSO was at fault for not fully understanding NRC licensing requirements and regulations and allowing the four Severity Level IV violations as documented in the NRC inspection report and the Notice of Violations report. RSO implemented corrective actions as detailed above. RSO has obtained current copies of all regulations, device documentation and manuals mentioned above and reviewed them along with license requirements in effort to update his knowledge on radiological protection requirements. RSO is committed to successfully operating a protection program which meets regulations and, most importantly, protects his operators, other employees and the public.

Copies of all device leak testing results, operator occupational dose records, storage facility public dosage calculations, annual program audit and other documents are available upon request. Please let me know if you have any questions or comments.

Sincerely,

A handwritten signature in blue ink that reads "Cody McLane". The signature is written in a cursive, flowing style.

Cody McLane, PE, Owner, RSO
49-50