

January 10, 2017

U.S Nuclear Regulatory Commission
Region III, Material Licensing Section
2443 Warrenville Road, Suite 201
Lisle, IL 60532-4352

RE: Event Notice #52453

To whom it may concern,

This letter serves as written notification of a portable nuclear gauge incident Terracon reported to the Nuclear Regulatory Commission's (NRC) telephonic emergency notification center on December 21, 2016 (event #52453). We were later contacted by Mr. Zahid Sulaiman, NRC Region III, and written notification was requested. We sent him e-mail correspondence on January 10, 2017 outlining the incident involving Troxler gauge #38373, model 3430.

Attached are the following documents outlining the incident and supporting documents:

Item 1 – MRD Incident report outlining the incident details of the incident on December 21, 2016 from the RSO, Mr. Donnelly.

Item 2 – E-mail sent to Mr. Zahid Sulaiman from Terracon's Corporate Radiation Safety Officer.

Item 2 – Gauge readings from the site of the incident.

Item 3 – Qal-Tek – Sealed radioactive source leak test report.

Corrective Actions:

- The gauge was leak tested and received a "pass" result. The gauge is being sent to InstroTek for repair.
- The gauge operator, Mr. Ian McNaughton, was suspended from work for 2 days without pay as a result of the incident. Upon his return to work he was instructed to retake the initial gauge user course and was formally coached against Terracon's Core Rules and Practices, R4. "Use tools, equipment and safety devices according to manufacturer's instructions only".
- All gauge operators in the Springfield, MO office were informed of the incident and proper gauge securement was addressed by the local RSO, Mr. Michael Donnelly.



Terracon takes its radiation safety program and the NRC regulatory requirements very seriously. If you have any questions or concerns, please contact the undersigned.

Thank you,

A handwritten signature in blue ink, reading "Katie D. Gilchrist", is positioned above the printed name.

Katie Gilchrist
Corporate Radiation Safety Officer
EOG Corporate Safety Professional

Terracon
18001 West 106th Street, Suite 300 | Olathe, KS 66061
D (913) 577 0466 | M (816) 674 8502
Katie.Gilchrist@terracon.com | terracon.com

December 21, 2016

RE: Nuclear Gauge incident s/n 38373

To Whom it May Concern,

I, Michael Donnelly, (RSO) was made aware of an incident that had just occurred at 1050 by Ty Alexander, via phone call. I was told that a gauge was struck by a piece of equipment in Conway, Missouri and tasked to deal with the situation, while keeping Ty informed.

At 1051 I called the technician on site, Ian McNaughton. Ian explained that he set a gauge (Troxler s/n 38373, Model 3430) in position, had the source extended and running a test. While the gauge was running, Ian walked 20-25 feet away to inspect another part of the job. While he was away, the gauge was struck by the back rubber tire of a steel drum roller. The operator was driving the equipment off the gauge when the technician saw what had happened. Ian ordered the roller stopped, while he successfully raised the source rod into the secured position. Once the roller was stopped, and the rod secured, Ian used spray paint to mark a boundary (approximately 20' radius) around the damaged gauge and informed all personnel to stay out, while maintaining visual surveillance until my arrival.

Upon my arrival, the gauge and equipment were as expected from the picture. I proceeded to survey the area outside the paint to find the readings were 0 mR/hr. Once I had determined it was as safe as could be, I approached the source from the west, using the roller as a barrier. Once near the gauge, I determined that the source rod appeared intact, with no damage and proceeded to take several readings around the gauge and roller. The readings at one meter were as expected (no higher than 0.5 mR/hr) and contact readings were also normal with the highest reading being 10 mR/hr. I also surveyed the path that the roller took after coming off the gauge, and the tire, to check for radiation, and none was present.

I contacted Katie Gilchrist via text and voice, and waited for a response. In this time, the contractor inquired if they could have their roller, which I allowed. I also had the technician retrieve the shipping case from his truck to place the gauge and pieces into while I maintained surveillance of the gauge. The technician and I then loaded the gauge into the case, and secured it with locks. The gauge was taken to my Terracon darkroom truck, and chained securely in place with chains and locks, and the back door locked. I then dismissed the technician to go back to the office while I awaited further instructions. Once cleared, I returned to the office and secured the gauge into the storage area and performed another survey, again getting no higher reading at one meter than 0.5 mR/hr. The source was secured in storage at 1350 and a "Do Not Use" notice posted at the damaged gauge.

Sincerely,



Michael Donnelly, local radiation safety officer

NDT project manager

Terracon Consultants, Inc. 4765 W Junction St Springfield Mo 65802
P (417) 864 5100 terracon.com

Gilchrist, Katie D

From: Gilchrist, Katie D
Sent: Wednesday, December 28, 2016 12:46 PM
To: 'zahid.sulaiman@nrc.gov'
Subject: Event Notification #52453
Attachments: MRD incident report.pdf; Incident Survey Readings _0001.pdf

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SEE Reverse
SIDE

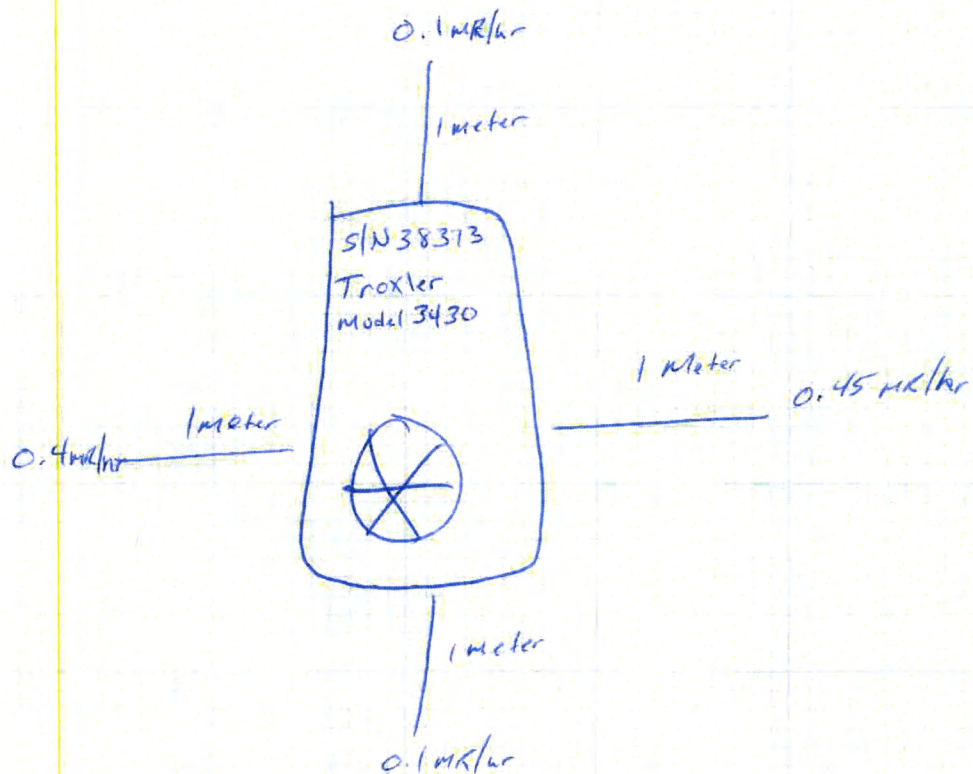
Mr. Sulaiman,

Thank you for speaking with me about event notification #52453 that was reported to the NRC main office on December 21, 2016. Attached is the incident report I receive from our Radiation Safety Officer, Mr. Michael Donnelly, the day of the incident. The corrective actions taken thus far, post incident, as follows:

- Gauge operator, Mr. Ian McNaughton, received documented coaching for violating Terracon's core Rule 4: Use tools, equipment, and safety devices according to manufactures instructions only.
- Mr. Ian McNaughton received 2 days unpaid suspension as a result of the incident and will be required to take the Initial Gauge User Course again when he returns to work.
- Leak Test were taken and results are pending. The gauge is secured at the Springfield, MO location.



PROJECT: Gauge Incident Reading Page 1 of 1
 JOB NO. _____ Date 12/21/16 Comp. By MD CHECKED BY: _____





www.qaltek.com
Qal-Tek Associates

1107 Wonder Drive Ste 104
Round Rock, TX 78681
Ph: 512 407-9252
Fax: 512 407-9831

3998 Commerce Circle
Idaho Falls, ID 83401
Ph: 208 523-5557
Fax: 208 524-8470

557 East Juanita Ste 6
Mesa, AZ 85204
Ph: 480 304-5199
Fax: 480 966-9495

SEALED RADIOACTIVE SOURCE LEAK TEST REPORT

Company: Terracon Consultants, Inc. - Springfield
Street: 4765 W Junction
City/St/Zip: Springfield, MO 65802
Phone: 417-864-5100 Fax:

Acct#: 103668

Ref#: W18781-081281

Serial Number: **38373**
Leak Test Date: 28-Dec-2016

Mfg: Troxler

Model: 3430

Leak Test Due Date: 28-Jun-2017

Test Instrument

Test Instrument	Ludlum : 3030 : 219695
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Test Instrument Info

MDA	less than 0.005 μ Ci
alpha efficiency	34.06
beta efficiency	20.65
Det. Type	ZnS (Ag)
Last Cal. Date	20-May-2016

Test Results

Isotope	Source SN	Activity (mCi)	Assay Date	net alpha CPM	net b/Y CPM	alpha μ Ci	b/Y μ Ci	Pass/Fail
Am241		40 mCi		0	9	0	0.000020	Pass
Cs137		8 mCi		0	6	0	0.000013	Pass

Comments

Instrument Technician: Chris Atchison

Date of Service: 04-Jan-2017

Qal-Tek Associates certifies that all leak test measurements are performed in accordance with NRC licensee requirements for isotopic detection limits. For this purpose the MDA is below the NRC regulatory limits of <0.005 μ Ci