



July 24, 2007

Document Control Desk
Director of Office of Nuclear Material Safety and Safeguards
US Nuclear Regulatory Commission
Washington D.C., 20555-0001

RE: Blazosky Associates, Inc. - Troxler Nuclear Gauge #29883 Damage Incident on June 25, 2007.

DESCRIPTION

On June 25, 2007 at approximately 0945hrs, TNG #29883 was struck by a Jeep utility vehicle which was being moved adjacent to the soils testing area at the Engineered Rock Placement Area (ERPA) jobsite on I-99 near Port Matilda, PA. The operator of the vehicle was David Stiffey of Blazosky Associates, Inc. (BAI). The operator of the TNG (Pat Wozinski, also of BAI) was putting documents into his vehicle which was parked approximately 20ft away from the TNG. The TNG was struck when it was briefly out of eyesight from Mr. Wozinski. The source rod was bent and the support rod was broken in two places, however no apparent damage occurred to the lead or tungsten shields. Mr. Wozinski immediately secured the area and notified myself, James Dotts, BAI Company RSO, of the incident. I notified Troxler at 0955hrs and the Nuclear Regulatory Commission (NRC) at 1002hrs.

Roger Granlund, CHP, formerly of Radiation Safety Services of State College, PA was also contacted by me to perform a radiation survey of the TNG to ensure no leakage occurred from the radioactive sources. The sources involved were CS-137 and AM-241:BE. Mr. Granlund arrived onsite later in the morning and performed both a radiation survey using a Thermo Microrem Meter and a leak test using a SE International Inspector. Readings from both tests were in the normal range. An Incident Response Report prepared by Mr. Granlund is included with this report.

The CS-137 source rod was secured with duct tape and the TNG was able to be placed back in its original case for shipping. Mr. Granlund performed an additional radiation survey on the outside of the case with the TNG inside. Exposure rates were within the normal range. In his professional opinion, the TNG could be shipped for repair. The TNG was stored at the BAI State College storage facility and later shipped to Troxler for repair. Troxler performed a leak test on July 6, 2007. The results, which are included in this submittal, were in the normal range.

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REGULATORY INSPECTIONS

Richard Ladun from the NRC Regional office conducted onsite interviews with both Mr. Stiffey and Mr. Wozinski to assess the incident. He then interviewed both Mr. Wozinski and Mr. Steven R. Greer (BAI Corporate Construction Manager) in the State College Office on June 29, 2007. Mr. Ladun also performed an interview and file review with me at the BAI Delaware Valley office on July 3, 2007.

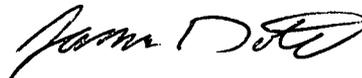
CORRECTIVE AND PREVENTATIVE ACTIONS

A summary of the incident was prepared by Mr. Wozinski and submitted to all other BAI Troxler certified users to review, as a measure to ensure incidences involving the TNG's do not occur in the future. The following items were addressed:

- TNG's will be secured in the cases and out of harms way when not in use.
- Surveyance (i.e., always within 15 feet of the gage and never more than 15 seconds away from the gage) of the TNG is of utmost importance. TNG's must be kept in the operator's possession during testing or whenever it is out of its secured case.
- As equally important to "surveyance" is "control of the gage." Operator must always keep the gage under control. In this instance, the gage was briefly out of surveyance, but there was *no loss of control*.
- Trigger locks must be used at all times. This includes time between individual tests during a testing period (to a reasonable extent).
- All personnel directly or indirectly involved with the earthwork construction must be aware of the TNG use and safety. This includes earthwork contractors, BAI employees (Troxler certified or not), site visitors, bystanders, etc.
- The incident and correct TNG handling procedures will be reviewed annually with BAI personnel during routine in-house safety meetings.
- Operators must understand the proper emergency procedures and protocol.
- Although the Company RSO is responsible for scheduling the annual training and maintaining records, all operators must complete their individual training and perform the standard record keeping tasks.

Sincerely,

Blazosky Associates, Inc.



James Dotts
Radiation Safety Officer

Enclosures

cc: Richard Ladun (Region 1, USNRC)

Incident Response Report

Date: 25 Jun 07

Location: Engineered Rock Placement Area (ERPA) site for I99 near Port Matilda, PA

Incident: Moisture/density gauge with radioactive sources damaged.

Gauge: Troxler model 3440 moisture/density gauge, S/N 29883 containing a 40 mCi ²⁴¹Am-Be neutron source S/N 47-26893 and an 8 mCi ¹³⁷Cs source S/N 750-4210.

Licensee: Blazosky Associates, Inc. 2525 Green Tech Drive, Suite D, State College, PA 16803. Phone 814 238-2060. NRC license 37-28507-01.

RSO James Dotts, Blazosky Associates, One Davis Road, Suite 200, P. O. Box 987, Valley Forge, PA 19482 Phone 610 783-0125.

Description: On the morning of 25 Jun 07 a Troxler model 3440 moisture density gauge was damaged while in use at the ERPA site, when it was run over by a Jeep utility vehicle that was being moved in the test area. The area was secured and Rodger Granlund was contacted for assistance in checking radiation levels and source leakage.

The screws holding the plastic cover on the instrument were torn from the anchors in the cover. The cover was loose and could not be secured to the base, but was not broken, except for the screw sockets. The ¹³⁷Cs source rod was withdrawn into the shield and the rod was bent at about a 15-degree angle at the top of the instrument. The support rod for the ¹³⁷Cs source rod was broken in two places, so the source rod was free to turn and could be removed from the shield. There was no apparent damage to the lead shield for the sources or to the tungsten shield block for the ¹³⁷Cs source.

Survey: Radiation levels were checked on the outside of the damaged instrument at 30 cm with a Thermo microrem meter. Readings were within the expected range. Smears to check for source leakage were taken of the bottom at the shield block plate, the lead source housing, the sides of the base and at the source end of the ¹³⁷Cs source rod with the rod removed from the shield. The smears were checked on site with a SE International Inspector with a pancake GM tube. Beta detection efficiency for this instrument is 0.14 c/beta for ⁹⁹Tc and 0.31 c/beta for ⁹⁰Sr/Y. The instrument is not calibrated for alpha, but typical alpha efficiency for the same geometry is about 0.1 c/alpha. Smears and a blank were counted for 5 minutes each in the scaler mode. All smears were less than 100 dpm.

Recovery: The ¹³⁷Cs source rod was secured so that it could not be removed from the shield with duct tape and the instrument was placed in the Troxler shipping/storage container. The source rod is further secured against moving out of the shield by the partitions in the shipping container. It is recommended that the source rod be secured with a wire or cable to replace the duct tape for shipping the gauge to Troxler for repair. The shipping container was closed and gamma radiation measurements were made on the

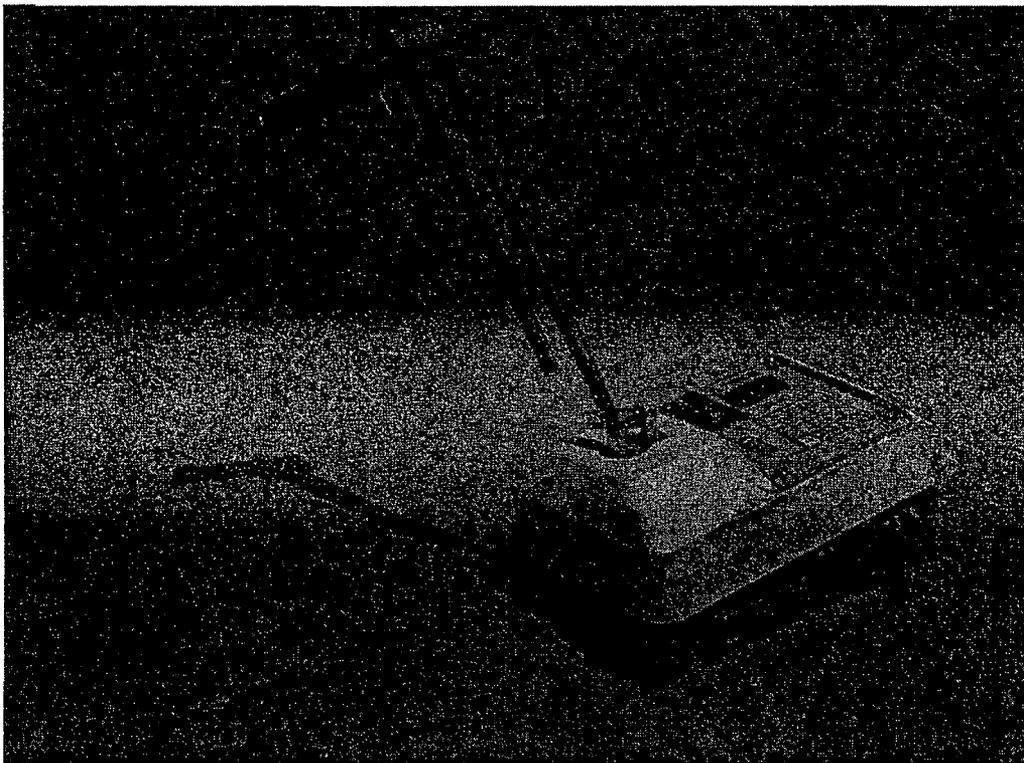
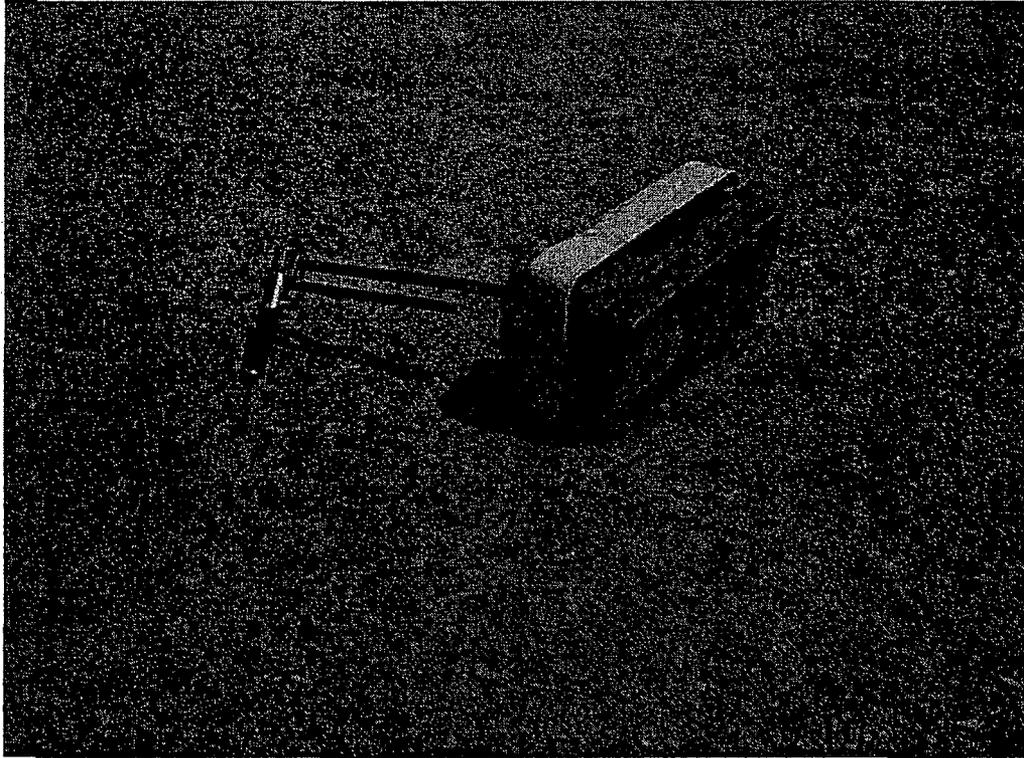
surface and at 1 meter. The gamma exposure rates were within the range expected for an undamaged instrument. No neutron measurements were made. The Troxler value for the TI should be used for shipping.

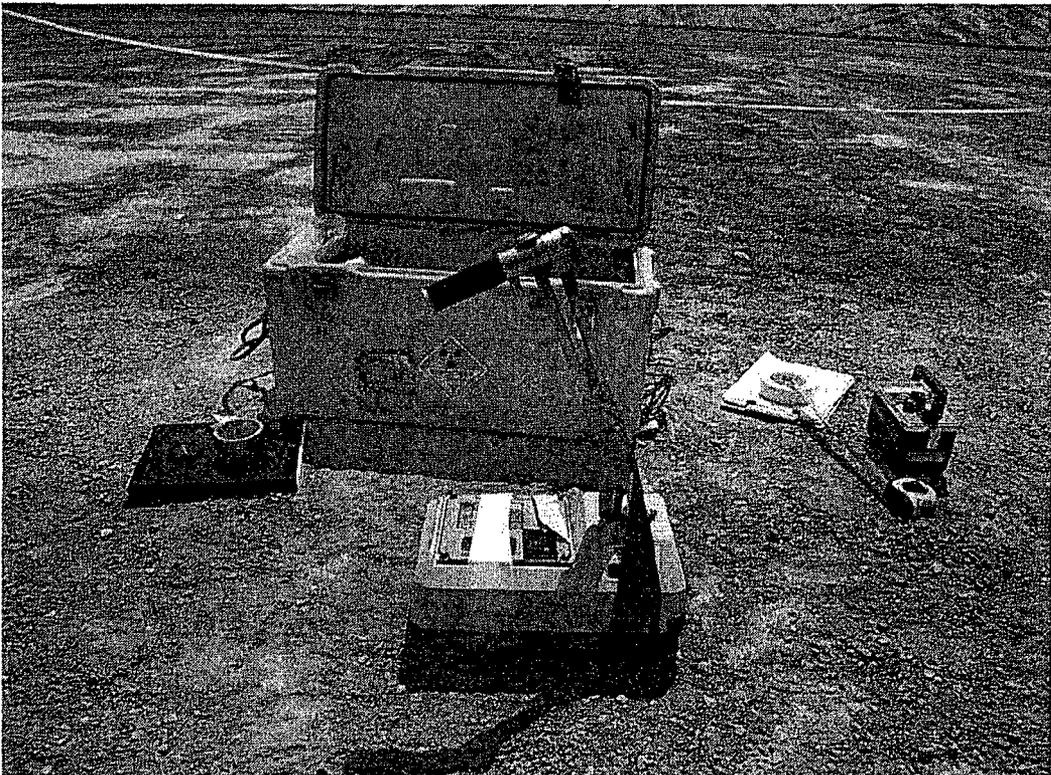
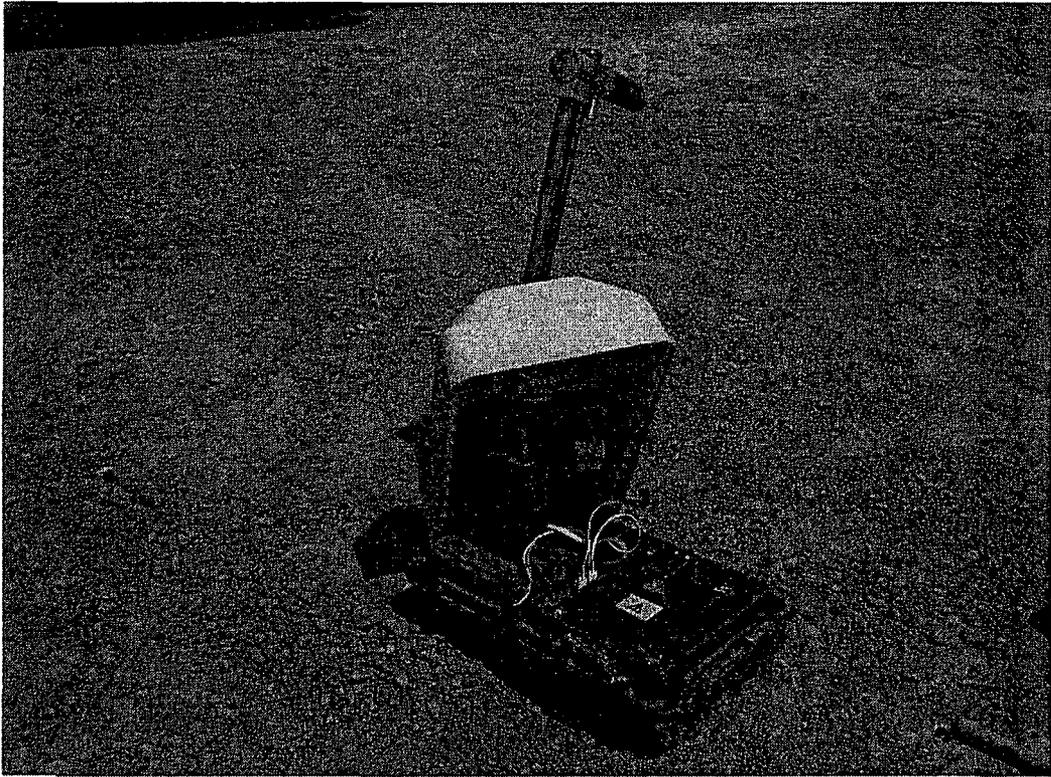
Copies of the survey forms and photos of the instrument and shipping container are attached.

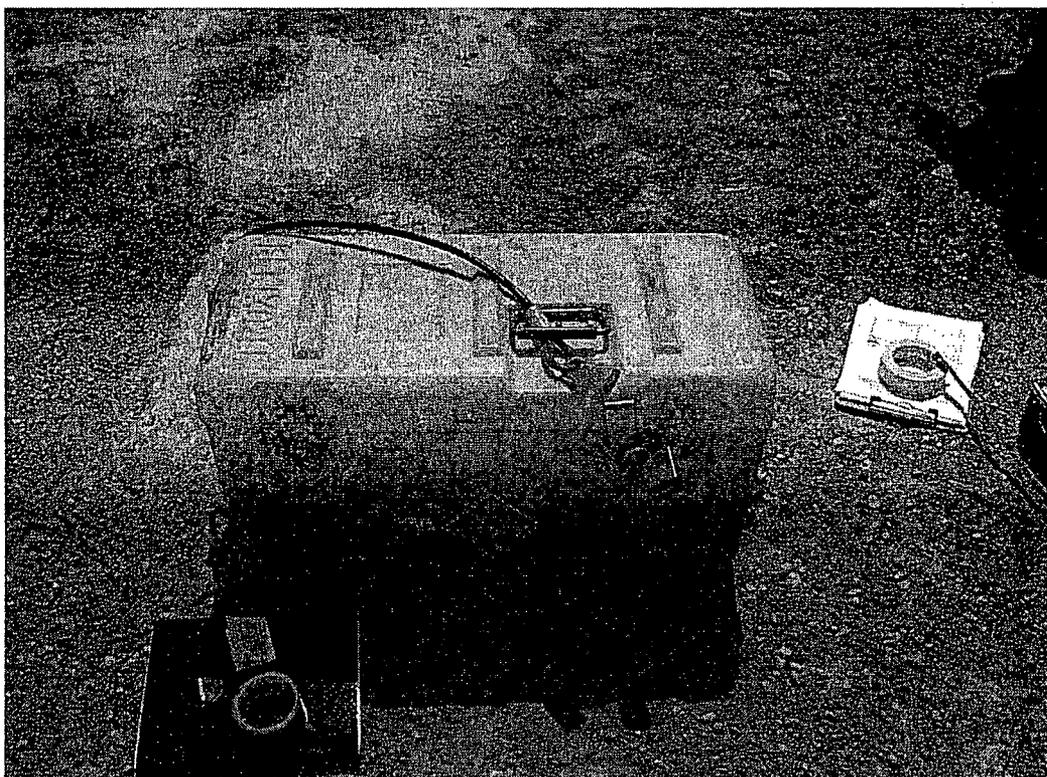
Rodger W. Granlund, CHP

26 Jun 07

Attachments: Survey forms
Photos

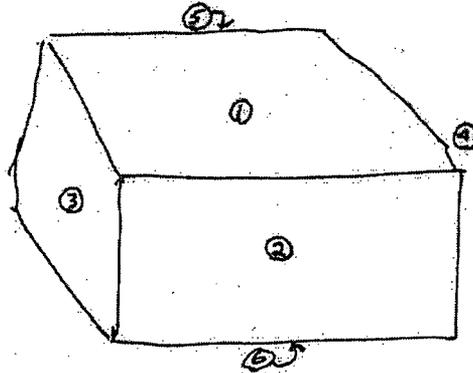






RADIOACTIVE CONTAMINATION SURVEY

LOCATION ERPA site Rt 322 Port Mahila DATE 25 Jun 07
 SURVEYOR R. Carlson
 CONDITIONS Trolley 3440 damaged packaged for shipment
 INSTRUMENT(S) Thermo J1220 S/N 11267 - B by 20 uB/hr



Contact			1m.		
NO.	mR/hr - DPM	LOCATION	NO.	mR/hr - DPM	LOCATION
1	5.0	Top	1	0.12	Top
2	2.5	front	2	0.12	front
3	1.5	right	3	0.07	right
4	0.2	left	4	0.05	left
5	3.0	rear	5	0.15	rear
6	3.0	bottom	6	0.15	bottom

COMMENTS Yellow II - No neutron measurement
use Trolley T.T. 0.6



Troxler Electronic Laboratories, Inc.

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Research Triangle Park, NC 27709
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License: NC 032-0182-1

JAMES DOTTS
BLAZOSKY ASSOCIATES, INC.
2525 GREEN TECH DRIVE
SUITE D
STATE COLLEGE, PA 16803

LEAK TEST CERTIFICATE

DEVICE:

Model: 3440 **Serial No:** 29883

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
750-4210	10/15/1998	CS-137	0.296	8
47-26833	04/08/1998	AM-241:BE	1.48	40

LEAK TEST ANALYSIS:

Sample collected on: 07/05/2007

Sample analyzed on: 07/06/2007 at 11:00:00 AM

Analyzed by: C. Ekwuribe

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.29E+01	2.02E+01
Background measurement (cpm)	1	25
Sample measurement (cpm)	0	23
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	5.1E-01	1.3E+00

This certifies that the leak test results are:

Less than 185 Bq (0.005 uCi) **Greater than 185 Bq (0.005 uCi)**