

R - DNMS Licensee Event Report Disposition

Licensee:	ECS Mid-Atlantic, LLC				
Event Description:	Damaged Gauge				
License No:	19-3261-01	Docket No:	09037505	MLER-RI:	2015-015
Event Date:	06/08/15	Report Date:	06/09/15	HQ Ops Event #:	51139

1. REPORTING REQUIREMENT

<input type="checkbox"/> 10 CFR 20.1906 Package Contamination <input type="checkbox"/> 10 CFR 20.2201 Theft or Loss <input type="checkbox"/> 10 CFR 20.2203 30 Day Report <input type="checkbox"/> Other	<input checked="" type="checkbox"/> 10 CFR 30.50 Report <input type="checkbox"/> 10 CFR 35.3045 Medical Event <input type="checkbox"/> License Condition <div style="border: 1px solid black; height: 20px; width: 100%;"></div>
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2. REGION I RESPONSE

<input type="checkbox"/> Immediate Site Inspection <input checked="" type="checkbox"/> Special Inspection <input type="checkbox"/> Telephone Inquiry <input type="checkbox"/> Preliminary Notification/Report <input checked="" type="checkbox"/> Information Entered in RI Log <input type="checkbox"/> Report Referred To:	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 50%;">Inspector/Date</td><td></td></tr> <tr><td>Inspector/Date</td><td style="text-align: center;">Lodhi / 6-11-2015</td></tr> <tr><td>Inspector/Date</td><td></td></tr> <tr><td>Daily Report</td><td></td></tr> <tr><td>Review at Next Inspection</td><td></td></tr> </table>	Inspector/Date		Inspector/Date	Lodhi / 6-11-2015	Inspector/Date		Daily Report		Review at Next Inspection	
Inspector/Date											
Inspector/Date	Lodhi / 6-11-2015										
Inspector/Date											
Daily Report											
Review at Next Inspection											

3. REPORT EVALUATION

<input checked="" type="checkbox"/> Description of Event <input checked="" type="checkbox"/> Levels of RAM Involved <input checked="" type="checkbox"/> Cause of Event	<input checked="" type="checkbox"/> Corrective Actions <input type="checkbox"/> Calculations Adequate <input type="checkbox"/> Additional Information Requested from Licensee
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4. MANAGEMENT DIRECTIVE 8.3 EVALUATION

<input type="checkbox"/> Release w/Exposure > Limits <input type="checkbox"/> Repeated Inadequate Control <input type="checkbox"/> Exposure 5x Limits <input type="checkbox"/> Potential Fatality If any of the above are involved: <input type="checkbox"/> Considered Need for IIT Decision/Made By/Date:	<input type="checkbox"/> Deliberate Misuse w/Exposure > Limits <input type="checkbox"/> Pkgng Failure > 10 rads/hr or Contamination > 1000x Limits <input type="checkbox"/> Large# Indivs w/Exp > Limits or Medical Deterministic Effects <input type="checkbox"/> Unique Circumstances or Safeguards Concerns <input type="checkbox"/> Considered Need for AIT
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5. MANAGEMENT DIRECTIVE 8.10 EVALUATION (additional evaluation for medical events only)

<input type="checkbox"/> Timeliness - Inspection Meets Requirements (5 days for overdose / 10 days for underdose) <input type="checkbox"/> Medical Consultant Used-Name of Consultant/Date of Report: _____ <input type="checkbox"/> Medical Consultant Determined Event Directly Contributed to Fatality <input type="checkbox"/> Device Failure with Possible Adverse Generic Implications <input type="checkbox"/> HQ or Contractor Support Required to Evaluate Consequences
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6. SPECIAL INSTRUCTIONS OR COMMENTS

On-site inspection scheduled & completed.

<input type="checkbox"/> Non-Public	Inspector Signature: <u>Sattar Lodhi</u>	Date: <u>9-29-15</u>
<input checked="" type="checkbox"/> Public-SUNSI REVIEW COMPLETE	Branch Chief Initials: <u>Shuh</u>	Date: <u>9/29/15</u>



June 9, 2015

United States Nuclear Regulatory Commission
Region I
2100 Renaissance Boulevard
Suite 100
King of Prussia, Pennsylvania 19406-2713

Subject: Nuclear Density Gauge Incident No. 51139
NRC License No. 19-31261-01
ECS Mid-Atlantic, LLC
1340 Charwood Road, Suite A
Hanover, Maryland 21076

On June 8, 2015, a Troxler Nuclear Density Gauge Model 3430, Serial No. 37714 containing 9 millicuries of Cs-137 and 44 millicuries of Am-241, was damaged while in service at the Perry Center construction site, United States Naval Academy, Annapolis, Maryland.

At approximately 1430, the gauge was run over by a piece of compaction equipment used for mechanically consolidating the soils. The gauge was being used by Mr. Mervin Davis of ECS Mid-Atlantic, LLC, who is an authorized user under the license. Mr. Davis proceeded to gain control of an area of approximately 15' radius around the gauge and then contacted the Radiation Safety Officer for this license, Mr. Michael Dean, of ECS Mid-Atlantic, of the incident. Upon arriving at the scene, Mr. Dean utilized a TroxAlert Survey Meter to determine the extent of damage and amount of radiation being emitted by the damaged gauge. The readings at the perimeter of the controlled area were found to be below 2 mr/hr. Mr. Dean then surveyed the gauge and found that the gauge was in the shielded position and, due to the electronic cover plate being removed from the gauge, levels were exceeding 10 mr/hr at the surface of the gauge.

At 1551, Mr. Dean contacted Mr. Donald Norwood of the Nuclear Regulatory Commission, to inform him of the incident. After discussing the situation with Mr. Norwood, Mr. Dean was informed that the NRC would not be visiting the incident site. Mr. Dean then proceeded to replace the shielding plate along with reconnecting the base of the device to the housing. This was done from the underside position of the gauge to utilize the shielding provided by the base of the gauge. After successfully reattaching the base, housing, and cover plate, Mr. Dean then placed the gauge in the transportation case and loaded it into the back of the truck to transport it back to the Hanover, Maryland office. Before leaving the site, 50 pound bags of sand were placed around the base of the case where the gauge housing was located. Surveying the surface of the vehicle, it was

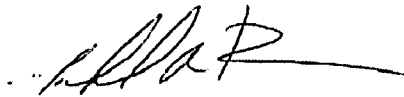
Rec'd 09/29/15

found that the transportation index on the surface was below 2 mr/hr. At approximately 1620, Mr. Dean left the site with the damaged gauge and returned to the Hanover, Maryland office at approximately 1700 where it was subsequently stored in the secure storage room.

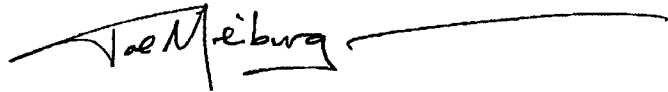
In the interview with Mr. Davis, the gauge was being utilized for testing a small area of soils backfill that was surrounded by sandbags. After a test, he placed the gauge outside the area of the work/sandbags and within 10' of himself while he discussed the results with the contractor onsite, Mr. Chip Ladd with AB Construction. According to Mr. Davis, he had informed the operator of the equipment to roll the area in a given direction that would not place the gauge at risk, but during his conversation with Mr. Ladd, the operator changed direction 90 degrees and, in reverse, backed over the gauge. In an interview with Mr. Ladd, he did confirm the location of the gauge in respect to Mr. Davis and that the operator did indeed back over the gauge.

Should you have any questions or require additional information, please feel free to contact our office.

Respectfully submitted,
ECS Mid-Atlantic, LLC



Michael R. Dean, CWI
Radiation Safety Officer



Joe Meiburger, PE, CPG
Vice President/Branch Manager

Attachments: Location Diagram
Photographs
Leak Test Results/Gauge 37714
Calibration Record/Gauge 37714
Training Records/Mr. Mervin Davis
Calibration Record/TroxAlert Survey Meter



ECS Mid-Atlantic, LLC
 1340-A Charwood Road
 Hanover, Maryland 21076
 (410) 859-4300 phone
 (410) 859-4324 fax

Project No.:

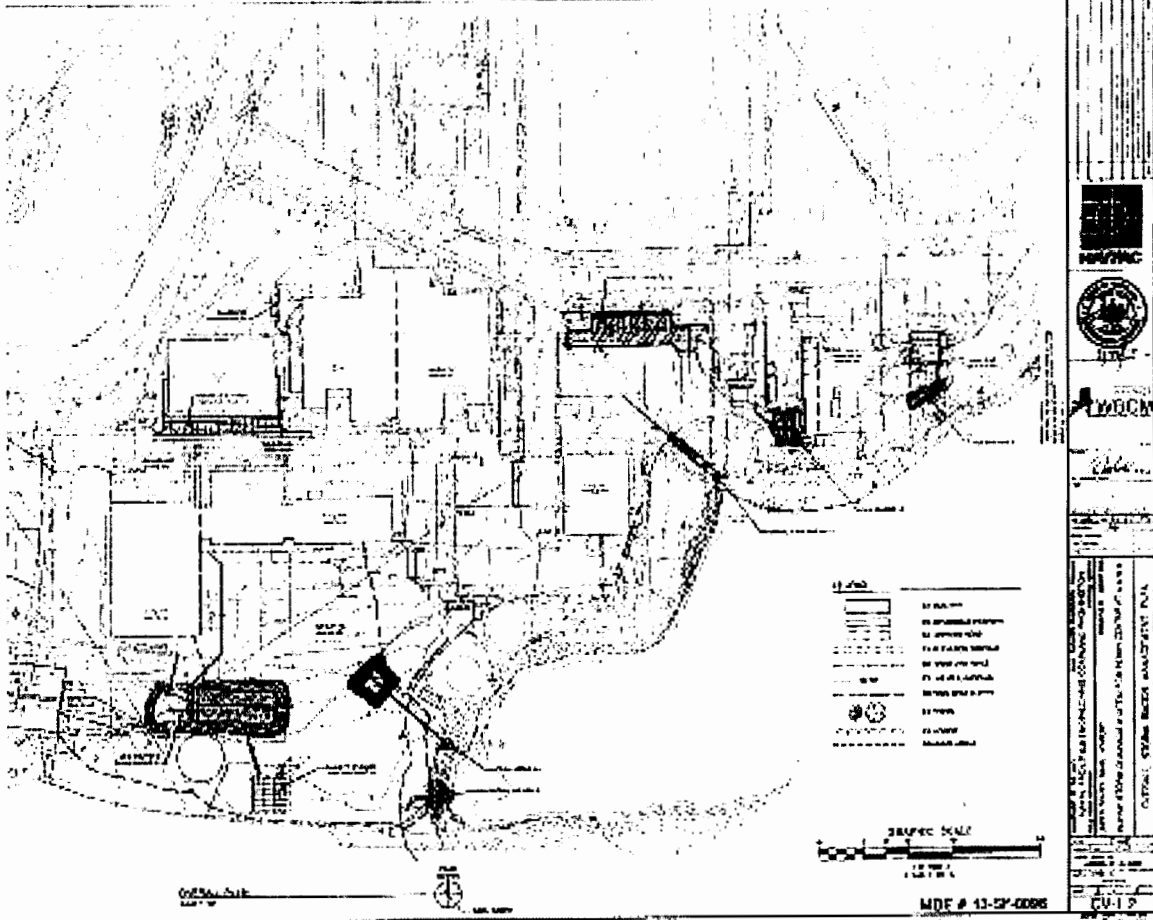
Date: 6/8/15

Project Name:
 Perry Center, USNA

By: MD/MRD

Subject:
 NRC Incident No. 51139

Work Order #:



USNA Perry Center
 #7290
 6-8-15
 Mord...

Legend
 [] - Location of Incident



Gauge – Facing Southeast



Gauge – Facing Northeast



Gauge – Facing Northwest



Gauge – Facing Southwest



Gauge – Closeup of cover plate



Equipment that damaged gauge

PERRY CENTER, USNA
ANNAPOLIS, MARYLAND



NRC INCIDENT NO. 51139
06/08/15



#13

North East Technical Services, Inc.
75 Allerton Ct., Suite A
Westminster, MD 21157
Ph: 410.751.5090 Fax: 410.751.5091

ECS Mid-Atlantic, LLC - Hanover
1340 Charwood Rd., Suite A
Hanover, MD 21076
ATTN: Mike Dean

Shipping Address: 1340 Charwood Rd., Suite A
Hanover, MD 21076

LEAK TEST CERTIFICATE

MD Materials License # MD-13-020-01

This certifies that leak test analysis was conducted on the sample with the following information. The results shown below accurately represent the level of removable contamination.

Gauge Model	3430	Gauge S/N	37714	Leak Test Date	1/12/2015
Source			Reading in microCuries		
	77-4958		0.00006093		
	78-2479		0.00000138		

Note: 0.005 microCuries (185 Bq) or greater is considered a leaking source. The source(s) tested above may remain in use.

Reviewed by: *Douglas Simon*

Date: JAN 15 2015

Thursday, January 15, 2015

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North East Technical Services, Inc Gauge Calibration Report

Gauge Model: 3430

Serial Number: 37714

Calib. Date: 03/25/2015

Expires: 03/24/2016

Density Std. Cnt: 2392

Moisture Std. Cnt: 683

Bay Number: 1

Block Type	Low	Med	High
Density	1774	2216	2697
S/N	300	301	302
Depth	Density	Calibration	Counts
BS	1097	738	490
2	4096	2677	1662
4	4134	2523	1462
6	3311	1897	1027
8	2305	1217	608
10	1451	708	326
12	869	395	180

Gauge Constants:

Depth	A	Bx1000	C	@2000 kg/m3 Repeatability
BS	2.79894	1.07659	-0.03448	8.77
2	10.20594	0.99386	0.07548	4.23
4	14.16085	1.19008	0.03051	3.71
6	14.97266	1.35192	0.01611	3.75
8	15.27222	1.57718	-0.00121	4.03
10	13.67302	1.77983	-0.00256	4.63
12	13.29988	2.07899	-0.01549	5.60

Moisture Parameters:

Block Type	Low	MagPoly	E	Fx1000	@240 kg/m3 Repeatability
Density	0	376			
S/N	300	303			
	Moisture	Cal Counts	Gauge Constants		
	20	284	0.02928	1.02801	4.89

North East Technical Services, Inc
Expected Std. Count

Gauge Model: 3430

Serial Number: 37714

Calib. Date: 03/25/2015

Expires: 03/24/2016

Density Std. Cnt: 2392

Moisture Std. Cnt: 683

Bay Number: 1

Date	From	To
Mar 15	2368	2416
Apr 15	2364	2411
May 15	2359	2407
Jun 15	2354	2402
Jul 15	2350	2397
Aug 15	2345	2393
Sep 15	2341	2388
Oct 15	2336	2384
Nov 15	2332	2379
Dec 15	2327	2374
Jan 16	2323	2370
Feb 16	2318	2365
Mar 16	2314	2361
Apr 16	2310	2356
May 16	2305	2352
Jun 16	2301	2347
Jul 16	2296	2343
Aug 16	2292	2338
Sep 16	2287	2334
Oct 16	2283	2329

North East Technical Services, Inc
[Signature]
Calibration Technician

3/25/15
Date

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North East Technical Services, Inc.

Nuclear Gauge Safety Report

Model 3430

Serial# 37914

Date 3/25/15

Part I

CONDITION OF GAUGE: Good
 Normal
 Poor

HANDLE CONDITION: Normal
 Abused

Part II

SOURCE ROD WEAR: None
 Slight
 Medium
 Extreme

SOURCE ROD CRACKS: None
 Yes (MUST BE REMOVED FROM SERVICE)

Part III

SLIDING BLOCK POS: Closed
 Open

REASON FOR OPEN: Spring
 Excessive Dirt
 Other

Comments:



APNGA

Portable Nuclear Gauge Safety Certification Class

Certificate of Completion to:

mervin davis

Hazmat refresher training is required within 3 years after today's date: Wednesday, April 10, 2013

Course covers training criteria of NUREG 1556, The Agreement States, and 49 CFR 172, Subpart H. (Includes IATA Requirements)

The Company RSO completes the training requirements by familiarizing the employee with:

- State specific regulations including introduction to the state regulatory website
- The company radiation safety program, specifically gauge safety operating and emergency procedures
- A tour of storage area with emphasis on security, documents and postings
- Loading, security, and transporting gauges in company vehicles
- The safety and operating features of the gauge(s) in use by the company
- Introduction to gauge safety content on gauge manufacturer website
- The RSO must also monitor the employee completing and passing a closed book test of this class material

The RSO signature certifies that the trainee has received the above training requirements.

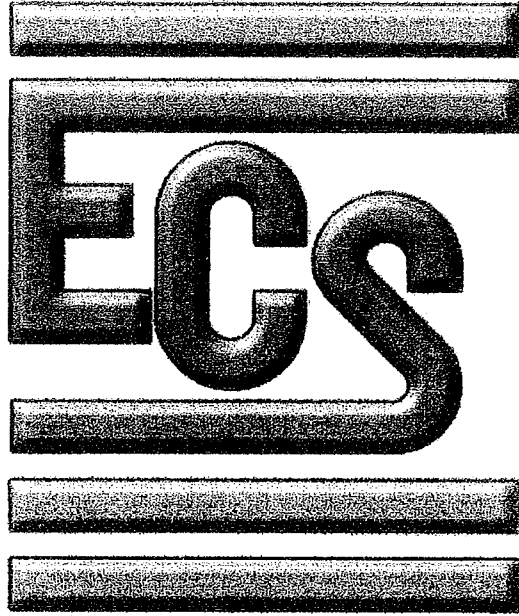
ECS MID-ATLANTIC LLC
Company Name

[Signature]
Signature of RSO

[Signature]
Director of APNGA

American Portable Nuclear Gauge Association (APNGA)
www.apnga.com

George E. Marshall
APNGA Director



ECS Radiation Safety Refresher Quiz

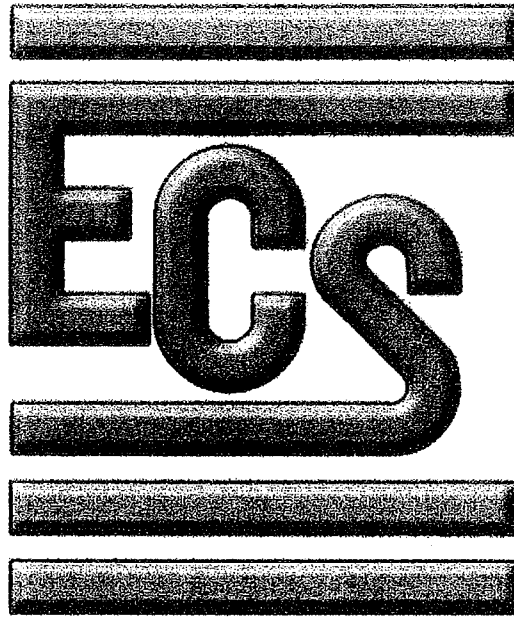
(March 2013)

Name: Mervin DAVIS

Office: 02

Date: 10-16-13

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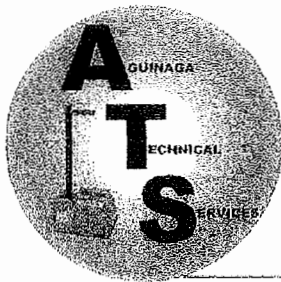
ECS Radiation Safety Refresher Quiz

(March 2013)

Name: MARVIN DAVIS

Office: 02

Date: 11-20-14



Richard Aguinaga
Aguinaga Technical Services
1924-C Calumet Drive
Sheboygan, WI 53081
rich@atsnuc.com
Phone: (920) 803-8789
Fax: (920) 803-6707

Where Customer Service is a Priority!

SURVEY METER CERTIFICATE OF CALIBRATION

Doug Simms
North East Technical Services, Inc.
75 Aileron Ct., Suite 4
Westminster MD 21157

INSTRUMENT

Manufacturer: Troxler

Meter Model No.: Troxalert

Meter Serial Number: 910

Probe Model No.: N/A

Probe Serial Number: N/A

CALIBRATION DATA

SCALE	UPPER			LOWER		
	Exposure Rate (mR/hr)	Instrument Reading (mR/hr)	Corr Factor	Exposure Rate (mR/hr)	Instrument Reading (mR/hr)	Corr Factor
X1	.4	.4	0	.1	.1	0
X10	4	4	0	1	.9	.9
X100	40	45	1.13	10	8	.8

Comments: Instrument(s) were found to be within / out of manufacturers specified tolerance levels.

Battery Check: Good Replace

This is certify that the above referenced survey meter was calibrated with a N.I.S.T. certified point calibration source at Aguinaga Technical Services, Inc. The unit was found to perform within required tolerances at 20 percent and 80 percent of full scale for each range setting as indicated in the summary above. All data listed above apply to this instrument only.

Wisconsin License No.: 117-1005-01

Calibrated by:

Date Calibrated:

27-Oct-14

Non-Agreement State	Event Number: 51139
Rep Org: ECS MID-ATLANTIC, LLC Licensee: ECS MID-ATLANTIC, LLC Region: 1 City: HANOVER State: MD County: License #: 19-31261-01 Agreement: Y Docket: NRC Notified By: MICHAEL DEAN HQ OPS Officer: DONALD NORWOOD	Notification Date: 06/08/2015 Notification Time: 15:51 [ET] Event Date: 06/08/2015 Event Time: 14:30 [EDT] Last Update Date: 06/08/2015
Emergency Class: NON EMERGENCY 10 CFR Section: 30.50(a) - PROTECTIVE ACTION PREVENTED	Person (Organization): JAMES DWYER (R1DO) NMSS_EVENTS_NOTIFICA (EMAI)

Event Text**MOISTURE/DENSITY GAUGE DAMAGED BY COMPACTOR ROLLER**

At a work site on the U.S. Naval Academy grounds, a compactor roller backed over and damaged a Troxler Model 3430 moisture/density gauge. The gauge contains an 8 mCi Cs-137 source and a 40 mCi Am-241/Be source. Upon inspection of the gauge and surrounding area, the gauge case was found to be separated, but no damage was noted to the sources. The sources were in the shielded position at the time of the incident. The licensee will place the gauge back in its case, transport it to its normal storage location, and contact the manufacturer for repair/disposal.