

# RI - DNMS Licensee Event Report Disposition

Licensee: Govt of DC  
 Event Description: Missing Nuclear Gauge  
 License No: OP-23557-91 Docket No: 03028905 MLER-RI: 2005-018  
 Event Date: 3-1-05 Report Date: 3-1-05 HQ Ops Event #: \_\_\_\_\_

**1. REPORTING REQUIREMENT**

<input type="checkbox"/> 10 CFR 20.1906 Package Contamination <input checked="" type="checkbox"/> 10 CFR 20.2201 Theft or Loss <input type="checkbox"/> 10 CFR 20.2203 30 Day Report <input type="checkbox"/> Other _____	<input type="checkbox"/> 10 CFR 30.50 Report <input type="checkbox"/> 10 CFR 35.3045 Medical Event <input type="checkbox"/> License Condition
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**2. REGION I RESPONSE**

<input type="checkbox"/> Immediate Site Inspection <input 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="0" style="width: 100%;"> <tr> <td style="width: 50%;">Inspector/Date</td> <td style="width: 50%; border: 1px solid black;"> </td> </tr> <tr> <td>Inspector/Date</td> <td style="border: 1px solid black;"> </td> </tr> <tr> <td>Inspector/Date</td> <td style="border: 1px solid black;"> </td> </tr> <tr> <td><input type="checkbox"/> Daily Report</td> <td> </td> </tr> <tr> <td><input checked="" type="checkbox"/> Review at Next Inspection</td> <td> </td> </tr> </table>	Inspector/Date		Inspector/Date		Inspector/Date		<input type="checkbox"/> Daily Report		<input checked="" type="checkbox"/> Review at Next Inspection	
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<input type="checkbox"/> Daily Report											
<input checked="" type="checkbox"/> 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 checked="" type="checkbox"/> Calculations Adequate <input checked="" 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 <input type="checkbox"/> 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**

<input type="checkbox"/> Public <input checked="" type="checkbox"/> Non-Public	Inspector Signature: <u>[Signature]</u> Branch Chief Initials: <u>[Signature]</u>	Date: <u>3/25/05</u> Date: <u>3/25/05</u>
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Government of the District of Columbia

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REGION 1



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**d.**

**District Department of Transportation**  
Infrastructure Project Management Administration  
Quality Assurance/Quality Control Division

April 27, 2005

**Mr. Samuel Collins**  
Region 1  
**U.S. Nuclear Regulator**  
**Commission**  
475 Allendale Road  
King of Prussia, PA 19406

Dear Mr. Collins:

**Report of Missing Nuclear Gauge**  
**License No. 08-23557-01**  
**Nuclear Gauge : Model No.3411- B, Serial No. 7520**

As request by Ms. Kathy Modes, I have made amendments to the correspondence dated April 15, 2005. ( see attachment). Please contact me at (202) 671-2422 if you have any questions.

Sincerely,

  
**Lawrence Chung**  
**Radiation Safety Officer**

Cc: Kathy Modes

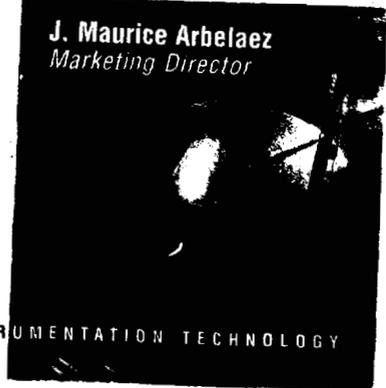
**Amendments To Correspondence dated April 15, 2005**

- 1. The Troxler Model 3411 nuclear gauge is equipped with 8 mCi cesium-137 gamma sources for measuring density of compacting soils and 40 mCi americium-241: Beryllium neutron sources for measuring moisture of the compacting soils. The two sources in the gauges when un-shield, have dose rates as follows:**

<b>Activity</b>		<b>Dose Rate@ 1 meter(3 feet)</b>
<b>Cesium-137</b>	<b>8 mCi</b>	<b>3.2 mrem/hour</b>
<b>Americium-241</b>	<b>40 mCi</b>	<b>0.088 mrem/hour</b>
	<b>Combined</b>	<b>3.288 mrem/hour</b>

- 2. All our twelve nuclear gauges were stored in our storage room on the first floor of DDOT Building, Annex 9 at 400 McMillan Drive, N.W. Washington, DC. During the last inventory inspection on December 6, 2004, we did not open the case to check if the gauge was actually inside. On March 1, 2005, during NRC inspection, we checked all our nuclear gauges and we found that the Troxler Nuclear gauge Model 3411-B, Serial No. 7520 was missing from the case in the storage room. This gauge was unworkable and was out of service since 1986 and was locked and stored in the storage room all the time.**
- 3. Since we found the gauge was not in the case, we have searched every corner of our facility in Annex 8 and 9. We interviewed current and former employees to see if they had taken the gauge out of the case. We checked with the employees working at Shepherd Parkway Construction Division (previous nuclear gauge storage location) to see if they had traded this gauge for purchasing the new one. We contacted Troxler Electronic Inc and Humboldt Scientific Inc. to see if they had leak tests or disposal records of this gauge which was missing without our knowledge and authority. We assumed this gauge was ending in the trash dump.**
- 4. Up to date no individual has been reported to have been contacted to radiation from the missing gauge.**
- 5. We reported the missing gauge to the D.C. Washington Police Department on March 9, 2005. The Police is in the process to investigate. For your information, the related Police Report is No. 029650, Police Officer Mr. M. Minor, Badge No. 1552 of 3<sup>rd</sup> District, 1624 V Street, N.W., Washington, D.C. We notified all concerned District offices including D.C. Department of Health to alert them of the missing gauge.**
- 6. We have made changes to our inventory of nuclear gauges. We will inspect all gauges on quarterly basis and ensure all the locks are secured all the time. We have permanently transferred seven unworkable gauges to Intro Tek Inc. Raleigh, North Carolina for disposal on April 25, 2005. (See attached documents.)**

5908 Triangle Drive  
Raleigh, NC 27617  
tel: 919.875.8371  
fax: 919.875.8328  
email: marbelaez@InstroTek.com



# Memo



INNOVATORS IN INSTRUMENTATION TECHNOLOGY

**To:** Dept. Of Transportation, QC Division  
**From:** InstroTek, Inc.  
**Date:** 3/9/2005  
**Re:** Gauge Transfer

Tel 919-875-8371

The following gauges can be shipped to InstroTek, Inc. at the following address:

Gauge Model	S/N
3241 <del>B</del> C	1167
3241 B	497
3241 C	1895
3411 B	16053
3411 B	9103
3440	19294
4640	459

InstroTek, Inc.  
5908 Triangle Dr.  
Raleigh, NC 27617  
(919) 875-8371

Please note: InstroTek will reserve the right to return the gauge to its owner if serious mechanical problems are detected. These problems include incorrect radioactive source information, cracked source rods, broken base assembly, broken tower, broken handle assembly or source rod assembly. If the gauge passes the inspection, InstroTek will permanently transfer the gauge to its inventory and notify the owner by a transfer letter.

Thank you for considering InstroTek for your disposal needs.

**Please sign and return this form back to us at 919-875-8328.**

*Lawrence Chung*  
Signature

Lawrence Chung (RSO)  
Print  
4/25/05

*J. Maurice Arbelaez*  
InstroTek, Inc.

J. Maurice Arbelaez  
April 25, 2005

Government of the District of Columbia

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**d.**

**District Department of Transportation**  
Infrastructure Project Management Administration  
Quality Assurance/Quality Control Division

April 15, 2005

**Mr. Samuel Collins**  
Region 1  
**U.S. Nuclear Regulator**  
**Commission**  
475 Allendale Road  
King of Prussia, PA 19406

Dear Mr. Collins:

**Report of Missing Nuclear Gauge**  
**License No. 08-23557-01**  
**Nuclear Gauge : Model No.3411- B, Serial No. 7520**

Per my telephone conversation with your office personnel on March 15, 2005, this is to confirm in writing that on March 1, 2005 I discovered that the above-mentioned nuclear gauge was missing from the D.C. Department of Transportation premises. The nuclear gauge was stored at our Material Teating Laboratory located at 400 McMillan Drive, N.W.

I have reported this missing gauge to the D.C. Metropolitan Police Department on March 9, 2005. For your information, the related Police Report is No. 029650, Police Officer Mr. M. Minor, Badge No. 1552 of 3<sup>rd</sup> District, 1624 V Street, N.W., Washington, DC.

Sincerely,

  
Lawrence Chung  
Radiation Safety Officer

Cc: Kathy Modes