



February 18, 2009

Jose Mancatangy  
US NRC Region III  
2443 Warrenville Road  
Lisle, Illinois 60532

Re: Control # 318521

Mr. Mancatangy:

Per our conversation here are the corrections of the unconfirmities, on Nuclear Material License 24-32205-01, that you faxed to us on 2-17-10. Our responses are as follow:

**Item #1**

Our legal name is Tech Services Incorporated as is stated on license.

**Item #2**

Our mailing address has changed from 2 Campbell Plaza Building C Saint Louis, MO 63139 to 5850 Arsenal Street Saint Louis, MO 63139.

**Item #3**

We would like to officially remove the follow storage locations:

- A. 2 Campbell Plaza, Building C, Saint Louis, MO 63139, in which we never stored any radioactive materials.
- B. 1600 Genessee Street, Suite 960, Kansas City, Missouri 64102, in which we never had a leaking source, and we have attached the most resent leak test.

Our current storage locations are:

- A. 5911 Southwest Avenue, Saint Louis, MO 63139
- B. 1322 Adam Street, Kansas City, KS 66103

**Item#4**

Nuclear Gauges will be used at temporary jobsites and returned to the storage location after usage.

**Item #5**

The maximum possession limit per radionuclide is:  
99mCi of Cs-137  
396mCi of Am-241

**Item #6**

We are currently using Humboldt Model 5001 Series Gauges

59th and Arsenal  
Building C  
2 Campbell Plaza  
St. Louis, MO 63139

TEL 314.644.3134

FAX 314.644.3135

14 YEARS OF PROFESSIONAL SERVICE



engineering, inc.

**Item #7**

Please see attachments

**Item #8**

Please see attachments

Mr. Mancatany, I hope I have addressed all of NRC's concerns. Please contact me if you have additional concerns.

Sincerely,  
TSi Engineering, Inc.

Carlos Villarreal, RSO  
Laboratory Supervisor

59th and Arsenal  
Building C.  
2 Campbell Plaza  
St. Louis, MO 63139

TEL 314.644.3134

FAX 314.644.3135

14 YEARS OF PROFESSIONAL SERVICE

APPENDIX B

**ITEMS 5 AND 6: MATERIALS TO BE POSSESSED AND PROPOSED USES**

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
		Cesium-137	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____ _____	<input type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
		Americium-241	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input checked="" type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____ _____	<input type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)

APPENDIX B

Yes	No	Radioisotope	Manufacturer or Distributor Model No.	Quantity	Use As Listed on SSD Certificate	Specify Other Uses Not Listed on SSD Certificate
		Californium-252	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: _____ _____ _____ _____ _____	<input checked="" type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
		Other Isotope (Specify):	Sealed source manufacturer or distributor and model number: _____ Device manufacturer or distributor and model number: _____	Not to exceed either the maximum activity per source or maximum activity per device as specified in Sealed Source and Device Registration Certificate	Yes <input type="checkbox"/> Specific description of the gauge use: _____	<input checked="" type="checkbox"/> Not applicable _____ <input type="checkbox"/> Uses are: _____ (Submit safety analysis supporting safe use)
<i>Financial Assurance Required and Evidence of Financial Assurance Provided</i>						

## APPENDIX B

## ITEMS 7 THROUGH 11: TRAINING AND EXPERIENCE, FACILITIES AND EQUIPMENT, RADIATION SAFETY PROGRAM, AND WASTE DISPOSAL

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
<b>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE – RADIATION SAFETY OFFICER</b>  Name: _____	Before obtaining licensed materials, the proposed RSO will have successfully completed one of the training courses described in Criteria in the section entitled "Individual(s) Responsible for Radiation Safety Program and Their Training and Experience – Radiation Safety Officer" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS</b>	Before using licensed materials, authorized users will have successfully completed one of the training course described in Criteria in the section entitled "Training for Individuals Working In or Frequenting Restricted Areas" in NUREG-1556, Vol. 1, Rev 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>9. FACILITIES AND EQUIPMENT</b>	No information needs to be submitted in response to this item; key issues are addressed under "Radiation Safety Program – Public Dose" and "Radiation Safety Program – Operating and Emergency Procedures."	<b>Separate Item 9 Response Need Not Be Submitted With Application</b>	
<b>10. RADIATION SAFETY PROGRAM – AUDIT PROGRAM</b>	The applicant is <i>not</i> required to, and should not, submit its audit program to NRC for review during the licensing phase.	<b>Need Not Be Submitted With Application</b>	
<b>10. RADIATION SAFETY PROGRAM – TERMINATION OF ACTIVITIES</b>	The applicant is <i>not</i> required to submit a response to the termination of activities section during the initial application. However, when the license expires when the licensee ceases operation, NRC Form 314 must be submitted.	<b>Need Not Be Submitted With Application</b>	
<b>10. RADIATION SAFETY PROGRAM – SURVEY INSTRUMENTS</b>	We will either possess and use, or have access to and use, a radiation survey meter that meets the Criteria in the section entitled "Radiation Safety Program – Instruments" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## APPENDIX B

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
10. RADIATION SAFETY PROGRAM – MATERIAL RECEIPT AND ACCOUNTABILITY	Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM – OCCUPATIONAL DOSIMETRY	Either we will maintain, for inspection by NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of 10 percent of the allowable limits in 10 CFR Part 20, or we will provide dosimetry processed and evaluated by an NVLAP-approved processor that is exchanged at a frequency recommended by the processor.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM – PUBLIC DOSE	The applicant is <i>not</i> required to submit a response to the public dose section during the licensing phase. This matter will be examined during an inspection.		Need Not Be Submitted With Application
10. RADIATION SAFETY PROGRAM – OPERATING AND EMERGENCY PROCEDURES	<p>We will implement and maintain the operating and emergency procedures in Appendix H of NUREG-1556, Vol. 1, Rev. 1, dated November 2001, and provide copies of these procedures to all gauge users and at each job site.</p> <p style="text-align: center;"><b>OR</b></p> <p>Operating and emergency procedures will be developed, implemented, and maintained and will meet the criteria in the section entitled "Radiation Safety Program – Operating and Emergency Procedures" in NUREG-1556, Vol. 1, Rev. 1, dated November 2001.</p>	<input type="checkbox"/>  <input checked="" type="checkbox"/>	<input type="checkbox"/>
10. RADIATION SAFETY PROGRAM – LEAK TEST	Leak tests will be performed at intervals approved by NRC or an Agreement State and specified in the Sealed Source and Device Registration Sheet. Leak tests will be performed by an organization authorized by NRC or an Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by NRC or an Agreement State to provide leak test kits to other licensees and according to the kit supplier's instructions.	<input checked="" type="checkbox"/>	<input type="checkbox"/>  The information in Appendix J supporting a request to perform leak testing and sample analysis is attached.

APPENDIX B

Item No. And Title	Suggested Response	Yes	Alternative Procedures Attached
<p><b>10. RADIATION SAFETY PROGRAM – MAINTENANCE</b></p>	<p><i>Routine Cleaning and Lubrication</i>                      We will implement and maintain procedures for routine maintenance of our gauges according to each manufacturer's recommendations and instructions.</p> <p><i>Non-Routine Maintenance</i>                      We will send the gauge to the manufacturer or other person authorized by NRC or an Agreement State to perform non-routine maintenance or repair operations that require the removal of the source or source rod from the gauge.</p>	<p><input checked="" type="checkbox"/></p> <p><input checked="" type="checkbox"/></p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p>The information listed in Appendix G supporting a request to perform non-routine maintenance in-house is attached.</p>
<p><b>10. RADIATION SAFETY PROGRAM – TRANSPORTATION</b></p>	<p>The applicant is <i>not</i> required to submit its response to transportation during the licensing process. However, this issue will be reviewed during inspection.</p>		<p><b>Need Not Be Submitted With Application</b></p>
<p><b>11. WASTE MANAGEMENT – GAUGE DISPOSAL AND TRANSFER</b></p>	<p>The applicant is <i>not</i> required to submit a response to waste management during the licensing process. However, the licensee should develop, implement, and maintain gauge transfer and disposal procedures in its radiation protection program.</p>		<p><b>Need Not Be Submitted With Application</b></p>



# HUMBOLDT SCIENTIFIC, INC.

## RSO Certification

*Robert Tarver*

### HAS SUCCESSFULLY COMPLETED A CERTIFIED RADIATION SAFETY OFFICER COURSE

Subjects included were:

*RSO Duties and Responsibilities*

*Radiation Safety Practices*

*Regulatory Requirements*

*Dose/Shielding Requirements*

*Accidents/Storage*

*Regulatory Guidance (NUREG-1556, Vol. 1)*

*Transportation/HAZMAT Requirements*

*Risk*

*ALARA*

*Radiation Measurement*

*Operating and Emergency Procedures*

*Calibration and Maintenance*

*Record Keeping*

Date of Training: **January 6, 2009**

Location: **Overland Park, KS**

Certificate Number: **8155**

HAZMAT Expiration Date: **January 6, 2012**

Instructor: **Eddie G. Hall**

**Humboldt Scientific, Inc.**

**551-D Pylon Drive**

**Raleigh, NC 27606**



LEAK TEST CERTIFICATE

Wipe Date 12-30-09

Instructions

- 1 Use wipe procedures as described in the device manual
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

DESCRIPTION OF DEVICE/SOURCE	
Model <u>500LPE</u>	Ser <u>1196</u>
	<u>SOURCE 1</u> <u>SOURCE 2</u>
Material <u>U137</u>	<u>Am241BE</u>
Source Ser <u>2131GH</u>	<u>A10152</u>
RSO Name <u>ROBERT TURNER</u>	
Telephone <u>(816) 232-3838</u>	

Do Not Write In This Space For HSI Use Only	
REMOVABLE ACTIVITY	
Beta <u>0</u> uCi	Alpha <u>0</u> uCi
Humboldt Scientific	
By <u>DOT U.</u>	
Date <u>01/07/10</u>	

5200174  
Return  
Address  
Label  
Please  
Type or  
Print  
Clearly

- TSI ENGINEERING
- 1322 ADAMS STREET
- KANSAS CITY KS 64103

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606. (919) 832-6509

(913) 794-6010

LEAK TEST CERTIFICATE

Wipe Date 2/16/09

DESCRIPTION OF DEVICE/SOURCE

Model # 2500E2 Ser # 2142  
 SOURCE 1 SOURCE 2  
 Material CAPIVA NEPTUNE  
 Source Ser 515028 4102500  
 RSD Name K. TAYLOR  
 Telephone 913 3747-8110

Do Not Write In This Space For HSI Use Only

REMOVABLE ACTIVITY

Be/Gam Alpha  
0 uCi 0 uCi  
 Humboldt Scientific  
 By DOTA  
 Date 2/16/09

Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
 Return Address Label Please Type or Print Clearly

- TSI ENGINEERING  
 - 1322 ANAMIC ST.  
 - KANSAS CITY KS 66103

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509

LEAK TEST CERTIFICATE

Wipe Date 02/09/2009

DESCRIPTION OF DEVICE/SOURCE

Model #SSD01EE Ser 2442

	SOURCE 1	SOURCE 2
Material	<u>GAMMA</u>	<u>NiRE 190A</u>
Source Ser	<u>515460</u>	<u>A102800</u>

RSD Name R. TARVER

Telephone 913-2749-4010

Do Not Write In This Space  
For HSI Use Only

REMOVABLE ACTIVITY

Beta 0 uCi    Alpha 0 uCi

Humboldt Scientific

By DOT/H.

Date 02/12/09

Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
Return  
Address  
Label  
Please  
Type or  
Print  
Clearly

- TSI ENGINEERING  
- 1600 GEMESSEE, SUITE 960  
- KANSAS CITY, MO 64102

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509

LEAK TEST CERTIFICATE

Wipe Date 3-18-2009

DESCRIPTION OF DEVICE/SOURCE  
 Model HS-5001EZ ser 5819  
 SOURCE 1 SOURCE 2  
 Material CS-137 Am-241 BR  
 Source Ser 5559 CAL NJ0632M  
 RSO Name R. TARNER  
 Telephone (816) 283-2838

Do Not Write In This Space  
 For HSI Use Only

REMOVABLE ACTIVITY  
 Be 0 Gam 0 Alpha  
 uCi uCi  
 Humboldt Scientific  
 By DOT UJ  
 Date 03/20/09

Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
 Return  
 Address  
 Label  
 Please  
 Type or  
 Print  
 Clearly

- TSI ENGINEERING  
 - 1600 GENESEE ST., SUITE 960  
 - KANSAS CITY, MO 64102

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509



LEAK TEST CERTIFICATE

Wipe Date 9-17-09

DESCRIPTION OF DEVICE/SOURCE

Model # #-5001EZ Ser 5819  
SOURCE 1 SOURCE 2  
Material CS-137 44241:RP  
Source Ser. 55590A 1106326  
RSO Name R. TARKER  
Telephone (913) 749-4010

Do Not Write in This Space  
For HSI Use Only

REMOVABLE ACTIVITY

Beta 0 uCi Alpha 0 uCi  
Humboldt Scientific  
By DOT U.  
Date 09/20/09

Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
Return  
Address  
Label  
Please  
Type or  
Print  
Clearly

- TSI ENGINEERING  
- 1322 ADAMS ST.  
- KANSAS CITY KS 66103

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509

LEAK TEST CERTIFICATE

Wipe Date 6-5-09

**DESCRIPTION OF DEVICE/SOURCE**

Model 5001EZ Ser 1196  
 SOURCE 1 SOURCE 2  
 Material GAMMA NEUTRON  
 Source Ser 273164 NJ01152  
 RSO Name ROBERT TARVER  
 Telephone (913) 794-4010

**Do Not Write In This Space For HSI Use Only**

**REMOVABLE ACTIVITY**

Beta  uCi Alpha  uCi  
 Humboldt Scientific  
 By DOTU  
 Date 06/15/09

Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
 Return  
 Address  
 Label  
 Please  
 Type or  
 Print  
 Clearly

- TSI ENGINEERING  
 - 1322 ADAMS  
 - KANSAS CITY KS 66103

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509

LEAK TEST CERTIFICATE

Wipe Date 12-08-2008

**DESCRIPTION OF DEVICE/SOURCE**

Model 5001EZ Ser 1196  
 SOURCE 1 SOURCE 2  
 Material GAMMA NEUTRON  
 Source Ser 273164 NJ01152  
 RSO Name STEVE WENDLAND  
 Telephone (816) 283-3838

**Do Not Write In This Space For HSI Use Only**

**REMOVABLE ACTIVITY**

Beta  uCi Alpha  uCi  
 Humboldt Scientific  
 By DOTU  
 Date 12/15/08

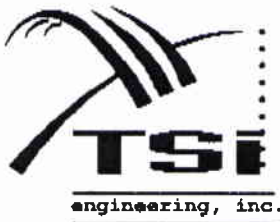
Instructions

- 1 Use wipe procedures as described in the device manual.
- 2 Enter all information under description.
- 3 Print or type return address in the space provided.
- 4 Wipe source (s) and put filter paper in the plastic bag.
- 5 Keep the middle copy and mail this form and bag to Humboldt.
- 6 Regulations require that sources with removable activity greater than 0.005 uCi be removed from service for repair and decontamination or disposal. Authorities must be notified.

5200174  
 Return  
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- TSI ENGINEERING  
 - 1600 GENESSEE, SUITE 960  
 - KANSAS CITY, MO 64102

HUMBOLDT SCIENTIFIC INC. 551D Pylon Drive, Raleigh, NC 27606, (919) 832-6509



Two Campbell Plaza  
 Bldg. C  
 59<sup>th</sup> & Arsenal  
 St. Louis, MO 63139  
 314-644-3134 314-644-3135 Fax

Facsimile Transmittal Sheet

To JOSE MACATANGY Company: NRC

Fax #: 630-515-1078 Date: 2-19-10

From: CARLOS VILLARREAL Pages including cover: 15

cc:

Project Description:

Subject: RE: CONTROL #: 318521

MATERIAL LICENSE # 24-32205-01

WE HAVE ATTACHED THE DOCUMENTATION THAT  
YOU REQUEST

PLEASE CALL WITH ANY QUESTIONS REGARDING  
THIS MATTER

CARLOS V. PH: 314-645-0703

**WARNING**

The information contained in this communication is confidential, may constitute non-public information, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please immediately notify us at (314) 644-3134 and return the original message to us at the address above via the U.S. Postal Service.

Thank you