

**APPLICATION FOR MATERIAL LICENSE**

**INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.**

**APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH: IF YOU ARE LOCATED IN:**

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
 OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
 U.S. NUCLEAR REGULATORY COMMISSION  
 WASHINGTON, DC 20555-0001

**ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:**

MATERIALS LICENSING BRANCH  
 U.S. NUCLEAR REGULATORY COMMISSION REGION III  
 2443 WARRENVILLE ROAD SUITE 210  
 LISLE IL 60532-4352

**ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:**

**IF YOU ARE LOCATED IN:**

**ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:**

**ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:**

LICENSING ASSISTANCE TEAM  
 DIVISION OF NUCLEAR MATERIALS SAFETY  
 U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
 475 ALLENDALE ROAD  
 KING OF PRUSSIA, PA 19406-1415

NUCLEAR MATERIALS LICENSING BRANCH  
 U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
 611 RYAN PLAZA DRIVE SUITE 400  
 ARLINGTON, TX 76011-4005

**PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.**

<p>1 THIS IS AN APPLICATION FOR (Check appropriate item)</p> <p><input type="checkbox"/> A NEW LICENSE</p> <p><input checked="" type="checkbox"/> B AMENDMENT TO LICENSE NUMBER <u>24-00513-38</u></p> <p><input type="checkbox"/> C RENEWAL OF LICENSE NUMBER</p>	<p>2 NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)</p> <p>The Curators of the University of Missouri                  University of Missouri - St. Louis                  1 University Boulevard (102 PTB)                  St. Louis, MO 63121-4400</p>
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<p>3 ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</p> <p>University of Missouri - St. Louis                  8001 Natural Bridge Road                  St. Louis Missouri 63121</p>	<p>4 NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</p> <p>Steven Struck</p> <p>TELEPHONE NUMBER</p> <p>(314) 516-6362</p>
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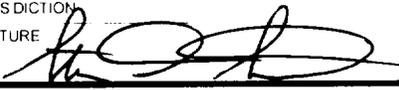
**SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE**

<p>5 RADIOACTIVE MATERIAL                  a Element and mass number, b chemical and/or physical form, and c maximum amount which will be possessed at any one time</p>	<p>6 PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED</p>
<p>7 INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE</p>	<p>8 TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS</p>
<p>9 FACILITIES AND EQUIPMENT</p>	<p>10 RADIATION SAFETY PROGRAM</p>
<p>11 WASTE MANAGEMENT</p>	<p>12 LICENSE FEES (See 10 CFR 170 and Section 170.31)                  FEE CATEGORY <u>Exempt</u> AMOUNT ENCLOSURED \$ <u>0.00</u></p>

**13. CERTIFICATION (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.**

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE: Steven D. Struck, RSO SIGNATURE:  DATE: 4/4/08

**FOR NRC USE ONLY**

<p>TYPE OF FEE: _____ FEE LOG: _____ FEE CATEGORY: _____ AMOUNT RECEIVED: \$ _____</p>	<p>CHECK NUMBER: _____ COMMENTS: _____</p>
<p>APPROVED BY: _____</p>	<p>DATE: _____</p>



Materials Licensing Branch Chief  
U.S. Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road STE 210  
Lisle, Illinois 60532-4352

April 4, 2008

Dear Sir or Ma'am,

The following is a request to amend the radioactive material license belonging to The Curators of the University of Missouri at the St. Louis Campus. The license number is 24-00513-38, amendment number 22, having the expiration date of January 31, 2013.

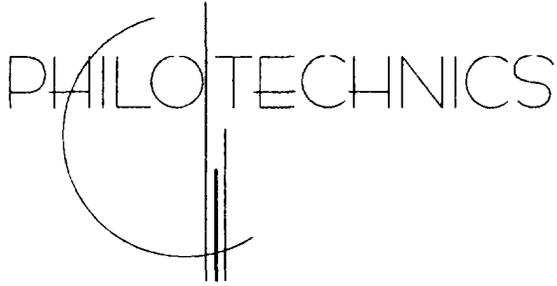
- 1) Please amend the license conditions 6 through 8 and add the following material and quantity. Note, that the location of use and storage, specific to this amendment, shall be as described in license condition 10A. Specific purpose, relevant to this amendment, is per license condition 9 for authorized use. Disposal of the following material shall be through normal University of Missouri procedures and stated in license conditions 17, 18 and 19.
  - a) Nickel-63 in any chemical and/or physical form with a maximum possession limit of 10 millicuries. The purpose is to use this isotope to study ion transport via a yeast magnesium transporter, which is necessary due to the lack of suitable radioactive isotopes of Mg. Small amounts of yeast cell suspensions will be mixed with the isotope in diluted form to study the rate of uptake into cells via this transport system.
  - b) The authorized user of the above listed material will be Colin MacDiarmid, Ph.D. who is an Authorized User listed under license condition 12A. Dr. MacDiarmid does not have direct experience using Ni-63 but he has over 10 years of experience using H-3 and Ca-45 and he had also been training in the use of C-14, which are all isotopes with similar beta energy levels as Ni-63. Maximum possession limits for the above radionuclide for this authorized user shall be fixed at 5 millicuries.
- 2) Please amend license condition 12A and delete the following Authorized Users who are no longer associated with the University of Missouri - St. Louis or no longer using licensed materials.
  - a) Jane A. Starling, Ph.D.
  - b) Shirley T. Bissen, Ph.D.
  - c) Claude Fauquet, Ph.D.

- 3) Please amend license condition 6.J. and delete the Am-241 wrapped with Beryllium for neutron source. The Troxler gauge that contains this source, model number 4302 with the serial number 00413, was shipped to Troxler Electronic Laboratories, Inc., via Philotechnics, Ltd., and received on September 17, 2007. A copy of the waste manifest, authorization to dispose of the gauge, source leak test, and the receipt acknowledgment from Troxler Electronic Laboratories is attached.
- 4) Please amend the license conditions 6.K. through 6.M. and remove the sealed sources Cobalt-60, Iodine-129 and Polonium-210. These sealed sources were shipped for disposal via Philotechnics, Ltd., on July 11, 2007 and received by Philotechnics, Ltd., on July 16, 2007. The University no longer possesses any of these sealed sources nor do we have a foreseeable need for them in the future. A copy of the waste manifest and receipt acknowledgment from Philotechnics, Ltd., is attached.

Respectfully,



Steven D. Struck  
Radiation Safety Officer  
University of Missouri – St. Louis  
(314)516-6362 phone  
(314)516-6309 fax



July 30, 2007

Troxler Electronic Laboratories, Inc.  
Attn: Repair/Service Department  
3008 Cornwallis Road  
Research Triangle Park, NC 27709

**Reference: Troxler Model 4302 Gauge Disposal**

To Whom It May Concern:

The enclosed Troxler Model 4302 depth moisture gauge containing 10 mCi Am-241, serial number 413, is being sent to Troxler Labs for disposal under RMA #05744. Immediate payment can be made via credit card by contacting Tina Richards with our Purchasing Department at 865-285-3015.

Philotechnics is acting as broker for The University of Missouri – St. Louis, who was in possession of the above referenced gauge and have given their authorization below for final disposition.

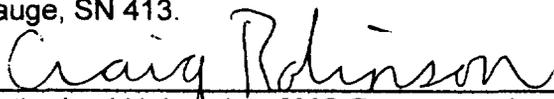
If you have any questions, please feel free to contact me or Annette Hansen at (865) 483-1551 or 888-RADWASTE, my direct number is 865-285-3004, and email address is [mlpatterson@philotechnics.com](mailto:mlpatterson@philotechnics.com).

Sincerely,  
*Philotechnics, Ltd.*

Michele Patterson  
Customer Service Manager

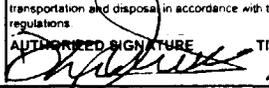
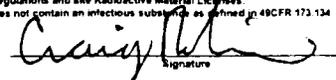
Cc: Tina Richards

I hereby authorize Troxler Labs to dispose of the enclosed Troxler Model 4302 depth moisture gauge, SN 413.

  
\_\_\_\_\_  
Authorized University of MO Representative

  
\_\_\_\_\_  
Date

cc

<b>NRC FORM 540 (3-95)</b> <b>U.S. NUCLEAR REGULATORY COMMISSION</b> <b>UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER</b>		<b>5. SHIPPER - NAME AND FACILITY</b> Philotechnics, Ltd @ University of Missouri/SAIC 1 University Blvd St. Louis, MO 63121-4400		<b>SHIPMENT ID NUMBER</b> 0798-071007PH  <b>X COLLECTOR PROCESSOR GENERATOR TYPE (Specify)</b>  <b>TELEPHONE NUMBER (Include Area Code)</b> (314) 516-6363		<b>7. FORM 540 AND 540A PAGE 1 OF 1 PAGE(S)</b> <b>FORM 541 AND 541A 1 PAGE(S)</b> <b>FORM 542 AND 542A 1 PAGE(S)</b> <b>ADDITIONAL INFORMATION NONE PAGE(S)</b>		<b>8. MANIFEST NUMBER</b> (Use this number on all continuation pages)  0798-071007PH									
<b>1. EMERGENCY TELEPHONE NUMBER (Include Area Code)</b> 800-424-9300  <b>ORGANIZATION</b> CHEMTREC		<b>USER PERMIT NUMBER</b>  <b>SHIPMENT NUMBER</b> 0798-071007PH  <b>CONTACT</b> Craig Robinson		<b>9. CONSIGNEE - Name and Facility Address</b> Philotechnics, Ltd Operated By Philotechnics, Ltd 201 Renovare Blvd. Oak Ridge, TN 37830		<b>CONTACT</b> Darrell K. Jerrell  <b>TELEPHONE NUMBER (Include Area Code)</b> (865) 483-0551		<b>SIGNATURE - Authorized consignee acknowledging waste receipt</b>  <b>DATE</b>									
<b>2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST</b> *****> 2		<b>6. CARRIER - Name and Address</b> R & R Trucking 302 Thunder Road Duenweg, MO 64641		<b>Truck #:</b>  <b>Trailer #:</b>  <b>EPA I.D. NUMBER</b> MOR000501973  <b>SHIPPING DATE</b> 07/10/2007  <b>TELEPHONE NUMBER (Include Area Code)</b> 866-252-2784		<b>10. CERTIFICATION</b> This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.									
<b>4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "Yes", provide Manifest Number *****		<b>EPA MANIFEST NUMBER</b>  N/A		<b>CONTACT</b> Mitch Lunsford SIGNATURE - Authorized carrier acknowledging waste receipt 		<b>DATE</b> 7/11/07		<b>AUTHORIZED SIGNATURE</b> 									
<b>11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION</b> (including proper shipping name, hazard class, UN ID number, and any additional information)		<b>12. DOT LABEL "RADIOACTIVE"</b>		<b>13. TRANSPORT INDEX</b>		<b>14. PHYSICAL AND CHEMICAL FORM</b>		<b>15. INDIVIDUAL RADIONUCLIDES</b>		<b>16. TOTAL PACKAGE ACTIVITY</b> MBq mCi		<b>17. LSA/SCO CLASS</b>		<b>18. TOTAL WEIGHT OR VOLUME</b> (Use appropriate units)		<b>19. IDENTIFICATION NUMBER OF PACKAGE</b>	
RADIOACTIVE MATERIAL, TYPE A PACKAGE, 7, UN2915; RQ (RQ = NUCLIDES) EQUIPMENT/MATERIAL FOR REUSE		Yellow II		0.1		SOLID/METAL OXIDES AM-241		370.000000 (10.000000)		NA		0.68 ft <sup>3</sup> 10.000000 lb		07-002589 (1)			
RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-INSTRUMENTS OR ARTICLES, 7, UN2911 EXIT SIGNS		NA		NA		SOLID/METAL OXIDES H-3		2775000 00000 (75000.000000)		NA		5.20 ft <sup>3</sup> 35.000000 lb		07-002590 (2)			
<b>FOR CONSIGNEE USE ONLY</b>				<b>20. Generator Certification Statement</b> A) Radioactive Materials. Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission or an Agreement State regulatory agency and with the current revision of the site Material Acceptance Criteria. B) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261. C) Data. Generator hereby represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and site Radioactive Material Licenses. D) INFECTIOUS SUBSTANCE. Generator hereby certifies that this material does not contain an infectious substance as defined in 49CFR 173.134.													
				Craig Robinson  7/12/07 Print Name Signature Date													

**ORIGINAL**

**CERTIFICATE OF RADIOACTIVE SOURCE LEAK TEST**

**Leak Test Information**

Complete the data requested in the top portion of this form and return it with your leak test sample (addressed to the "Radiation Safety Officer") to the address listed below. Following our analysis of your leak test sample, we will return this form to you as a record of the test and the results.

Device: Troxler Model: 4302 Serial #: 413 Manufacturer: Troxler  
Radionuclide: Am-241/Be Activity (mCi): 10  
Source Model: N/A Source #: 571663 Manufacturer: Troxler

The leak testing of this source and/or device was performed as indicated in the source/device manufacturer's recommendations or the SAIC leak test kit instructions using kit # N/A

By: W. Clark Evers Date: 21 15 107  
Company: SAIC Telephone: (314) - 770 - 3006  
Address: 8421 St. Johns Industrial Dr. Fax: (314) - 344 - 4349  
St. Louis, MO 63114 MATERIALS LICENSE # 24-32591-01

**Leak Test Result**

Analysis of the above test, performed on 21 15 107 yielded the following:

- Analysis of the leak test specimen indicated that any activity present is less than 0.005 microcuries. The source or device may continue to be used as authorized.
- Analysis of the leak test specimen indicated that there is activity present in excess of 0.005 microcuries. **This source should be considered to be leaking.** Consult your device operations manual, place this unit in storage, and make the required notifications to your regulatory agency.

Your next routine required leak test for this device is due on or before 8/15/107.

THIS CERTIFICATE IS AN ESSENTIAL RECORD AND SHOULD BE MAINTAINED FOR INSPECTION BY YOUR REGULATORY AGENCY.

Certificate #: 2007-03 Test By: W. Clark Evers Date: 21/15/07



**Troxler Electronic Laboratories, Inc. - Troxler International, Ltd.**  
3008 Cornwallis Road, P.O. Box 12057, Research Triangle Park, NC 27709 - USA  
Telephone: 919/549-8661 Telefax: 919/549-0761

09/17/2007

University of Missouri- St Louis  
Business Services  
8001 Natural Bridge Road  
St Louis, MO 63121

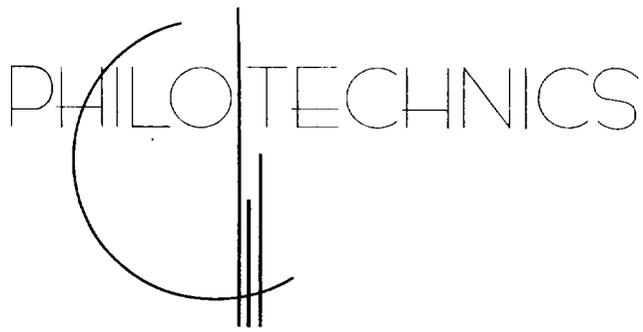
Attn: Radiation Safety Officer

This is to acknowledge receipt of the below-referenced nuclear gauge(s) under North Carolina Radioactive Materials License #032-0182-1. You should retain this letter in your files to document transfer of the gauge.

<u>Disposal Order</u>	<u>Model</u>	<u>Serial Number</u>
86434	4302	00413

Regards,

Steve Pennington  
Service Sales Manager  
TroXler Electronic Laboratories, Inc.



July 23, 2007

Mr. Craig Robinson  
University of Missouri – St. Louis  
1 University Blvd.  
St. Louis, MO 63121-4400

Via Fax: 314-516-6309

Subject: Shipment Receipt Acknowledgement

Dear Mr. Robinson:

In accordance with the requirements of 10 CFR 20, Appendix G, Section III, C.1., the attached signed manifest copy is provided as your notice of receipt and acceptance of the radioactive waste materials specified on the manifest. Manifest No. 0798-071007PH was received at Philotechnics, Ltd. on July 16, 2007.

This letter is acknowledgement of receipt only. Any manifest discrepancies found during unloading or processing will be reported at a later date.

Please contact me if you have any questions or require additional information. I can be reached at 888-RADWASTE or 865-285-3006 (direct), or via email at [pseiber@philotechnics.com](mailto:pseiber@philotechnics.com).

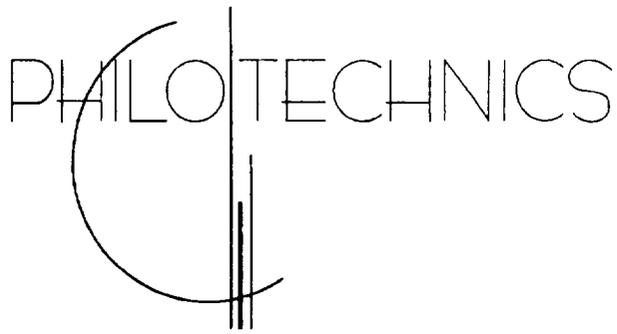
Sincerely,

*Philotechnics, Ltd.*

A handwritten signature in cursive script that reads "Patty Seiber".

Patty Seiber  
Customer Service

ps  
cc: Harry Anagnostopoulos, SAIC  
enclosure



August 30, 2007

Mr. Joe Cumpian  
SAIC  
1121 Roger Bacon Drive  
Reston, VA 22090

Subject: Certificate of Treatment

Dear Joe:

I have attached a Certificate of Treatment from PermFix Northwest for waste received from The University of MO Manifest No. 0798-071007Pe on receipt LLR07-088.

Please contact me if you have any questions or require additional information. I can be reached at 865-285-3006 or by e-mail at [pseiber@philotechnics.com](mailto:pseiber@philotechnics.com)

Sincerely,

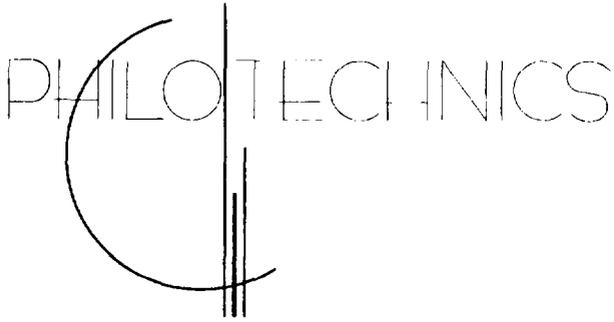
*Philotechnics, Ltd.*

A handwritten signature in black ink that reads "Patty Seiber". The signature is written in a cursive, flowing style.

Patty Seiber  
Brokerage Clerk

cc: Randy Hansen

ps  
Enclosure



September 28, 2007

Mr. Joe Cumpian  
SAIC  
1121 Roger Bacon Drive  
Reston, VA 22090

Subject: Shipment Receipt Acknowledgement

Dear Joe :

In accordance with the requirements of 10 CFR 20, Appendix G, Section III, C.1., the attached signed manifest copy is provided as your notice of receipt and acceptance of the radioactive waste materials specified on the manifest. Manifest No. 0798-071007Pe was received at PFNW (Pecos) on August 21, 2007 and assigned Receipt Number LLR07-088.

This letter is acknowledgement of receipt only. Any manifest discrepancies found during unloading or processing will be reported at a later date.

Please contact me if you have any questions or require additional information. I can be reached at 888-RADWASTE or 865-285-3006 (direct), or via email at [pseiber@philotechnics.com](mailto:pseiber@philotechnics.com).

Sincerely,

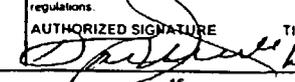
*Philotechnics, Ltd.*

A handwritten signature in cursive script that reads "Patty Seiber".

Patty Seiber  
Customer Service

ps  
enclosure

2004

<b>NRC FORM 540 (3-95)</b> <b>U.S. NUCLEAR REGULATORY COMMISSION</b> <b>UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER</b>		<b>5. SHIPPER - NAME AND FACILITY</b> Philotechnics, Ltd @ University of Missouri/SAIC 1 University Blvd St Louis, MO 63121-4400		<b>SHIPMENT ID NUMBER</b> 0798-071007PE <b>X COLLECTOR PROCESSOR GENERATOR TYPE (Specify)</b>  <b>TELEPHONE NUMBER (Include Area Code)</b> (314) 516-6363		<b>7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION</b> PAGE 1 OF 1 PAGE(S) NONE PAGE(S) NONE PAGE(S) NONE PAGE(S)		<b>8. MANIFEST NUMBER</b> (Use this number on all continuation pages) 0798-071007PE													
<b>1. EMERGENCY TELEPHONE NUMBER (Include Area Code)</b> 800-424-9300 <b>ORGANIZATION</b> CHEMTREC		<b>USER PERMIT NUMBER</b> 0798-071007PE <b>CONTACT</b> Craig Robinson		<b>SHIPMENT NUMBER</b> 0798-071007PE <b>TRUCK #:</b>  <b>TRAILER #:</b>  <b>EPA I.D. NUMBER</b> MOR000501973 <b>SHIPPING DATE</b> 07/10/2007 <b>TELEPHONE NUMBER (Include Area Code)</b> 866 252-2784		<b>9. CONSIGNEE - Name and Facility Address</b> Pacific EcoSolutions Operated By Pacific EcoSolutions 2025 Battelle Blvd Richland, WA 99362 <b>CONTACT</b> Larry Morm <b>TELEPHONE NUMBER (Include Area Code)</b> (509) 375-5160/7046		<b>SIGNATURE - Authorized consignee acknowledging waste receipt</b>  <b>DATE</b> 7/16/07													
<b>2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST</b> *****> 2		<b>6. CARRIER - Name and Address</b> R & R Trucking 302 Thunder Road Duenweg, MO 64841 <b>CONTACT</b> Mitch Lunsford <b>SIGNATURE - Authorized carrier acknowledging waste receipt</b>  <b>DATE</b> 7/11/07		<b>10. CERTIFICATION</b> This is to certify that the herein-named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Part 20 and 61, or equivalent state regulations. <b>AUTHORIZED SIGNATURE</b>  <b>TITLE</b> Logistics Mgr. <b>DATE</b> 7/11/07															
<b>4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?</b> If "Yes", provide Manifest Number ***** <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>EPA MANIFEST NUMBER</b> N/A		<b>11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)</b>		<b>12. DOT LABEL "RADIOACTIVE"</b>		<b>13. TRANSPORT INDEX</b>		<b>14. PHYSICAL AND CHEMICAL FORM</b>		<b>15. INDIVIDUAL RADIONUCLIDES</b>		<b>16. TOTAL PACKAGE ACTIVITY</b> MBq mCi		<b>17. LSA/SCO CLASS</b>		<b>18. TOTAL WEIGHT OR VOLUME (Use appropriate units)</b>		<b>19. IDENTIFICATION NUMBER OF PACKAGE</b>	
Non-Radioactive per DOT		NA		NA		LIQUID/OXIDES		C-14 ; H-3 ; U-238		74.074000		(2.002000)		NA		4.10 ft <sup>3</sup>		0-002591			
NON-HAZ LSV																75.00000 lb		(3)			
Radioactive material, excepted package-limited quantity of material, 7, UN2910		NA		NA		SOLID/METAL OXIDES		AM-241 ; C-14 ; CO-57 ; CO-60 ; CS-137 ; I-125 ; I-131 ; NA-22 ; PO-210 ; U-238 ; V-49		68.637738		(1.855074)		NA		5.20 ft <sup>3</sup>		0-002592			
DAW/T: ERMAL																60.00000 lb		(4)			
<b>FOR CONSIGNEE USE ONLY</b>										<b>20. Generator Certification Statement</b> A) Radioactive Materials. Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission or an Agreement State regulatory agency and with the current revision of the site Material Acceptance Criteria. B) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261. C) Data. Generator hereby represents and warrants that all data set forth in this UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and the Radioactive Material Licenses. D) INFECTIOUS SUBSTANCES. Generator hereby certifies that this material does not contain an infectious substance as defined in 49CFR 173.134  Craig Robinson  7/12/07 Print Name Signature Date											

Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

<b>NRC FORM 540 (3-95)</b> <b>U.S. NUCLEAR REGULATORY COMMISSION</b> <b>UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER</b>		<b>5. SHIPPER - NAME AND FACILITY</b> Philotechnics, Ltd @ University of Missouri/SAIC 1 University Blvd. St. Louis, MO 63121-4400		<b>SHIPMENT ID NUMBER</b> 0798-071007PE		<b>7. FORM 540 AND 540A</b> PAGE 1 OF 1 PAGE(S) <b>FORM 541 AND 541A</b> 2 PAGE(S) <b>FORM 542 AND 542A</b> 1 PAGE(S) <b>ADDITIONAL INFORMATION</b> NONE PAGE(S)		<b>8. MANIFEST NUMBER</b> (Use this number on all continuation pages) 0798-071007PE									
<b>1. EMERGENCY TELEPHONE NUMBER (Include Area Code)</b> 800-424-9300		<b>USER PERMIT NUMBER</b> CONTACT Craig Robinson		<b>SHIPMENT NUMBER</b> 0798-071007PE		<b>GENERATOR TYPE (Specify)</b> CONTACT Larry Morin <i>LM07-088</i>		<b>TELEPHONE NUMBER (Include Area Code)</b> (509) 375-5160 x7046									
<b>ORGANIZATION</b> CHEMTREC		<b>6. CARRIER - Name and Address</b> R & R Trucking 302 Thunder Road Duerweg, MO 64841		<b>Truck #:</b> <b>Trailer #:</b>		<b>EPA I.D. NUMBER</b> MOR000501973		<b>9. CONSIGNEE - Name and Facility Address</b> Perma-Fix/North West Operated By Perma-Fix of Florida 2025 Battelle Blvd Richland, WA 99352									
<b>2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		<b>3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST</b> 2		<b>CONTACT</b> Mitch Lundford		<b>SHIPPING DATE</b> 07/10/2007		<b>SIGNATURE - Authorized consignee acknowledging waste receipt</b> <i>Jamelle</i>									
<b>4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?</b> <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "Yes", provide Manifest Number ----->		<b>EPA MANIFEST NUMBER</b> N/A		<b>CONTACT</b> Mitch Lundford		<b>TELEPHONE NUMBER (Include Area Code)</b> 866-252-2784		<b>10. CERTIFICATION</b> This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. The also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.									
<b>11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (including proper shipping name, hazard class, UN ID number, and any additional information)</b>		<b>12. DOT LABEL "RADIOACTIVE"</b>		<b>13. TRANSPORT INDEX</b>		<b>14. PHYSICAL AND CHEMICAL FORM</b>		<b>15. INDIVIDUAL RADIONUCLIDES</b>		<b>16. TOTAL PACKAGE ACTIVITY</b> MBq      mCi		<b>17. LSASCO CLASS</b>		<b>18. TOTAL WEIGHT OR VOLUME (Use appropriate units)</b>		<b>19. IDENTIFICATION NUMBER OF PACKAGE</b>	
Non-Radioactive per DOT NON-HAZ LSV		NA		NA		LIQUID/OXIDES		C-14 ; H-3 ; U-238		74.074000      (2.002000)		NA		4.10 ft <sup>3</sup> 60.00000 lb		07-002591 (3)	
Radioactive material, excepted package-limited quantity of material, 7, UN2910 DAW/THERMAL		NA		NA		SOLID/METAL OXIDES		AM-241 ; C-14 ; CO-60 ; CO-60 ; CS-137 ; I-125 ; I-131 ; NA-22 ; PO-210 ; U-238 ; V-49		68.637736      (1.855074)		NA		5.20 ft <sup>3</sup> 40.00000 lb		07-002592 (4)	
<b>FOR CONSIGNEE USE ONLY</b>		<b>20. Generator Certification Statement</b> A) <b>Radioactive Materials:</b> Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission or an Agreement State regulatory agency and with the current revision of the site Material Acceptance Criteria. B) <b>Hazardous Materials:</b> Generator hereby certifies that this material does not contain a hazardous waste as defined in 49 CFR 261. C) <b>Debris:</b> Generator hereby represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and site Radioactive Material Licenses. D) <b>INFECTIOUS SUBSTANCE:</b> Generator hereby certifies that this material does not contain an infectious substance as defined in 49 CFR 173.134.															
		Print Name _____ Signature _____ Date _____ <i>Signature on File</i>															



University of Missouri - St. Louis  
1 University BLVD (102 FTB)  
St. Louis, MO 63121

MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION,  
REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352