

From: [Piskura, Deborah](#)
To: [Lambert, Kenneth](#)
Subject: FW: TRANSFER INFORMATION ADDRESSING NOTICE OF VIOLATION (EA-20-113)
Date: Thursday, June 3, 2021 10:19:35 AM
Attachments: [image001.png](#)
[Receipt gauge.pdf](#)
[NRC - ADDENDUM C300 - ROBERT ORLIKOWSKI \(R3DO\) - 3-24-2021.pdf](#)
[Leak Test.PDF](#)
[Signed Amend6 624985.pdf](#)
[NITON HANDGUN RECEIPT.pdf](#)

From: Shashidhar Shastri <shashidhar.shastri@lgccorp.com>
Sent: Tuesday, June 01, 2021 3:57 PM
To: John.Glessner@nrc.gov; Lewman, Shelbie <Shelbie.Lewman@nrc.gov>;
Jamnes.Cameron@nrc.gov; Piskura, Deborah <Deborah.Piskura@nrc.gov>
Subject: [External_Sender] TRANSFER INFORMATION ADDRESSING NOTICE OF VIOLATION (EA-20-113)

Dear Mr. Glessner ,

Attached is the electronic version of our submittal pursuant to your Notice of Violation (EA-20-113) dated May 6th 2021. Two hard copies of the attached submittal are being sent to the two addresses mentioned in the referenced letter. Appreciate an acknowledgement of this transmittal, we are available in case of any questions.

Sincerely,



Shashi Shastri

Chief Operating Officer

LGC Global, Inc.

[7310 Woodward Avenue, Suite 500](#)

[Detroit, Michigan 48202](#)

Phone: 313.989.4141

Cell: 248.207.8026

Shashidhar.Shastri@lgccorp.com

LGC Core Values: Client Satisfaction | Positive Can-Do-Attitude | Responsibility | Respect



NUCLEAR GAUGE TRANSFER RECEIPT

We acknowledge receipt of two Model C-300 & C-200 Seaman Nuclear Corporation gauges (containing a 5.5-millicurie radium-226 sealed source) Sr. No A456 & 21174 from LGC Global, Inc. Haengel Associates NRC License # 21-32321-01.

S/D ON BEHALF OF HAENGEL & ASSOCIATES

Signature: _____

Name: Venkata Sai Tarun Katragadda

Date: 5/26/2021





HAENGEL & ASSOCIATES
ENGINEERING

Geotechnical, Environmental, Structural, Construction, & Inspections.

42040 KOPPERNICK ROAD, SUITE 407
CANTON, MICHIGAN 48187
PHONE: 734.455-9771
FAX : 734.455-9774
EMAIL haei@earthlink.net
WEBSITE www.haengelassociates.com

March 24, 2021

Mr. Robert Orlikowski (R3DO)
U. S. Nuclear Regulatory Commission - Region III
Materials Licensing Branch
2443 Warrenville Road
Suite 210
Lisle, Illinois 60532-4352
630-829-9834
Robert.orlikowski@nrc.gov

Re: **NRC License Information Update**
License number: 21-32321-01
Docket No. 030-35736
Amendment No. 01

Dear Mr. Orlikowski:

Haengel & Associates Engineering, Inc. (HAE) is a consulting engineering firm offering a multi-disciplined package of professional services in planning, surveying, facility design, geotechnical engineering, construction services, environmental engineering, structural engineering, program management and design-build for renovation, additions, and new construction projects. The management of Haengel & Associates Engineering, Inc. (HAE) is committed to making sure that radioactive materials are used by authorized individuals in a safe manner and all materials are kept under full protection at all times.

This letter is intended to update our license information by officially reporting that we will like to amend our existing license to add two nuclear gauges Model C-300 Seaman Nuclear Gauge. Please, see attached picture.

HAE is committed to returning the nuclear gauges to our permanent storage facility at the end of each day and making sure that radioactive materials are used by authorized individuals in a safe manner. When not being used, the gauges shall be stored in a cabinet which is located on the west wall of the building in the concrete laboratory area. The storage cabinet has a lockable door and no outside access.

Haengel & Associates Engineering, Incorporated hopes this information is sufficient for your present needs. If you have any questions or need additional information feel free to contact me at 734 - 455-9771 or at my cell phone number 734-323-9546.


Respectfully,

HAENGEL & ASSOCIATES
ENGINEERING, INC.

U. S. Nuclear Regulatory Commission - Region III

Materials Licensing Branch
NRC License Information Update
License number: 21-32321-01
Docket No. 030-35736
Amendment No. 01
Page No. 2

HAENGEL & ASSOCIATES ENGINEERING INCORPORATED


Gustavo N. Haengel
Radiation Safety Officer

Seaman Nuclear Gauge – C-300



**Troxler Electronic Laboratories, Inc.**

3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (866) 391-2759
License: NC 032-0182-1

GUS HAENGEL
HAENGEL & ASSOCIATES ENG.
42040 KOPPERNICK ROAD
SUITE 407
CANTON, MI 48187

Cust ID: 6145

LEAK TEST CERTIFICATE

DEVICE:

Model: C-300 **Serial No:** 21174

LEAK TEST ANALYSIS:

Sample collected on: 05/10/2021
Sample analyzed on: 05/19/2021 7:47:07 AM **Position:** 45
Analyzed by: TH

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.23E+01	1.96E+01
Background measurement (cpm)	0	26
Sample measurement (cpm)	0	27
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-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)**

**Troxler Electronic Laboratories, Inc.**

3008 Cornwallis Rd., P.O. Box 12057

Research Triangle Park, NC 27709

Tel: (877) 876-9537 Fax: (866) 391-2759

License: NC 032-0182-1

GUS HAENGEL
HAENGEL & ASSOCIATES ENG.
42040 KOPPERNICK ROAD
SUITE 407
CANTON, MI 48187

Cust ID: 6145

LEAK TEST CERTIFICATE

DEVICE:**Model:** C-200**Serial No:** A-456**LEAK TEST ANALYSIS:****Sample collected on:** 05/10/2021**Sample analyzed on:** 05/19/2021 7:48:19 AM **Position:** 46**Analyzed by:** TH

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.23E+01	1.96E+01
Background measurement (cpm)	0	26
Sample measurement (cpm)	0	23
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-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)**

Seaman Nuclear Corporation

7315 South First Street Oak Creek, WI 53154 USA

Tel 414-762-5100 Fax 414-762-5106

info@seamannuclear.com

Leak Test Certificate

A leak test has been performed on meter, serial number **21174**, a model C-300 DT, 12", containing the radionuclide Ra 226

Owned By:

Lakeshore Global
7310 Woodward Ave., Suite 500
Detroit, MI 48202

Date Sample Collected: 12/28/20

Collected By: MM

Date Sample Analyzed: 2/11/21

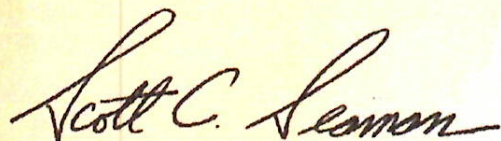
Analyzed By: Andy Moore

Most regulatory agencies consider a source to be leaking if a leak test reveals the presence of more than 0.005 microcurie of removable contamination.

Analysis found contamination of less than 0.005 microcurie.

Analysis authorized by Wisconsin license 079-1257-01.

LEAK TEST DUE: 6/28/21



Scott C. Seaman
Radiation Safety Officer
Seaman Nuclear Corporation

S/N: 21174

Leak Tested: 2/11/21

Due: 8/11/21



Seaman Nuclear Corporation
Oak Creek, WI (414) 762-5100



TROXLER ELECTRONIC LABORATORIES
3008 Cornwallis Rd • P.O. Box 12057 • Research Triangle Park, NC 27709
Phone +1-919-549-8661 • Fax +1-919-485-2250 • www.troxlerlabs.com

Please print all information clearly

Name GUSTAVO HAENGEL Sample Date 5-10-2021
Company HAENGEL & ASSOCIATES ENGINEER. Device _____
Address 42040 KOPPERNICK ROAD Model C-300 Serial # 21174
SUITE 407 Source RA226(BE)
CANTON, MI 48187 Radionuclide _____ Serial # 21174
Phone 734-455-9771 Radionuclide _____ Serial # _____
E-mail HAEI@EARTHLINK.NET

ORIGINAL COPY



TROXLER ELECTRONIC LABORATORIES
3008 Cornwallis Rd • P.O. Box 12057 • Research Triangle Park, NC 27709
Phone +1-919-549-8661 • Fax +1-919-485-2250 • www.troxlerlabs.com

2

Please print all information clearly

Name GUSTAVO HAENGEL Sample Date 5-10-2021
Company HAENGEL & ASSOCIATES ENGINEERING Device _____
Address 92040 KOPPERNICK RD Model C-200 Serial # A-456
SUITE 407 Source _____
CANTON, MI 48107 Radionuclide RA 226 (Be) Serial # A-456
Phone 734-455-9771 Radionuclide _____ Serial # _____
E-mail HAEL@EARTHLINK.NET

ORIGINAL COPY

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NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

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Amendment No. 6

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 70 and 71, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

<p align="center">Licensee</p> <p>1. Haengel & Associates Engineering, Inc.</p>		<p>In accordance with letter dated March 24, 2021,</p>	<p>4. Expiration Date: November 30, 2021</p>
<p>2. 42040 Koppernick Rd. Ste. 407 Canton, MI 48187</p>		<p>3. License No.: 21-32321-01 is amended in its entirety to read as follows:</p>	<p>5. Docket No.: 030-35736 Reference No.:</p>
<p>6. Byproduct, source, and/or special nuclear material</p>	<p>7. Chemical and/or physical form</p>	<p>8. Maximum amount that licensee may possess at any one time under this license</p>	<p>9. Authorized use</p>
<p>A. Cesium-137</p>	<p>A. Sealed Sources (AEA Technology/QSA, Inc., Model CDCW556; Isotope Product Laboratories, Model HEG-137)</p>	<p>A. 9 millicuries per source and 72 millicuries total</p>	<p>A. For use in Troxler Electronic Labs, Inc. Model 3400 Series portable gauging devices for measuring physical properties of materials.</p>
<p>B. Americium-241</p>	<p>B. Sealed Sources (AEA Technology/QSA, Inc., Model AMNV.997; Isotope Product Laboratories, Model AMI-NO2)</p>	<p>B. 44 millicuries per source and 352 millicuries total</p>	<p>B. For use in Troxler Electronic Labs, Inc. Model 3400 Series portable gauging devices for measuring physical properties of materials.</p>
<p>C. Radium-226</p>	<p>C. Sealed Sources (AEA Technology, Model RAN.C1; Gammatron, Model GT-GHP; Radium Chemical Company, Model Drawing 21.94)</p>	<p>C. 5.5 millicuries per source and 11 millicuries total</p>	<p>C. For use in Seaman Nuclear Corporation Model C-300 Series portable gauging devices for measuring physical properties of materials.</p>

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NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License No.: 21-32321-01

Docket or Reference No.:
030-35736

Amendment No. 6

CONDITIONS

10. Licensed material may be used or stored at the licensee's facilities located at: 42040 Koppernick Rd., Ste. 407, Canton, Michigan, 48187

Licensed material may be used at temporary job sites anywhere in the United States where the U.S. Nuclear Regulatory Commission maintains jurisdiction for regulating the use of licensed material, including areas of exclusive Federal jurisdiction within Agreement States.

If the jurisdiction status of a Federal facility within an Agreement State is unknown, the licensee should contact the Federal agency controlling the job site in question to determine whether the proposed job site is an area of exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites in Agreement States not under exclusive Federal jurisdiction shall be obtained from the appropriate state regulatory agency.

11. The Radiation Safety Officer (RSO) for this license is Gustavo N. Hengel.
12. Licensed material shall only be used by, or under the supervision and in the physical presence of, individuals who have received the training described in application dated May 25, 2011.
13. A. Sealed sources and detector cells shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State. In the absence of a registration certificate, sealed sources shall be tested for leakage and/or contamination at intervals not to exceed 6 months, or at such other intervals as specified.
- B. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

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NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

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**MATERIALS LICENSE
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License No.: 21-32321-01

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- C. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.
- D. The leak test shall be capable of detecting the presence of 185 becquerels (0.005 microcuries) of radioactive material on the test sample. If the test reveals the presence of 185 becquerels (0.005 microcuries) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.
- E. Analysis of leak test samples and/or contamination shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is authorized to collect leak test samples but not perform the analysis.
- F. Records of leak test results shall be kept in units of becquerels (microcuries) and shall be maintained for 3 years.
14. Sealed sources or source rods containing licensed material shall not be opened or sources removed or detached from source rods or gauges by the licensee.
15. Except for maintaining labeling as required by 10 CFR Part 20, or Part 71, the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission before making any changes in the sealed source, device, or source-device combination that would alter the description or specifications as indicated in the respective certificate of registration issued either by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or by an Agreement State.
16. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 3 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

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NRC FORM 374A

U.S. NUCLEAR REGULATORY COMMISSION

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**MATERIALS LICENSE
SUPPLEMENTARY SHEET**

License No.: 21-32321-01

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030-35736

Amendment No. 6

17. Any cleaning, maintenance, or repair of the gauge(s) that requires detaching the source or source rod from the gauge shall be performed only by the manufacturer or by other persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.
18. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container must be locked when in transport or storage, or when not under the direct surveillance of an authorized user.
19. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. This license condition applies only to those procedures that are required to be submitted in accordance with the regulations. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.
- A. Application dated May 25, 2011 (ML111530243)
 - B. Letter dated November 28, 2011 (ML113340458)
 - C. Letter dated October 23, 2013 (ML13302C194)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Erin J. KennedyDigitally signed by Erin J.
Kennedy
Date: 2021.04.13 23:31:46 -05'00'

By: _____

Erin J. Kennedy
Region 3Date: April 13, 2021**Official Use Only - Security-Related Information**



P.O. Box 817 – Kingston, TN 37763 – (865) 220-8501

JUNE 1, 2021

SHASHI SHASTRI

LGC GLOBAL, INC
7310 WOODWARD AVENUE, STE 500
DETROIT, MI 48202

Shashi,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that Bionomics, Inc. has received the shipment recently picked up at your facility on **May 27, 2021**.

Attached you will find a copy of your NRC Form 540, the only change from the original is in Item No.9 "signature" which identifies that Bionomics, Inc. is acknowledging receipt of waste from your facility.

Please keep this with your original, as well as future disposal certifications.

If you have any questions please feel free to contact me at (865) 220-8501.

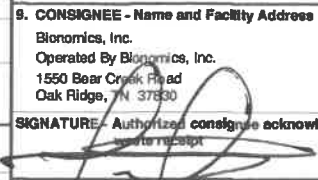
Sincerely,

A handwritten signature in black ink, appearing to read 'Jerry Noll', written over the word 'Sincerely,'.

Jerry Noll
QA Manager

Cc: File BIO-06-21

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-6 FS2), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollecta@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0164), 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.

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		Blonomics, Inc.		5. SHIPPER - NAME AND FACILITY Blonomics, Inc. on behalf of LGC Global, Inc. 7310 Woodward Avenue, Suite 500 Detroit, MI 48202		SHIPMENT ID NUMBER 0521LTCG		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		PAGE 1 OF 1 PAGE(S) 1 PAGE(S) NONE PAGE(S) NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0521LTCG							
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (800) 424-9300				USER PERMIT NUMBER		SHIPMENT NUMBER 0521LTCG		9. CONSIGNEE - Name and Facility Address Blonomics, Inc. Operated By Blonomics, Inc. 1550 Bear Creek Road Oak Ridge, TN 37830		CONTACT John McCormick TELEPHONE NUMBER (Include Area Code) (865) 220-8501									
ORGANIZATION CHEMTREC / CCN825454				CONTACT Shashi Shastri		TELEPHONE NUMBER (Include Area Code) (248) 207-8026		SIGNATURE - Authorized consignee acknowledging waste receipt 		DATE 6/1/21									
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		6. CARRIER - Name and Address Blonomics, Inc. 1550 Bear Creek Road Oak Ridge, TN 37830		Truck #: Trailer #: 		EPA I.D. NUMBER TND982116493		10. CERTIFICATION 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 regulation.									
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If "Yes", provide Manifest Number		EPA MANIFEST NUMBER N/A		CONTACT John McCormick		SHIPPING DATE 5/27/21		TELEPHONE NUMBER (Include Area Code) 865-220-8501		DATE 5-27-21									
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)				12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY MBq mCi		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
UN2910, Radioactive material, excepted package-limited quantity of material, 7 SEALED SOURCES 1 - 5 GAL PLASTIC CASE				NA		NA		SOLID/OXIDES		AM-241 ; CD-109		0.3404 (0.0092)		NA		0.68 ft³ 5.00 lb		LTCG-01 (21-000943)	
FOR CONSIGNEE USE ONLY				Record Waste Description Inadequate Contamination or Leakage Detected Unexpected Exposure Rates Detected Labels, Markings, etc. Inadequate Container Integrity Inadequate Other No Violations Detected on this Shipment				20. TERMS AND CONDITIONS A. HAZARDOUS MATERIALS: Generator represents & warrants that Waste Material is (or is not) hazardous waste as defined in 49 CFR 261. Where the material is a hazardous waste, this shipment is also accompanied by a separate and completed hazardous waste manifest, along with the appropriate land-disposal restriction notice and/or certification as required by 49 CFR 268.1. B. TITLE: Upon acceptance at the disposal site by EnergySolutions, Inc. and all appropriate regulatory authorities, title to the Waste Material which conforms to Generator's representations herein shall thereupon transfer from Generator and be vested in EnergySolutions, Inc. C. WASTE MATERIAL: Generator 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, and regulations and Environmental Health, Inc.'s facility license. D. INDEMNIFICATION: Generator agrees to indemnify EnergySolutions, Inc., its officers, employees, and agents against all losses and liability whatsoever if such losses or liability results from the failure of the Waste Material to conform in all material respects to the data supplied on the UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST, or if this shipment fails to meet the standards prescribed by the Department of Transportation or any governmental agency having jurisdiction over such matters.											

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOF-10202, (3150-0196), 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.

FORM 541		Bionomics, Inc.		1. MANIFEST TOTALS										2. MANIFEST NUMBER		
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR MATERIAL (grams)				TOTAL	3. PAGE 1 OF 1 PAGE(S) 4. SHIPPER NAME Bionomics, Inc. on behalf of LTC Global, Inc. SHIPMENT ID NUMBER 0521LTCG				
							U-233	U-235	Pu							
							NP	NP	NP	NP						
							ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)									
ALL NUCLIDES		TRITIUM	C-14	Tc-99	I-129	SOURCE										
MBq	0.3404	NP	NP	NP	NP	NP										
mCi	0.0082	NP	NP	NP	NP	NP										
DISPOSAL CONTAINER DESCRIPTION				WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C		
5. CONTAINER IDENTIFICATION NUMBER	6. CONTAINER DESCRIPTION (See Note 1 & 1A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg ton	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm² dpm/100 cm²		11. WASTE DESCRIPTOR (See Note 2 & Note 2A)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ ft³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION				
					ALPHA	BETA-GAMMA						RADIONUCLIDES	pCi/µm		MBq	mCi
# - Innerpack Container																
21-000943 (LTCG-01)	3	0.0193	2.27	< 0.005	< 0.00000334	< 0.0000167	H 36	0.0193	100	SOLID OXIDES / NP	NP	AM-241	9820.8011	0.1665	0.0045	AU
Origin: MI		0.6800	0.00	< 0.5	< 20	< 1000		0.6800				CD-109	10361.7256	0.1739	0.0047	
LTC Global, Inc.												Sub Total	20282.5268	0.3404	0.0092	
7310 Woodward Avenue,																
Suite 500																
Detroit, MI 48202																
Package Total																
Shipment Total		0.0193	2.27													
		0.6800	0.00											0.3404	0.0092	

NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved shipping overpacks, the numerical code must be followed by "OP".

1. Wooden Box or Crate	9. Demineralizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk, Unpackaged Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	14. Other. Describe in Item 11, or additional page
7. Polyethylene Tank or Liner	
8. Fiberglass Tank or Liner	

NOTE 1A: Bulk Packaging Description Codes (Choose one code as may be applicable.)

A. Gondola
B. Intermediate
C. End-ump
D. Roll-off
E. Seavon

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal	29. Demolition Rubble	38. Evaporator Bottoms/Sludges/
21. Incinerator Ash	30. Carbon Ion-exchange Media	Concentrates
22. Soil	31. Anion Ion-exchange Media	39. Compressible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	40. Noncompressible Trash
24. Oil	33. Contaminated Equipment	41. Animal Carcass
25. Aqueous Liquid	34. Organic Liquid (except oil)	42. Biological Material (except animal carcass)
26. Filter Media	35. Glassware or Labware	43. Activated Material
27. Mechanical Filter	36. Sealed Source/Device	44. Other. Describe in Item 11, or additional page
28. EPA or State Hazardous	37. Paint or Plating	

NOTE 2A: Specific Waste Descriptions (Choose all applicable codes.)

G. Degraded
H. Solid
I. Combustible
J. Non-combustible
K. Air Filtration Filters
L. Asbestos

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in Item 13. Code 109=None Required

90. Cement	94. Vinyl Ester Resins
91. Concrete (encapsulation)	95. Other. Describe in Item 13, or additional page
92. Bitumen	100. None Required
93. Vinyl Chloride	