



**CERTIFICATE OF DISPOSITION
OF MATERIALS**

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0028), 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.

LICENSEE NAME AND ADDRESS

Old Dominion University
EH&S Department
5255 Hampton Blvd. Spong Hall Suite 2501
Norfolk, VA 23529

Dr. 2

LICENSE NUMBER

45-09599-03
45-09599-04

DOCKET NUMBER

03016045
03037926

LICENSE EXPIRATION DATE

A. LICENSE STATUS (Check the appropriate box)

- This license has expired. This license has not yet expired; please terminate it.

B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- 1. No radioactive materials have ever been procured or possessed by the licensee under this license.
- 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner.
 - a. Transfer of radioactive materials to the licensee listed below:
 - b. Disposal of radioactive materials:
 - 1. Directly by the licensee:
 - 2. By licensed disposal site:
 - 3. By waste contractor:
 - Bionomics
 - P. O. Box 817 Kingston, TN 37763 (phone number 865-220-8501)
 - c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

REC RG 1 09 28 15 AM 07 07

C. SURVEYS PERFORMED AND REPORTED

- 1. A radiation survey was conducted by the licensee. The survey confirms:
 - a. the absence of licensed radioactive materials
 - b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.
- 2. A copy of the radiation survey results:
 - a. is attached; or b. is not attached (Provide explanation); or c. was forwarded to NRC on: 9/18/15 Date
- 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and
 - a. The results of the latest leak test are attached; and/or
 - b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

| NAME | TITLE | TELEPHONE (Include Area Code) | E-MAIL ADDRESS |
|---------------|------------------------|-------------------------------|----------------|
| Sheri A. Vann | Compliance Officer/RSO | 757-683-5834 | svann@odu.edu |

Mail all future correspondence regarding this license to:

Old Dominion University
EH&S Department 5255 Hampton Blvd. Suite 2501 Norfolk, VA 23529

C. CERTIFYING OFFICIAL
I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

| PRINTED NAME AND TITLE | SIGNATURE | DATE |
|------------------------|----------------------|-----------|
| Sheri Ann Vann | <i>Sheri A. Vann</i> | 9/18/2015 |

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 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.



MEMORANDUM

Occupational
Safety & Health

Environmental
Health

Laboratory
Safety

Industrial
Hygiene

Radiation
Safety

Hazardous
Waste

Pollution
Prevention

DATE: September 21, 2015

TO: NRC
Licensing Assistant Section
Nuclear Materials Safety Branch
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

FROM: Sheri Vann
Environmental Health & Safety Department
Old Dominion University
5255 Hampton Boulevard Spong Hall Suite 2501
Norfolk, VA 23529

SUBJECT: Deactivating our current license and applying for another license

January 28, 2015 the University was inspected by Dennis Lawyer. I'm in the process of trying to have our current license deactivated and an application for a new license so we can still use sea vessels to work with radioactive material on board.

I have completed the Form 314 which is enclosed; I have also enclosed a swipe survey for the sea vessel SLOVER which was used in 2008 and 2009 by (2) Authorized Users here at the University at that particular time these individuals only use long half-life items; the documented swipe survey is enclosed. The sea vessel was swiped on September 8, 2015.

I have also included radioactive waste shipments from 2008 and 2009. We use Bionomics to pick up our radioactive waste from the University. Their address is P.O. Box 817 Kingston TN 87763 or by calling them at 865.220.8501.

The Form 374 is an internal Form and is being shipped here for completion, I was told by Deborah A. Hersey that it would be mailed directly here for completion so until I have that document I cannot provide the Form 374. I was told it would be shipped here for completion. I will complete the Form once it arrives here at the University.



This is the only information I can provide at the current time, date, and year.

Thank you
Sheri A. Vann
EH&S Department
Old Dominion University
5255 Hampton Blvd. Spong Hall Suite 2501
Norfolk, VA 23529

SYSTEM NORMALIZED

C14 IPA DATA PROCESSED - 04-Sep-2015 14:13
 C14 Eff (0-156 keV) = 95.47 %
 H3 IPA DATA PROCESSED - 04-Sep-2015 14:14
 H3 Eff (0-18.6 keV) = 61.45 %
 BKG IPA DATA PROCESSED - 04-Sep-2015 15:14
 Bkg (0-18.6 keV) = 12.45 cpm
 Bkg (0-156 keV) = 21.32 cpm
 C14 E²/B (1-156 keV) = 521.19
 H3 E²/B (1-18.6 keV) = 303.86

Protocol #:21 Name:Swipe test 08-Sep-2015 11:45
 Region A: LL-UL= 0.0-18.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region B: LL-UL= 0.0-156. Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Region C: LL-UL= 0.0-2000 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
 Time = 1.00 QIP = tSIE/AEC ES Terminator = Count
 Luminescence Correction On

| S# | TIME | CPMA | CPMB | CPMC | FLAG | tSIE | LUM |
|----|-------|------|-------|-------|------|------|-----------------|
| 1 | 10.00 | 2.85 | 16.52 | 28.02 | B | 281. | 6 - BkgD |
| 2 | 1.00 | 1.06 | 0.00 | 0.00 | | 288. | 9 Bench |
| 3 | 1.00 | 5.95 | 4.98 | 4.48 | | 309. | 23 sink |
| 4 | 1.00 | 4.69 | 0.40 | 0.00 | | 320. | 6 sink |
| 5 | 1.00 | 4.15 | 1.48 | 0.00 | | 303. | 0 floor |
| 6 | 1.00 | 1.26 | 6.65 | 1.15 | | 215. | 32 steps |
| 7 | 1.00 | 6.06 | 6.60 | 2.90 | | 330. | 4 handrail |
| 8 | 1.00 | 5.79 | 0.48 | 0.00 | | 321. | 0 bench |
| 9 | 1.00 | 6.06 | 7.40 | 7.90 | | 315. | 4 bench |
| 10 | 1.00 | 0.00 | 0.00 | 0.00 | | 283. | 41 bench |
| 11 | 1.00 | 3.67 | 2.32 | 0.00 | | 290. | 10 deck deck |

Slover
 Sen vessel

} inside vessel

} outside vessel



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

October 02, 2008

Ms. Sherri Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherri Vann:

This letter certifies that Duratek, Inc. (Energy Solutions) has processed the materials from your shipment as indicated below:

Please reference the following table for detailed disposal information.

| Manifest Number | Shipment Date | Container Number | Incineration Date |
|------------------------|----------------------|-------------------------|--------------------------|
| 41508D | 4/15/2008 | 2008-01 | 5/30/2008 |
| 41508D | 4/15/2008 | 2008-02 | 5/30/2008 |

Note: Any ash from the incineration process becomes Duratek's (Energy Solutions) waste.

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

Sincerely,

Rene Guy
Administrative Manager

Cc: File



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

May 01, 2008

Ms. Sherry Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherry Vann,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that Energy Solutions (formerly Duratek) has received the shipment recently picked up at your facility on **April 15, 2008**. 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 Energy Solutions 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 'Rene Guy', is written over a horizontal line. The signature is fluid and somewhat stylized, with a large initial 'R' and 'G'.

Rene Guy
Administrative Manager

Cc: File GTS-08-09

| | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|---|--|---|---|--|---|--|--|--------------------------|--|-------------------------------|--|---|--|
| NRC FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | BIONOMICS, INC. SHIPPER NAME AND FACILITY Old Dominion University 1070 W. 47th Street Norfolk, VA 23508 | | SHIPPER I.D. NUMBER COLLECTOR _____ PROCESSOR _____ GENERATOR TYPE (density) A | | PAGE 1 OF <u>1</u> PAGE(S) <u>1</u> PAGE(S) <u>0</u> PAGE(S) <u>0</u> PAGE(S) NRC FORM 540 AND 540A NRC 541 AND 541A NRC 542 AND 542A ADDITIONAL INFORMATION | | | MANIFEST NUMBER (Use this number on all construction paper) 41508D | | | | | | | | |
| 1. EMERGENCY TELEPHONE NUMBER (include Area Code) (865) 220-8520 | | | USER PERMIT NUMBER _____ SHIPMENT NUMBER _____ CONTACT Sherri Vaun | | TELEPHONE NUMBER (including Area Code) (757) 683-5834 | | CONSIGNEE - Name and Facility Address Energy Solutions 1580 Bear Creek Road Oak Ridge, TN 37831 | | | CONTACT Fred Schultz TELEPHONE NUMBER (including Area Code) (865) 481-0222 | | | | | | | | |
| ORGANIZATION BIONOMICS, INC. | | | 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 2 | | 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 | | | | | | | | |
| 5. CARRIER - Name and Address Bionomics, Inc. 1550 Bear Creek Road Oak Ridge, TN 37831 | | | EPA I.D. NUMBER TND982116493 | | SHIPPING DATE 4/15/2008 | | | SIGNATURE - Authorized consignee acknowledging waste receipt <i>Darvella Anderson</i> | | | DATE 4/29/08 | | | | | | | |
| 6. CARRIER CONTACT John McConnick | | | TELEPHONE NUMBER (including Area Code) (865) 220-8501 | | DATE 4/15/2008 | | | 19. CERTIFICATION This is to certify that the herein-referenced 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 are in proper condition for transportation and disposal as described in accordance with the requirements of 40 CFR Parts 26 and 61, or equivalent state regulations. | | | AUTHORIZED SIGNATURE <i>Sherri Vaun</i> TITLE RSO | | | | | | | |
| 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 | | 16a. TOTAL PACKAGE ACTIVITY IN MBq | | 17. LSA/SCO CLASS | | 18a. TOTAL VOLUME in l | | 18. IDENTIFICATION NUMBER OF PACKAGE | |
| Radioactive Material, low specific activity (LSA II), 7, UN3321 | | | N/A | | N/A | | Solid / Oxides | | H 3, C 14 | | 0.074 | | LSA II | | 0.11 | | 2008-01 | |
| Radioactive Material, low specific activity (LSA II), 7, UN3321 | | | N/A | | N/A | | Solid / Oxides | | Mn 54, Cd 109, Co 57, Ni 22, Co 60, Po 210, Tl 204, Sr 90 Ba 137, Cl 36, Ba 133, Cs 137, Pb 210, C 14 | | 1.541827 | | LSA II | | 0.11 | | 2008-02 2008-02 | |
| BIONOMICS, INC. | | | | | | | | | | | | | | | | | | |



25-Apr-08

OLD DOMINION UNIVERSITY
SHERI VANN
ENVIRONMENTAL SAFETY
1070 W 47TH STREET
NORFOLK VA 23508

REF: MANIFEST NUMBER: 28938
SHIPMENT NUMBER: BIO-340
SHIPMENT DATE: 04/22/2008

ON THE ABOVE DATE, YOUR WASTE MATERIAL WAS RECEIVED AT OUR FACILITY.

THIS MATERIAL WILL BE DISPOSED OF IN FULL IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

THIS ENTIRE PROCESS IS GENERALLY COMPLETED WITHIN A 30-DAY PERIOD FROM THE DATE OF THE SHIPMENT.

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number VAH 54144134 05 | 2. Page 1 of 1 | 3. Emergency Response Phone (865) 720-3520 | 4. Manifest Tracking Number 000328938 JJK | | | |
|--|--|---|--|---|--|----------------------------|-----|-----|
| 5. Generator's Name and Mailing Address OLD LORRAINE UNION 17700 WATKINS NORFOLK VA 23513 | | | Generator's Site Address (if different than mailing address) | | | | | |
| Generator's Phone: (757) 633-5834 | | | | | | | | |
| 6. Transporter 1 Company Name BIO-DYNAMICS INC | | | | U.S. EPA ID Number TN098211041 | | | | |
| 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | | |
| 8. Designated Facility Name and Site Address PERMANENT FIX 1940 N.W. 67TH PL GAINESVILLE FL 32653 | | | | U.S. EPA ID Number FL0980711071 | | | | |
| Facility's Phone: (352) 373-6066 | | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
| | | No. | Type | | | | | |
| | 1. HAZARDOUS FLAMMABLE LIQUID, N.O.S. (TANNING SOLUTION) | 001 | DR | 003 | G | D01 | R02 | F03 |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |
| 14. Special Handling Instructions and Additional Information 961, NRC - EXEMPT LSU. ERG #128 PROFILE # 00361 | | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | | |
| Generator's/Offeror's Printed/Typed Name SHERI VANN | | | | Signature <i>Sheri Vann</i> | | Month Day Year 4/15/08 | | |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ | | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | | |
| Transporter 1 Printed/Typed Name SKYAN KILL | | | | Signature <i>Skyan Kill</i> | | Month Day Year 4/15/08 | | |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month Day Year | | |
| 18. Discrepancy | | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | | |
| Manifest Reference Number: _____ | | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | | | U.S. EPA ID Number | | |
| Facility's Phone: _____ | | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | Month Day Year | | |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | | |
| 1. _____ | | | 2. _____ | | | 3. _____ | | |
| 4. _____ | | | | | | | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | | |
| Printed/Typed Name Steve Williams | | | | Signature <i>Steve Williams</i> | | Month Day Year 04/17/08 | | |

UNIFORM LOW-LEVEL RADIOACTIVE MANIFEST WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

BIONOMICS UNIT

| | | | | | | |
|--|----------------|------------|--------------------------------|-------|--------|--------|
| 1 NUMBER OF PACKAGES/DISPOSAL CONTAINERS | NET VOLUME | NET WEIGHT | 2 MANIFEST TOTALS | | | |
| | m ³ | kg | SPECIAL NUCLEAR MATERIAL grams | | | |
| 2 | 0.22 | 19.50 | U-233 | U-235 | Pu | TOTAL |
| | ALL NUCLIDES | | TRITIUM | Te 99 | Te 129 | SOURCE |
| MBq | 1.61582700 | 0.03700 | 0.0370370 | 0 | 0 | 0 |

| | |
|----------------------|-------------------------|
| 3 MANIFEST NUMBER | 415080 |
| 4 PAGE | 1 OF 1 PAGE |
| 5 SHIPPER NAME | Old Dominion University |
| 6 SHIPMENT ID NUMBER | |

DISPOSAL CONTAINER DESCRIPTION

WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

| 5 CONTAINER IDENTIFICATION NUMBER / GENERATOR ID NUMBER | 6 CONTAINER DESCRIPTION PROCESS TYPE (See Note 1A) | 7 VOLUME m ³ | 8 WASTE AND CONTAINER WEIGHT kg | 9 SURFACE RADIATION LEVEL mSv/hr | 10 SURFACE CONTAMINATION MBq/100 cm ² | | 11 PHYSICAL DESCRIPTION | | | 14 CHEMICAL DESCRIPTION | | 15 INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | | | 16 WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C |
|---|--|-------------------------|---------------------------------|----------------------------------|--|--|---|------------------------------------|--|-------------------------|----------|---|-------------------------------|----------|---|
| | | | | | 11 WASTE DESCRIPTOR (See Note 2) | 12 APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ | 13 SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3) | 14 CHEMICAL FORM / CHELATING AGENT | 15 WEIGHT % CHELATING AGENT IF > 0.1 % | RADIONUCLIDES | MBq | PACKAGE TOTAL (MBq) | | | |
| 2008-01 | 19Other Fiber Box 2A Incineration | 0.11 | 9.52 21.00 | <0.001 | <3.3e-7 | <1.6e-5 | 50 Saw for incineration | 0.11 | 100 None Required | Oxides | NP | C 14 H 3 | 0.037 0.037 | 0.074 | AU |
| 2008-02 | 19Other Fiber Box 2A Incineration | 0.11 | 9.98 22.00 | <0.001 | <3.3e-7 | <1.6e-5 | 50 Saw for incineration | 0.11 | 100 None Required | Oxides | NP | Mn 54 Cd 109 Co 57 | 0.42476 0.42032 0.39849 | 1.541827 | AU |
| | | | | | | | | | | | | Na 22 Co 60 Po 210 | 0.04181 0.12358 0.00037 | | |
| | | | | | | | | | | | | Ti 204 Sr 90 Ba 137 | 0.111 0.00074 0.0037 | | |
| | | | | | | | | | | | | Cl 36 Ba 133 Cs 137 | 0.0037 0.00888 0.00074 | | |
| | | | | | | | | | | | | Pb 210 C 14 | 0.0037 0.000037 | | |
| Package Total | | 0.220 | 19.50 43.00 | kg | PAGE TOTALS | | | 0.22 | PAGE TOTALS | | 1.615827 | | | | |

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

- 1: Wooden Box or Crate
- 2: Metal Box
- 3: Plastic Drum or Can
- 4: Metal Drum or Can
- 5: Metal Tank or Liner
- 6: Concrete Tank or Liner
- 7: Polyethylene Tank or Liner
- 8: Fiberglass Tank or Liner
- 9: Demeritizer
- 10: Gas Cylinder
- 11: Bulk, unpackaged waste
- 12: Unpackaged 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
- 13: High Integrity Container
- 14: Other (Describe in item 9 or additional page)
- 15A: Fiber Box
- 15B: Overpack

NOTE 1A: Process Type Codes Are Specific To Bionomics and Only Apply To How The Waste Will Be Processed / Handled By The Designator. Use up to two process codes and one disposal site.

- 1A: Supercompact
- 2: Incineration
- 3: Transfer
- 4: Solidify
- 5A: Encapsulate
- 5B: Metal Mat
- 7A: Son
- 8A
- 9A
- 10A: Other (Specify in the block or on attached page)
- 11A: Bismell
- 12A: Rehand
- 13A: Evaporate
- 14A: Return
- 20A: Other (Specify in the block or on attached page)

Note 2: Waste Descriptors Codes: Choose up to three predominate by volume.

- 20: Charcoal
- 21: Incinerator Ash
- 22: Soil
- 23: Gas
- 24: Oil
- 25: Aqueous Liquid
- 26: Filter Media
- 27: Mechanical Part
- 28: EPA or other material
- 29: Demolition Rubble
- 30: Carbon Ion-exchange Media
- 31: Anion Ion-exchange Media
- 32: Mixed Bed Ion-exchange Media
- 33: Contaminated Equipment
- 34: Organic Liquid
- 35: Glassware or Labware
- 36: Sealed source / Device
- 37: Part or Piece
- 38: Evaporator Bottoms / Sludges / Concentrates
- 39: Compactable Trash
- 40: Noncompactable Trash
- 41: Animal Carcasses
- 42: Biological Material (except animal or avian)
- 43: Activated Material
- 44: Other (Describe in item 11 or additional page)

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "S". For all solidification media, the vendor, manufacturer and brand name must also be identified in item 15. Code 100: NONE REQUIRED.

| | | |
|-------------------|---------------|--|
| 50: Specialty | Solid A Sorb | 77: Aquifer |
| 51: Cement | Chemical 30 | 79: Other |
| 52: Fly Ash | Chemical 50 | Describe in item 13 or additional page |
| 53: Sludge | Chemical 3030 | |
| 54: Safe T. L. L. | Cooper HP200 | additional page |
| 55: Safety Dr. | Petroset | |
| 56: Epoxy | Petroset 3 | COULDFICATION |
| 57: Epoxy | Aquaset | 30: Cement |

NRC FORM 540 BIONOMICS, INC. 5. SHIPPER NAME AND FACILITY
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER
 Old Dominion University
 1070 W. 47th Street
 Norfolk, VA 23508

SHIPPER I.D. NUMBER
 COLLECTOR
 PROCESSOR

7 NRC FORM 540 AND 540A PAGE 1 OF 1
 NRC 541 AND 541A PAGE(S) 1
 NRC 542 AND 542A PAGE(S) 0
 ADDITIONAL INFORMATION PAGE(S) 0

8 MANIFEST NUMBER (Use this number on all continuation pages)
41508D

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
(865) 220-8520

ORGANIZATION
BIONOMICS, INC.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
 YES
 NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST
 =====> **2**

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
 YES
 NO
 If "Yes" provide Manifest Number =====>

EPA MANIFEST NUMBER
N/A

5. SHIPMENT NUMBER
A

6. CARRIER - Name and Address
**Bionomics, Inc.
 1550 Bear Creek Road
 Oak Ridge, TN 37831**

7. GENERATOR TYPE (Specify)
A

8. CONSIGNEE - Name and Facility Address
**Energy Solutions
 1580 Bear Creek Road
 Oak Ridge, TN 37831**

CONTACT
Sherri Vaun

TELEPHONE NUMBER (Including Area Code)
(757) 683-5834

SIGNATURE - Authorized consignee acknowledging waste receipt
[Signature]

DATE
4/15/2008

CONTACT TELEPHONE NUMBER (Including Area Code)
(865) 481-0222

DATE
4/15/08

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 are in proper condition for transportation and disposal as described in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE
[Signature]

TITLE
RSO

DATE
4/15/08

| 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 | 16a TOTAL PACKAGE ACTIVITY IN MBq | 17 LSA/SCO CLASS | 18a TOTAL VOLUME m ³ | 19 IDENTIFICATION NUMBER OF PACKAGE |
|---|----------------------------|--------------------|-------------------------------|--|-----------------------------------|------------------|---------------------------------|-------------------------------------|
| Radioactive Material, low specific activity (LSA II), 7, UN3321 | N/A | N/A | Solid / Oxides | H 3, C 14 | 0.074 | LSA II | 0.11 | 2008-01 |
| Radioactive Material, low specific activity (LSA II), 7, UN3321 | N/A | N/A | Solid / Oxides | Mn 54, Cd 109, Co 57, Na 22, Co 60, Po 210, Tl 204, Sr 90 Ba 137, Cl 36, Ba 133, Cs 137, Pb 210, C 14 | 1.541827 | LSA II | 0.11 | 2-8-02 |
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BIONOMICS, INC.

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

DSSI • M&EC • Perma-Fix of Florida

Generator Name:
 Generator Address:
 State Manifest No:

Generator USEPA ID No:
 City/ST/Zip:
 Manifest Doc No:

Instructions

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment.
- In Column 2, choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW)
- In Column 3, enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste can be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris).
- In Column 4 circle the letter of the appropriate LDR management categories on the back of this form
- In Column 5, enter the Reference Number(s) from the LDR-UHC Constituent Table for any constituents subject to treatment in your waste stream

Go to Table 1 Constituent Table

| Manifest Line Item # | 1 USEPA HAZARDOUS WASTE CODES | 2. NWW or WW | | 3. SUBCATEGORY | 4 HOW MUST THE WASTE BE MANAGED (Check one) | | | | | | | | | | | 5 REFERENCE NUMBER(S) of Hazardous Constituents contained in the waste | | | |
|----------------------|-------------------------------|--------------|-----|----------------|---|---|---|---|---|---|---|---|-----------|--|--|--|--|---------------|--|
| | | | | | A | B | C | D | E | F | G | H | Soil Only | | | | | | |
| 11 A | D001, F003, F005 | X | NWW | High TOC | A | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | Does Not | | complies with | |
| 11 B | | | NWW | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | Does Not | | complies with | |
| 11 C | | | NWW | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | Does Not | | complies with | |
| 11 D | | | NWW | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | Does Not | | complies with | |

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information

Title Date

- A. THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD. This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land d
- B. THIS HAZARDOUS DEBRIS MAY BE TREATED USING THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this waste m
- C. THIS RESTRICTED WASTE HAS BEEN TREATED TO THE APPLICABLE TREATMENT STANDARD(S). I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this ce
- D. THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making fals
- E. THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268 I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a co
- F. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized
- G. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to re
- H. THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL. (Please include the date the waste is subject to the prohibitions in Column 5) This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for I
- S. THIS CONTAMINATED SOIL (DOES / DOES NOT) CONTAIN LISTED HAZARDOUS WASTE AND (DOES / DOES NOT) EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND (IS SUBJECT TO / COMPLIES WITH) THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(c) OR THE UNIVERSAL TREATMENT.



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

September 08, 2008

Ms. Sherri Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherri Vann:

This is to certify that the radioactive material picked up at your facility on May 28, 2008 on manifest #52808, has been processed at Energy Solutions (formerly Duratek) in Oak Ridge, TN and disposed of at Energy Solutions (formerly Envirocare) in Clive, Utah.

Please reference the following table for detailed disposal information.

| Manifest Number | Container Number | Disposal Volume (ft³) | Disposal Shipment Number | Disposal Date |
|------------------------|-------------------------|---|---------------------------------|----------------------|
| 52808 | UL-1 | 2.40000 | T083152 | 08/07/2008 |
| 52808 | ODU-1 | 2.40000 | T083152 | 08/07/2008 |

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

Sincerely,

Rene Guy
Administrative Manager

Cc: File



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

June 12, 2008

Ms. Sherri Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherri Vann,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that Energy Solutions (formerly Duratek) has received the shipment recently picked up at your facility on **May 28, 2008**. 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 Energy Solutions 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 "Rene Guy", with a long horizontal flourish extending to the right.

Rene Guy
Administrative Manager

Cc: File GTS-08-14

| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | SHIPPER I.D. NUMBER | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 | | 8. MANIFEST NUMBER | |
|---|--|--|--|--|--|---|--|--|--|
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | SHIPPER - Name and Facility OLD DOMINION UNIVERSITY 4807 Hampton Blvd. Norfolk, VA. 23529 | | NRC FORM 541 AND 541A | | PAGE(S) | |
| | | | | USER PERMIT NUMBER | | SHIPMENT NUMBER | | NRC FORM 542 AND 542A | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-8520 | | | | CONTACT Sherril Vann | | PROCESSOR | | PAGE(S) | |
| ORGANIZATION Bionomics Inc. | | | | 8. CONSIGNEE - Name and Facility Address Energy Solutions 1560 Bear Creek Rd Oak Ridge, TN. 37831 | | ADDITIONAL INFORMATION | | PAGE(S) | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 3 | | EPA I.D. NUMBER TN098216493 | | SIGNATURE - Authorized consignee acknowledging waste receipt Danville S. Sherril | | DATE 5/28/08 | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | EPA MANIFEST NUMBER | | CONTACT John McCormick | | SIGNATURE - Authorized generator acknowledging waste receipt John McCormick | | DATE 5/28-08 | |
| 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 IN SI UNITS | | 17. LSA/SCO CLASS | | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | | 19. IDENTIFICATION NUMBER OF PACKAGE | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | |
| Radioactive Material, low specific activity (LSA II), 7, UN 3321 | | NA | | NA | | Solid/Oxides | | Cl36; Co60; C14; H3 | |
| Radioactive Material, low specific activity (LSA II), 7, UN 3321 | | NA | | NA | | Solid/Oxides | | Ra226; Pb210; Th223; Th232; U235; U238 | |
| Radioactive Material, low specific activity (LSA II), 7, UN 3321 | | NA | | NA | | Solid/Oxides | | U238 | |
| 0.01051 MBq | | LSA II | | 0.13 m ³ | | BOX-1 ✓ | | | |
| 0.0041635 MBq | | LSA II | | 0.02 m ³ | | ODU-1 ✓ | | | |
| 0.000481 MBq | | LSA II | | 0.02 m ³ | | UL-1 ✓ | | | |

Invoice

Invoice Number:
08341

Invoice Date:
Jun 9, 2008

Page
1

Bionomics, Inc.
P O Box 817
Kingston, TN 37763
USA

Voice: 865-220-8501
Fax: 865-220-8532

Tax Exemption ID: 85-0366891

Sold To:
Old Dominion University
Finance Office
Rollins Hall, Room 206
Norfolk, VA 23529

Ship to:
Old Dominion University
Sherri Vann
4807 Hampton Blvd
Norfolk, VA 23529

| | | | |
|---------------------|------------------------|----------------------|-----------------|
| Customer ID | Customer PO | Payment Terms | |
| ODU | DO1059635 | Net 30 Days | |
| Sales Rep ID | Shipping Method | Ship Date | Due Date |
| Ray Alexander | Bionomics | 5/28/08 | 7/9/08 |

| Quantity | Item | Description | Unit Price | Extension |
|----------|------|---------------------------|------------|-----------|
| 10.00 | Lbs | Boxes for Incineration | 8.00 | 80.00 |
| 11.00 | Lbs | Compaction in Drums | 9.00 | 99.00 |
| 1.00 | | Uranyl Compound | 800.00 | 800.00 |
| 1.00 | | Nitric Acid | 5,800.00 | 5,800.00 |
| 1.00 | | HCL | 3,800.00 | 3,800.00 |
| 1.00 | | Flammable | 2,250.00 | 2,250.00 |
| 1.00 | | Supplies/DAW Boxes | 5.00 | 5.00 |
| 1.00 | | Supplies/5 Gal Metal Pail | 12.00 | 12.00 |

WE ACCEPT ALL MAJOR CREDIT CARDS

Subtotal 12,846.00
Sales Tax

Total Invoice Amount 12,846.00
Payment Received 0.00

TOTAL 12,846.00

Check No:

Remit To: Bionomics, Inc.
PO Box 817
Kingston, TN 37763
Questions: Call Karen McCormick at
865-220-8501

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

DSSI • M&E.C. • Permits of Florida

Generator Name: OLD DOMINION UNIVERSITY
 Generator Address: 4807 HAMPTON BLVD.
 State Manifest No:

Generator USEPA ID No: VAD041448465
 City/ST/Zip: ~~SPR~~ NORFOLK, VA. 23529
 Manifest Doc No: 000328982-JTK

Instructions

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment
- In Column 2, choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW)
- In Column 3, enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste can be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris)
- In Column 4, circle the letter of the appropriate LDR management categories on the back of this form.
- In Column 5, enter the Reference Number(s) from the LDR-UHC Constituent Table for any constituents subject to treatment in your waste stream

Go to LDR-UHC Constituent Table

| Manifest Line Item # | 1 USEPA HAZARDOUS WASTE CODES | 2 NWW or WW | 3 SUBCATEGORY | 4 HOW MUST THE WASTE BE MANAGED (Check one) | | | | | | | | | | | | | 5. REFERENCE NUMBER(S) of Hazardous Constituents contained in the waste. | | |
|----------------------|-------------------------------|--|---------------|---|---|---|---|---|---|---|---|-----------|--|--|--|--|--|--|--|
| | | | | A | B | C | D | E | F | G | H | Soil Only | | | | | | | |
| 9b.1 | D002 | <input checked="" type="checkbox"/> NWW <input type="checkbox"/> WW | | <input checked="" type="checkbox"/> | | | | | | | | | | | | | Does <input type="checkbox"/> | Is subject to <input type="checkbox"/> | |
| 9b.2 | D001 F003 | <input checked="" type="checkbox"/> NWW <input type="checkbox"/> WW | | <input checked="" type="checkbox"/> | | | | | | | | | | | | | Does <input type="checkbox"/> | Is subject to <input type="checkbox"/> | |
| 9b.3 | D002 | <input checked="" type="checkbox"/> NWW <input type="checkbox"/> WW | | <input checked="" type="checkbox"/> | | | | | | | | | | | | | Does <input type="checkbox"/> | Is subject to <input type="checkbox"/> | |
| 9b.4 | | <input type="checkbox"/> NWW <input type="checkbox"/> WW | | | | | | | | | | | | | | | Does <input type="checkbox"/> | Is subject to <input type="checkbox"/> | |

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Name: [Signature] Title: RSO Date: 5/28/08

- THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD.** This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land disposal.
- THIS HAZARDOUS DEBRIS MAY BE TREATED USING THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45.** I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this waste meets the definition of debris and can be treated using the alternate methods specified in 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO THE APPLICABLE TREATMENT STANDARD(S).** I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.
- THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45.** I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making false certification, including the possibility of a fine and imprisonment.
- THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268.** I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC.** I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS.** I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting false certification, including the possibility of fine and imprisonment.
- THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL.** (Please include the date the waste is subject to the prohibitions in Column 5) This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under 40 CFR Part 268.5, or an exemption under 40 CFR 268.6).
- THIS CONTAMINATED SOIL (DOES / DOES NOT) CONTAIN LISTED HAZARDOUS WASTE AND (DOES / DOES NOT) EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND (IS SUBJECT TO / COMPLIES WITH) THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(C) OR THE UNIVERSAL TREATMENT STANDARDS.** I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number VAD041448465 | 2. Page 1 of 1 | 3. Emergency Response Phone (815) 220-8520 | 4. Manifest Tracking Number 000328982 JJK | | |
|---|--|---|-----------------------|--|---|-----------------------------------|------|
| 5. Generator's Name and Mailing Address OLD DOMINION UNIVERSITY 4807 HAMPSHIRE BLVD. NORFOLK, VA. 23529 | | | | Generator's Site Address (if different than mailing address) | | | |
| Generator's Phone: (757) 683-3834 | | | | | | | |
| 6. Transporter 1 Company Name BIODYNAMICS INC. | | | | U.S. EPA ID Number FL09822116493 | | | |
| 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | |
| 8. Designated Facility Name and Site Address PERMA-FIX 1940 N.W. 67th Place GAINESVILLE, FL. 32653 | | | | U.S. EPA ID Number FL0980711071 | | | |
| Facility's Phone: (352) 573-6066 | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | |
| | | No. | Type | | | | |
| X | 1. Waste RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA II), 7, (8), UN3321 | 001 | DF | 03.6 | LTR | 002 | |
| X | 2. Waste RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA II), 7, (8), UN3321 | 001 | DF | 03.0 | LTR | 001 | F003 |
| X | 3. Waste RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA II), 7, (8), UN3321 | 001 | DF | 03.3 | LTR | 002 | |
| | 4. | | | | | | |
| 14. Special Handling Instructions and Additional Information ORNL 004-2 9b.1 Lab Pack - Mixed Waste (Hydrochloric Acid) 16 Glass Bottles 10ml to 300ml 3 Plastic Bottles 10ml to 100ml 9b.2 Lab Pack Mixed Waste 2-500ml Glass Bottles 1-4LTR Glass Bottle ORNL 004-3 (See previous waste shipment Manifest) 9b.3 Lab Pack Mixed Waste ORNL 004-4 11-Glass Bottles 10-500ml; 32-Plastic Bottles 10-250ml | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | |
| Generator's/Offeror's Printed/Typed Name SHERI A. VANN | | | | Signature <i>Sheri A. Vann</i> | | Month Day Year 12 15 08 | |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | |
| Transporter 1 Printed/Typed Name KRYMOND D. Alexander | | | | Signature <i>Krymond D. Alexander</i> | | Month Day Year 05 28 08 | |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month Day Year | |
| 18. Discrepancy | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | Manifest Reference Number: _____ U.S. EPA ID Number _____ | | | |
| Facility's Phone: _____ | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | Month Day Year | |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | |
| 1. _____ | | 2. _____ | | 3. _____ | | 4. _____ | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | |
| Printed/Typed Name Steve Williams | | | | Signature <i>Steve Williams</i> | | Month Day Year 12 15 08 | |



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

July 27, 2009

Ms. Sheri Vann
Old Dominion University
Environmental Health & Safety
5255 Hampton Blvd.
Spong Hall, Suite 203
Norfolk, VA 23529

Dear Ms. Sheri Vann:

This letter certifies that EnergySolutions (formerly Duratek) has processed the materials from your shipment as indicated below:

Please reference the following table for detailed disposal information.

| MANIFEST NUMBER | SHIPMENT DATE | CONTAINER NUMBER | INCINERATION COMPLETION DATE |
|-----------------|---------------|------------------|------------------------------|
| 32509 | 3/25/2009 | 2009-1 | 6/24/2009 |

Note: Any ash from the incineration process becomes Duratek's (EnergySolutions) waste.

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

Sincerely,

Rene Guy
Administrative Manager

Cc: File GTS-09-09



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

July 28, 2009

Ms. Sheri Vann
Old Dominion University
Environmental Health & Safety
5255 Hampton Blvd.
Spong Hall, Suite 203
Norfolk, VA 23529

Dear Ms. Sheri Vann:

This letter certifies that EnergySolutions (formerly Duratek) has recycled the lead from your shipment as indicated below:

Please reference the following table for detailed disposal information.

| MANIFEST NUMBER | SHIPMENT DATE | CONTAINER NUMBER | RECYCLE DATE |
|--------------------|------------------|---------------------|-----------------|
| 32509 | 3/25/2009 | ODU-2 | 6/24/2009 |

Note: Any ash from the incineration process becomes Duratek's (EnergySolutions) waste.

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

Sincerely,

Rene Guy
Administrative Manager

Cc: File GTS-09-09



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

April 8, 2009

Ms. Sheri Vann
Old Dominion University
Env. Health & Safety Office
5255 Hampton Blvd
Spong Hall, Suite 203
Norfolk, VA 23529

Dear Ms. Sheri Vann,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that Energy Solutions (formerly Duratek) has received the shipment recently picked up at your facility on **March 25, 2009**. 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 Energy Solutions 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 "R. Guy", written over a circular stamp or mark.

Rene Guy
Administrative Manager

Cc: File GTS-09-09

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER

SHIPPER - NAME AND FACILITY
Old Dominion University
5255 Hampton Blvd
Norfolk, Va. 23529

SHIPPER I.D. NUMBER

COLLECTOR

PROCESSOR

7 NRC FORM 540 AND 540A PAGE 1 OF

NRC 541 AND 541A

NRC 542 AND 542A

ADDITIONAL INFORMATION

PAGE(S)

PAGE(S)

PAGE(S)

PAGE(S)

8. MANIFEST NUMBER
(Use this number on all continuation pages)

32509

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)

(865) 220-8520

ORGANIZATION

BIONOMICS, INC.

USER PERMIT NUMBER

SHIPMENT NUMBER

GENERATOR TYPE
(Specify)

X

A

9. CONSIGNEE - Name and Facility Address

Energy Solutions
1580 Bear Creek Road
Oak Ridge, TN 37831

CONTACT

DONNIE BRACKETT

865-481-0222

CONTACT

Sheri Vann

TELEPHONE NUMBER
(Including Area Code)

(757)683-5834

SIGNATURE - Authorized consignee acknowledging waste receipt

Donnie Brackett
7091512

DATE

4/2/09

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?

YES
 NO

3. TOTAL NUMBER OF
PACKAGES IDENTIFIED
ON THIS MANIFEST

3

EPA I.D. NUMBER

TND982116493

SHIPPING DATE

3-25-09

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 are in proper condition for transportation and disposal as described in accordance with the requirements of 19 CFR Parts 20 and 51, or equivalent state regulations.

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?

YES
 NO

EPA MANIFEST NUMBER

CONTACT

John McCormick

TELEPHONE NUMBER
(Including Area Code)

(865)220-8501

SIGNATURE - Authorized consignee acknowledging waste receipt

John McCormick

TITLE

RSO

DATE

3/25/09

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 IN SI UNITS

17. LSASCO CLASS

18. TOTAL WEIGHT OR VOLUME (Use appropriate units)

19. IDENTIFICATION NUMBER OF PACKAGE

Radioactive Material, excepted package- limited quantity of material, 7, UN2910

N/A

N/A

Solid / Oxides

H3;C14

C136

309.394MBq

N/A

0.13m3

2009-1

Radioactive Material, excepted package- limited quantity of material, 7, UN2910

N/A

N/A

Solid / Oxides

C136

0.37MBq

N/A

0.13m3

ODU-2

Radioactive Material, excepted package- limited quantity of material, 7, UN2910

N/A

N/A

Solid / Oxides

U238; Pb212

Ra226; Th232

Th232

0.185MBq

N/A

0.13m3

ODU-3

FOR CONSIGNEE USE ONLY

BIONOMICS, INC.

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number VAD049 4 48 4 65 | | 2. Page 1 of | | 3. Emergency Response Phone 841 330 510 | | 4. Manifest Tracking Number 003345698 JJK | | | | | | | | | | | | | | | | | |
|--|--|---|------|--------------------|-------------------|--|--|--|--|----|--|--|--|--|----|--|--|---------------------|--|-------|--|------|--|------|--|
| | | 5. Generator's Name and Mailing Address The University of North Carolina 2400 University Blvd. Spring Hall Raleigh, NC 27697 Generator's Site Address (if different than mailing address) | | | | | | | | | | | | | | | | | | | | | | | |
| Generator's Phone: 703 633 2222 | | 6. Transporter 1 Company Name Bioscience Inc | | | | U.S. EPA ID Number TND083 114 4 91 | | | | | | | | | | | | | | | | | | | |
| | | 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | | | | | | | | | | | | | | | | | |
| | | 8. Designated Facility Name and Site Address Ferna Pl. of Florida 1240 NW 87th Place Miami, FL 33150 Facility's Phone: 305 748 8152 | | | | U.S. EPA ID Number PEP080 7110 74 | | | | | | | | | | | | | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | | | | | | | | | | | | | | | | | | |
| | | No. | Type | | | | | | | | | | | | | | | | | | | | | | |
| 1. | Very Toxic Liquid, Corrosive, UN1815 (Hazard Class 3) | 001 | DM | 000 | 3 | | | | | | | | | | | | | | | | | | | | |
| 2. | Very Toxic Liquid, Corrosive, UN1815 (Hazard Class 3) | 001 | DM | 000 | 6 | | | | | | | | | | | | | | | | | | | | |
| 3. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. | | | | | | | | | | | | | | | | | | | | | | | | | |
| 14. Special Handling Instructions and Additional Information The above described materials are to be shipped in 200 liter drums, UN1815-5 PLS ADVISE THE TRANSPORTER OF THE HAZARD CLASS AND PGM NO. UN1815-5 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | | | | | | | | | | | | | | | | | | | |
| Generator's/Offoror's Printed/Typed Name The University of North Carolina | | | | | | | | | | | | | | | | | | Signature | | Month | | Day | | Year | |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. | | | | | | | | | | | | | | | | | | Port of entry/exit: | | | | | | | |
| Transporter signature (for exports only): | | | | | | | | | | | | | | | | | | Date leaving U.S.: | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | | | | | | | | | | | | | | | | | | | |
| Transporter 1 Printed/Typed Name Bernardo Alvarado | | | | | | | | | | | | | | | | | | Signature | | Month | | Day | | Year | |
| Transporter 2 Printed/Typed Name | | | | | | | | | | | | | | | | | | Signature | | Month | | Day | | Year | |
| 18. Discrepancy | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | | | | | | | | | | | | | | | | | | | |
| Manifest Reference Number: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | | | | | | | | | | | | | | | U.S. EPA ID Number | | | | | | | |
| Facility's Phone: | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | | | | | | | | | | | | | Month | | Day | | Year | | | |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. | | | | | 2. | | | | | 3. | | | | | 4. | | | | | | | | | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | | | | | | | | | | | | | | | | | | | |
| Printed/Typed Name | | | | | | | | | | | | | | | | | | Signature | | Month | | Day | | Year | |

U.S. EPA Form 8700-22

Read all instructions before completing this form.

1. This form has been designed for use on a 12-pitch (elite) typewriter which is also compatible with standard computer printers; a firm point pen may also be used—press down hard.
2. Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, and disposal facilities to complete this form (EPA Form 8700-22) and, if necessary, the continuation sheet (EPA Form 8700-22A) for both inter- and intrastate transportation of hazardous waste.

Public reporting burden for this collection of information is estimated to average: 30 minutes for generators, 10 minutes for transporters, and 25 minutes for owners or operators of treatment, storage, and disposal facilities. This includes time for reviewing instructions, gathering data, completing, reviewing and transmitting the form. Any correspondence regarding the PRA burden statement for the manifest must be sent to the Director of the Collection Strategies Division in EPA's Office of Information Collection at the following address: U.S. Environmental Protection Agency (2822T), 1200 Pennsylvania Ave., NW., Washington, DC 20460. Do not send the completed form to this address.

I. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve digit identification number, or the State generator identification number if the generator site does not have an EPA identification number.

Item 2. Page 1 of ____

Enter the total number of pages used to complete this Manifest (*i.e.*, the first page (EPA Form 8700-22) plus the number of Continuation Sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (*e.g.*, consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

Item 5. Generator's Mailing Address, Phone Number and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 Company Name, and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a Continuation Sheet(s) (EPA Form 8700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this Item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the Continuation Sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those Items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

TABLE I.--TYPES OF CONTAINERS

| | |
|---|-----------------------------------|
| BA = Burlap, cloth, paper, or plastic bags. | DT = Dump truck. |
| CF = Fiber or plastic boxes, cartons, cases. | DW = Wooden drums, barrels, kegs. |
| CM = Metal boxes, cartons, cases (including roll-offs). | HG = Hopper or gondola cars. |
| CW = Wooden boxes, cartons, cases. | TC = Tank cars. |
| CY = Cylinders. | TP = Portable tanks. |
| DF = Fiberboard or plastic drums, barrels, kegs. | TT = Cargo tanks (tank trucks). |
| DM = Metal drums, barrels, kegs. | |

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and *do not* enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

TABLE II.--UNITS OF MEASURE

| | |
|-----------------------------------|-------------------------|
| G = Gallons (liquids only). | N = Cubic Meters. |
| K = Kilograms. | P = Pounds. |
| L = Liters (liquids only). | T = Tons (2000 Pounds). |
| M = Metric Tons (1000 kilograms). | Y = Cubic Yards. |

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported in connection with very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of PCB waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Officer's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed.

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

DSSI • M&EC • Perma-Fix of Florida

Generator Name: Old Dominion University Generator USEPA ID No: VAD041448465
 Generator Address: 5255 HAMPTON BLVD City ST Zip: Norfolk VA 23508
 State Manifest No: N/A Manifest Exp. No: 0033457ETJF

Instructions

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment.
- In Column 2 choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW).
- In Column 3 enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste can be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris).
- In Column 4, place an "X" in the block that corresponds to the appropriate LDR management category described at the bottom of this form.
- In Column 5, enter the Reference Number(s) from the LDR-UHC Constituent Table for any constituents subject to treatment in your waste stream.

Go to: 268.49(c) or 268.45

| Manifest Line Item # | 1. USEPA HAZARDOUS WASTE CODES | 2. NWW or WW | 3. SUBCATEGORY | 4. HOW MUST THE WASTE BE MANAGED? (Check one) | | | | | | | | | | | | | 5. REFERENCE NUMBER(s) of Hazardous Constituents contained in the waste |
|----------------------|--------------------------------|--------------|----------------|---|---|---|---|---|---|---|---|-----------|--|--|------------------|--------------------------------|---|
| | | | | A | B | C | D | E | F | G | H | Soil Only | | | | | |
| 11 A | D001 P003 P005 | X NWW WW | High TOC | X | | | | | | | | | | | Does Does Not | is subject to complies with | |
| 11 B | D001 D002 | X NWW WW | High TOC | X | | | | | | | | | | | Does Does Not | is subject to complies with | |
| 11 C | | NWW WW | | | | | | | | | | | | | Does Does Not | is subject to complies with | |
| 11 D | | NWW WW | | | | | | | | | | | | | Does Does Not | is subject to complies with | |

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Name: *[Signature]* Title: *RSC* Date: *11/06/09*

- A. THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD. This waste must be treated to the applicable performance based treatment standard set forth in 40 CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land disposal.
- B. THIS HAZARDOUS DEBRIS MAY BE TREATED USING THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this waste meets the definition of debris and can be treated using the alternate methods specified in 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- C. THIS RESTRICTED WASTE HAS BEEN TREATED TO THE APPLICABLE TREATMENT STANDARD(S). I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.
- D. THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making false certification, including the possibility of a fine and imprisonment.
- E. THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standard for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- F. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.
- G. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting false certification, including the possibility of fine and imprisonment.
- H. THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL. (Please include the date the waste is subject to the prohibitions in Column 5). This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under 40 CFR Part 268.5, or an exemption under 40 CFR 268.6).
- S. THIS CONTAMINATED SOIL (DOES / DOES NOT) CONTAIN LISTED HAZARDOUS WASTE AND (DOES / DOES NOT) EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND (IS SUBJECT TO / COMPLIES WITH) THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(c) OR THE UNIVERSAL TREATMENT STANDARDS. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

Bionomics, Inc.
 P O Box 817
 Kingston, TN 37763
 USA

Invoice
 Invoice Number
 09423

Invoice Date
 Nov 20, 2009

Page
 1

Voice: 865-220-8501
 Fax: 865-220-8532

Tax Exemption ID: 85-0366891

*No
 Dec 20th*

Sold To:
 Old Dominion University
 Finance Office
 Rollins Hall, Room 206
 Norfolk, VA 23529

Ship to:
 Sheri Vann/EH&S Office
 5255 Hampton Blvd.
 Spong Hall, Suite 203
 Norfolk, VA 23529

| Customer ID | | Customer PO | | Payment Terms | |
|--------------|------|-----------------------------|------------|---------------|----------|
| ODU | | | | Net 30 Days | |
| Sales Rep ID | | Shipping Method | | Ship Date | Due Date |
| Bryan Kirk | | Bionomics | | 11/6/09 | 12/20/09 |
| Quantity | Item | Description | Unit Price | Extension | |
| 46.00 | Lbs | Boxes for Incineration | 8.00 | 368.00 | |
| 1.00 | | 30 Gal Exempt Scint Vials | 325.00 | 325.00 | |
| 1.00 | | 5 Gal Mixed Waste Flammable | 3,400.00 | 3,400.00 | |
| 1.00 | | Supplies/30 Gal Drums | 28.00 | 28.00 | |

WE ACCEPT ALL MAJOR CREDIT CARDS

| | |
|----------------------|-----------------|
| Subtotal | 4,121.00 |
| Sales Tax | |
| Total Invoice Amount | 4,121.00 |
| Payment Received | 0.00 |
| TOTAL | 4,121.00 |

Check No:

Remit To: Bionomics, Inc.
 PO Box 817
 Kingston, TN 37763
 Questions: Call Karen McCormick at 865-220-8501



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

November 18, 2009

Ms. Sheri Vann
Old Dominion University
Environmental Health & Safety
5255 Hampton Blvd.
Spong Hall, Suite 203
Norfolk, VA 23529

Dear Ms. Sheri Vann,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that EnergySolutions (formerly Duratek) has received the shipment recently picked up at your facility on **November 06, 2009**. 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 EnergySolutions 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,

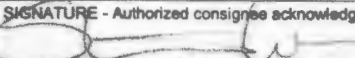
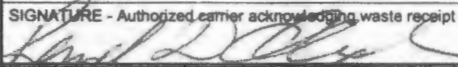
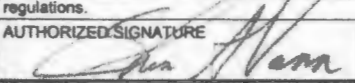
A handwritten signature in black ink, appearing to read 'R. Guy'.

Rene Guy
Administrative Manager

Cc: File GTS-09-28

| | | | | | | | | | |
|---|--|---|----------------------------|--|-------------------------------------|--|--------------------------|--|---|
| NRC FORM 540 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | 5. SHIPPER - NAME AND FACILITY OLD DOMINION UNIV. 5255 HAMPTON BLVD SPRING HALL, SITE 203 NORFOLK VA 23529 USER PERMIT NUMBER _____ SHIPMENT NUMBER _____ | | SHIPPER I.D. NUMBER <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) A TELEPHONE NUMBER (Include Area Code) (571) 683-4495 EPA I.D. NUMBER TAD98211693 SHIPPING DATE 11/6/09 TELEPHONE NUMBER (Include Area Code) (865) 220-8520 DATE 11/6/09 | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A 1 PAGE(S) NRC FORM 542 AND 542A 0 PAGE(S) ADDITIONAL INFORMATION 0 PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 1109609C | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-8520 | | 6. CARRIER - Name and Address CONTACT SHERI VANN BIONOMICS, INC. 1560 BEAR CREEK RD OAK RIDGE TN 37830 | | 8. CONSIGNEE - Name and Facility Address CONTACT FRED SCHULTZ 1560 BEAR CREEK RD OAK RIDGE TN 37830 TELEPHONE NUMBER (Include Area Code) (865) 481-0222 DATE 11/17/09 | | 9. SIGNATURE - Authorized carrier acknowledging waste receipt SIGNATURE <i>[Signature]</i> DATE 11/6/09 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. AUTHORIZED SIGNATURE <i>[Signature]</i> TITLE RSO DATE 11/06/09 | |
| 2. IS THIS AN 'EXCLUSIVE USE' SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 2 | | 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> If "Yes," provide Manifest Number | | EPA MANIFEST NUMBER N/A | | | |
| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE |
| RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II) 7, UN3321 | | N/A | N/A | SOLID/OXIDES P33 | | 32.0 MBq | LSA-II | 0.11m ³ | B2 |
| RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II) 7, UN3321 | | N/A | N/A | SOLID/OXIDES C14 | | 74.0 MBq | LSA-II | 0.11m ³ | B3 |
| FOR CONSIGNEE USE ONLY | | | | | | | | | |

| | | | | | | | | | | |
|--|---|--|--------------|-----------------------------|----------------|---|--|-------------------|-----------------|--------------------|
| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | | 4. Manifest Tracking Number 003345787 JJK | | | | |
| | | 5. Generator's Name and Mailing Address | | | | | Generator's Site Address (if different than mailing address) | | | |
| Generator's Phone: | | | | | | | | | | |
| 6. Transporter 1 Company Name | | | | | | U.S. EPA ID Number | | | | |
| 7. Transporter 2 Company Name | | | | | | U.S. EPA ID Number | | | | |
| 8. Designated Facility Name and Site Address | | | | | | U.S. EPA ID Number | | | | |
| Facility's Phone: | | | | | | | | | | |
| GENERATOR | 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | | | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | |
| | | | | | No. | Type | | | | |
| | 1. | | | | | | | | | |
| | 2. | | | | | | | | | |
| | 3. | | | | | | | | | |
| 4. | | | | | | | | | | |
| 14. Special Handling Instructions and Additional Information | | | | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | | | | |
| Generator's/Offeror's Printed/Typed Name | | | | | | Signature | | Month | Day | Year |
| INT'L | 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. | | | Port of entry/exit: _____ | | | | | | |
| | Transporter signature (for exports only): _____ | | | Date leaving U.S.: _____ | | | | | | |
| TRANSPORTER | 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | | | |
| | Transporter 1 Printed/Typed Name | | | | | Signature | | Month | Day | Year |
| | Transporter 2 Printed/Typed Name | | | | | Signature | | Month | Day | Year |
| DESIGNATED FACILITY | 18. Discrepancy | | | | | | | | | |
| | 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | | | |
| | 18b. Alternate Facility (or Generator) | | | | | | Manifest Reference Number: _____ | | | U.S. EPA ID Number |
| | Facility's Phone: | | | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | Signature | | Month | Day | Year |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | | | | |
| 1. | | | 2. | | | 3. | | 4. | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | | | | |
| Printed/Typed Name | | | | | | Signature | | Month | Day | Year |

| | | | | | | | | | | | | |
|--|--|--|---------------------|--|--|---|--|---|--|--|--|-----------------|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY OLD DOMINION UNIVERSITY 4807 Hampton Blvd. NORFOLK, Virginia 23529 | | SHIPPER I.D. NUMBER <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) A | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A 2 PAGE(S) NRC FORM 542 AND 542A 5 PAGE(S) ADDITIONAL INFORMATION 8 PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 28982 | | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER SHIPMENT NUMBER | | 9. CONSIGNEE - Name and Facility Address Perma-Fix 1940 NW 6th Place GAINESVILLE, FL. 32653 | | CONTACT Raymond Whittle TELEPHONE NUMBER (Include Area Code) (352) 373-6066 | | DATE 6/18/08 | | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (865) 220-8520 | | | | CONTACT Sherri Vann | | TELEPHONE NUMBER (Include Area Code) (757) 683-9874 | | SIGNATURE - Authorized consignee acknowledging waste receipt  | | DATE 6/18/08 | | |
| ORGANIZATION Biodynamics Inc | | 6. CARRIER - Name and Address Biodynamics Inc. 1650 Bear Creek Rd Oak Ridge, TN 37830 | | EPA I.D. NUMBER TND982116493 | | SHIPPING DATE 5-29-08 | | 10. CERTIFICATION | | | | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 3 | | CONTACT John McCormick | | TELEPHONE NUMBER (Include Area Code) (865) 220-9501 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | | | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | EPA MANIFEST NUMBER 000 328982 JJK | | SIGNATURE - Authorized carrier acknowledging waste receipt  | | DATE 5-28-08 | | AUTHORIZED SIGNATURE  | | TITLE RSO | | DATE 5/28/08 |
| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE | | |
| Waste RADIOACTIVE MATERIAL, low specific activity (LSA II), 7, UN 3321 | | NA | NA | LIQUID/ ACID | Pb210; Cs137; U236; Pb208; Th229; Ra226; Ba133; Cl36; Eu154 | | 5.7949 MBq | LSA II | 0.02 m ³ | ODU-2 | | |
| Waste RADIOACTIVE MATERIAL, low specific activity (LSA II), 7, (3), UN 3321 | | NA | NA | LIQUID/ ORGANIC SOLVENTS | C14 | | 0.07474 MBq | LSA II | 0.02 m ³ | ODU-3 | | |
| Waste RADIOACTIVE MATERIAL, low specific activity (LSA II), 7, (8), UN 3321 | | UA | NA | LIQUID/ ACID | Th229; Th232; U236; Po210; Po209; Ba133; Pu242; C14; Pb208; Cl36 | | 21.00626 MBq | LSA I | 0.12 m ³ | ODU-4 | | |

FOR CONSIGNEE USE ONLY

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|--|--|--|--|---|--|---|--|---|--|--|--|-------------------|--|--|--|--------------------------------------|--|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY Old Dominion Univ Dept of Environmental Health 1000 N. Virginia St Norfolk, Virginia 23507 | | SHIPPER I.D. NUMBER COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) A | | 7. NRC FORM 540 AND 540A PAGE 1 OF <u>1</u> PAGE(S) NRC FORM 541 AND 541A <u>2</u> PAGE(S) NRC FORM 542 AND 542A <u>3</u> PAGE(S) ADDITIONAL INFORMATION <u>3</u> PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 25922 | | | | | | | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER SHIPMENT NUMBER | | TELEPHONE NUMBER (Include Area Code) (757) 483-9374 | | 9. CONSIGNEE - Name and Facility Address Virginia Tech 1100 Wilson Hall Blacksburg, VA, VA 24061-3 | | CONTACT Telephone Number (Include Area Code) (540) 231-6666 | | | | | | | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800 322 8321 | | | | CONTACT Sherry Vann | | EPA I.D. NUMBER 13075211873 | | SIGNATURE - Authorized consignee acknowledging waste receipt _____ | | DATE | | | | | | | |
| ORGANIZATION Biometrics Inc | | | | 6. CARRIER - Name and Address American Express 1000 Boulevard 174 Bridge, PO Box 392 | | SHIPPING DATE 5-29-08 | | 10. CERTIFICATION | | | | | | | | | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 3 | | CONTACT John McChinnick | | TELEPHONE NUMBER (Include Area Code) (804) 230-9501 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | | | | | | | | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | EPA MANIFEST NUMBER 06032899235K | | CONTACT _____ | | DATE 5-29-08 | | AUTHORIZED SIGNATURE _____ | | TITLE _____ | | | | | | | |
| 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 IN SI UNITS | | 17. LSA/SCO CLASS | | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | | 19. IDENTIFICATION NUMBER OF PACKAGE | |
| Waste Radioactive Material, low specific activity (LSA-II), 7, (1), 40321 | | UN-28 | | 1 | | Liquid/Acid | | Pb210, Cs137, U235, Pb210 | | 5214781g | | LSA-II | | 0.02m ³ | | 001-2 | |
| Waste Radioactive Material, low specific activity (LSA-II), 7, (3), 40321 | | UN-28 | | 1 | | Liquid/Acid | | U235, Cs137, Pu239, Pu240, Pu241, Pu242, Pu243, Pu244 | | 227579mg | | LSA-II | | 0.02m ³ | | 001-3 | |
| Waste Radioactive Material, low specific activity (LSA-II), 7, (5), 40321 | | UN-28 | | 1 | | Liquid/Acid | | U235, Pu239, Pu240, Pu241, Pu242, Pu243, Pu244, Pb210, Cs137 | | 210000mg | | LSA-II | | 0.02m ³ | | 001-4 | |
| Waste Radioactive Material, low specific activity (LSA-II), 7, (5), 40321 | | UN-28 | | 1 | | Liquid/Acid | | Pb210, Cs137 | | 210000mg | | LSA-II | | 0.02m ³ | | 001-4 | |
| FOR CONSIGNEE USE ONLY | | | | | | | | | | | | | | | | | |

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|--|---|--|----------------------------------|----------------------------------|---------|------|--|--------------------------------|
| NRC FORM 541 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste | 1. MANIFEST TOTALS | | | | | | 2. MANIFEST NUMBER 28982 | |
| | NUMBER OF PACKAGES/DISPOSAL CONTAINERS 3 | NET WASTE VOLUME (m ³) 0.06 | NET WASTE WEIGHT (kg) 355 | SPECIAL NUCLEAR MATERIAL (grams) | | | | |
| | | | | U-233 | U-235 | Pu | TOTAL | |
| | | | | ALL NUCLIDES | TRITIUM | C-14 | Tc-99 | I-129 |
| | | | ACTIVITY (MBq) | | | | | SHIPPER I.D. NUMBER ODU |
| | | | 268759 | NP | 1.369 | NP | NP | PAGE 1 OF 2 PAGE(S) |

| 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/GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL | | 10. SURFACE CONTAMINATION MBq/100cm ² | | 11. PHYSICAL DESCRIPTION | | | 14. CHEMICAL DESCRIPTION | | 15. RADIOLOGICAL DESCRIPTION | | |
| | | | | <input type="checkbox"/> (µSv/hr) | <input checked="" type="checkbox"/> (mSv/hr) | ALPHA | BETA-GAMMA | 11. WASTE DESCRIPTOR (See Note 2) | 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER | 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | CHEMICAL FORM/CHELATING AGENT | WEIGHT % CHELATING AGENT IF > 0.1% | INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | | |
| ODU-2 | 3 | 0.02 | 5.5 | 0.005 | 2.30 | 1.60 | 28 | 0.02m ³ | 100 | Acid/ NP | NA | Pb210 = 1.0347 Cs137 = 0.444 U238 = 0.037 [0.00006 kg] Pb210 = 0.1356 H338 = 0.156 Th227 = 0.074 [0.550-11 kg] K226 = 0.0166 Ba133 = 0.190 C136 = 3.811 TOTAL = 5.1947 | | | NA |
| ODU-3 | 3 | 0.02 | 5.0 | 0.002 | 2.30 | 1.60 | 28 | 0.02m ³ | 100 | SOLIDIFIED POWDERS/ NP | NA | TOTAL = 0.07474 | | | NA |

NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compactible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompactible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100-NONE REQUIRED.

| Sorption | | | Solidification | | |
|-------------------------|------------------|--------------------|-----------------|--|------------------------------|
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemil 30 | 74. Petroset | 89. Other. Describe in item 13, or additional page | 90. Cement |
| 61. Caetom | 65. Safe N Dri | 70. Chemil 50 | 75. Petroset II | | 91. Concrete (encapsulation) |
| 62. Floor Dry/Superfine | 66. Florco | 71. Chemil 3030 | 76. Aquaset | | 92. Bitumen |
| 63. Hi Dri | 67. Florco X | 72. Dicapert HP200 | 77. Aquaset II | | 93. Vinyl Chloride |
| | 68. Solid A Sorb | 73. Dicapert HP500 | | | 100. None Required |

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST

28982

CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

3. PAGE 2 OF 2 PAGE(S)

| 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/GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL <input type="checkbox"/> (μSv/hr) <input checked="" type="checkbox"/> (mSv/hr) | 10. SURFACE CONTAMINATION MBq/100cm ² | | 11. WASTE DESCRIPTION (See Note 2) | 12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME(S) IN CONTAINER | | 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | 14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT | | WEIGHT % CHELATING AGENT IF > 0.1% | 15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL, OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | |
| ODU-4 | 3 | 0.12 | 25 | 0.0002 | 4330 ⁷ | 440 ⁵ | 28 | 0.12m ³ | 100 | Acid/NP | NA | Th 229 = 0.13135 [1476E-11kg] | Th 232 = 0.102 [0.025kg] | NA | |
| | | | | | | | | | | | | U 235 = 0.000185 [0.02-0kg] | Po 210 = 0.00444 | | |
| | | | | | | | | | | | | Po 209 = 0.8325 | | | |
| | | | | | | | | | | | | Ba 133 = 0.037 | | | |
| | | | | | | | | | | | | Pu 242 = 0.0296 [0.0029kg] | | | |
| | | | | | | | | | | | | C 14 = 1.367 | | | |
| | | | | | | | | | | | | Pb 208 = 0.000185 | | | |
| | | | | | | | | | | | | C 130 = 185 | | | |
| | | | | | | | | | | | | TOTAL = 21.02625 | | | |

| | | | | | | | | | | | |
|--|--|---|---------------------|---|---|---|-------------------|--|--------------------------------------|--|--|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY Old Dominion University 4607 Norfolk Blvd Norfolk, VA 23529 | | SHIPPER I.D. NUMBER _____ COLLECTOR _____ PROCESSOR _____ GENERATOR TYPE (Specify) A | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A PAGE(S) NRC FORM 542 AND 542A PAGE(S) ADDITIONAL INFORMATION PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 52808 | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER _____ SHIPMENT NUMBER _____ | | CONTACT Sherri Vanni TELEPHONE NUMBER (Include Area Code) (757) 683-2814 | | 9. CONSIGNEE - Name and Facility Address Energy Solutions 1560 Bear Creek Rd Oak Ridge, TN 37831 | | CONTACT Dwight Brackbill TELEPHONE NUMBER (Include Area Code) (615) 491-1022 | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 804-225-3320 | | | | CONTACT Sherri Vanni TELEPHONE NUMBER (Include Area Code) (757) 683-2814 | | 6. CARRIER - Name and Address Brimmer Inc 1450 Bear Creek Road Oak Ridge, TN 37830 | | EPA I.D. NUMBER 110182116473 SHIPPING DATE 5-28-08 | | SIGNATURE - Authorized consignee acknowledging waste receipt _____ DATE 5-28-08 | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 3 | | CONTACT John McCombs TELEPHONE NUMBER (Include Area Code) (615) 220-8521 | | SIGNATURE - Authorized carrier acknowledging waste receipt _____ DATE 5-28-08 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | EPA MANIFEST NUMBER _____ | | CONTACT John McCombs TELEPHONE NUMBER (Include Area Code) (615) 220-8521 | | SIGNATURE - Authorized carrier acknowledging waste receipt _____ DATE 5-28-08 | | AUTHORIZED SIGNATURE _____ TITLE _____ DATE 5-28-08 | | | |
| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE | | |
| Radioactive Material, low specific activity (LSA-I), 7, UN 3321 | | WA | II | Solid/liquid | C136, C140, C141, 113 | 0.0151 mSv/h | LSA-I | 0.13 m ³ | BLX-1 | | |
| Radioactive Material, low specific activity (LSA-I), 7, UN 3321 | | WA | II | Solid/liquid | K226, Pb210, Tl203, 112m, 112g, 112b, 112c, 112d, 112e, 112f, 112g, 112h, 112i, 112j, 112k, 112l, 112m, 112n, 112o, 112p, 112q, 112r, 112s, 112t, 112u, 112v, 112w, 112x, 112y, 112z, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000 | 0.0141 mSv/h | LSA-I | 0.02 m ³ | UD4-1 | | |
| Radioactive Material, low specific activity (LSA-I), 7, UN 3321 | | WA | II | Solid/liquid | 11235, 11234 | 0.000451 mSv/h | LSA-I | 0.02 m ³ | UL-1 | | |

| | | | | | | | | | | | | | | | |
|--|---------------------------------------|-----------------------------|------------------------------------|---|---|-----------------------|---|--------------------|------------------------|---|-------|---|---|--|----|
| NRC FORM 541 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste | | | | 1. MANIFEST TOTALS | | | | | | 2. MANIFEST NUMBER | | | | | |
| | | | | NUMBER OF PACKAGES/DISPOSAL CONTAINERS | NET WASTE VOLUME (m ³) | NET WASTE WEIGHT (kg) | SPECIAL NUCLEAR MATERIAL (grams) | | | | TOTAL | PAGE <u>1</u> OF <u>1</u> PAGE(S) | | | |
| | | | | | | | U-233 | U-235 | Pu | TOTAL | | | | | |
| | | | | 3 | 17 | 282 | NP | NP | NP | NP | NP | 52008 | | | |
| | | | ACTIVITY (MBq) | | | SOURCE (kg) | | | | | | | | | |
| ALL NUCLIDES | | | TRITIUM | C-14 | Tc-99 | I-129 | | | | | | | | | |
| | | | 0.0251045 | 0.00056 | 0.00255 | NP | NP | 0.00045 | 4. SHIPPER NAME ODU | | | | | | |
| | | | | | | | | | SHIPPER I.D. NUMBER | | | | | | |
| 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/GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL <input type="checkbox"/> (µSv/hr) <input checked="" type="checkbox"/> (mSv/hr) | 10. SURFACE CONTAMINATION MBq/100cm ² ALPHA BETA-GAMMA | | 11. PHYSICAL DESCRIPTION 11. WASTE DESCRIPTION (See Note 2) 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | | | 14. CHEMICAL DESCRIPTION CHEMICAL FORM/CHELATING AGENT WEIGHT % CHELATING AGENT IF > 0.1% | | 15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | | | |
| Box-1 | Box | 0.13 | 4.8 | 0.0002 | 3.3e-1 | 1.4e-5 | Paper Plastic | 0.13m ³ | 100 | OXIDES/NIP | NA | U-235 = 0.0037 C-14 = 0.0037 C-14 = 0.0020 | H-3 = 0.00056 TOTAL = 0.01051 | AU | |
| ODU-1 | 4 | 0.02 | 5.2 | 0.0002 | 3.3e-1 | 1.4e-5 | 37 | 0.02m ³ | 100 | OXIDES/NIP | NA | K-40 = 0.0019 Pb-210 = 0.0012 Th-229 = 0.0014 [1.248E-12kg] | Th-232 = 0.0015 [0.00015kg] U-235 = 0.0014 [0.0006kg] U-238 = 0.0010 [8.06E-10kg] | TOTAL = 0.004135 | AU |
| UL-1 | 3 | 0.02 | 15.2 | 0.0002 | 3.3e-1 | 1.4e-5 | 37 | 0.02m ³ | 100 | OXIDES/NIP | NA | U-235 = 0.0013 0.000451 [0.00039kg] | | AU | |

NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compactible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompactible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100-NONE REQUIRED.

| | | | | | |
|-------------------------|------------------|-------------------|-----------------------|--|--|
| Sorption | | | Solidification | | |
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemsil 30 | 74. Petroset | 89. Other. Describe in item 13, or additional page | 90. Cement |
| 61. Celetom | 65. Safe N Dri | 70. Chemsil 50 | 75. Petroset II | | 91. Concrete (encapsulation) |
| 62. Floor Dry/Superfine | 66. Florco | 71. Chemsil 3030 | 76. Aqueset | | 92. Bitumen |
| 63. Hi Dri | 67. Florco X | 72. Dicapri HP200 | 77. Aqueset II | | 93. Vinyl Chloride |
| | 68. Solid A Sorb | 73. Dicapri HP500 | | | 94. Vinyl Ester Styrene |
| | | | | | 99. Other. Describe in item 13, or additional page |
| | | | | | 100. None Required |



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

December 18, 2008

Ms. Sherri Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherri Vann:

This letter certifies that Duratek, Inc. (Energy Solutions) has processed the materials from your shipment as indicated below:

Please reference the following table for detailed disposal information.

| Manifest Number | Shipment Date | Container Number | Incineration Date |
|------------------------|----------------------|-------------------------|--------------------------|
| 52808 | 5/28/2008 | Box-1 | 07/18/08 |

Note: Any ash from the incineration process becomes Duratek's (Energy Solutions) waste.

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

Sincerely,

Rene Guy
Administrative Manager

Cc: File



11-Nov-08

OLD DOMINION UNIVERSITY
SHERI VANN
ENVIRONMENTAL SAFETY
1070 WEST 47TH STREET
NORFOLKD VA 23508

REF: MANIFEST NUMBER: 003345614JJK
SHIPMENT NUMBER: BIO-350
SHIPMENT DATE: 11/04/2008

ON THE ABOVE DATE, YOUR WASTE MATERIAL WAS RECEIVED AT OUR FACILITY.

THIS MATERIAL WILL BE DISPOSED OF IN FULL IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

THIS ENTIRE PROCESS IS GENERALLY COMPLETED WITHIN A 30-DAY PERIOD FROM THE DATE OF THE SHIPMENT.

1940 N.W. 67th Place ◇ Gainesville, Florida 32653 ◇ (800) 365-6066 ◇ Telephone (352) 373-6066 ◇ Fax (352) 372-8963 ◇ www.perma-fix.com/florida

EPA-PERMITTED TSD FACILITY ◇ HAZARDOUS WASTE ◇ NON-HAZARDOUS WASTE ◇ MIXED WASTE



| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number 003345614 JJK | | | |
|---|--|------------------------|--------------|--|---|--------------------|------------------|-------------------|
| 5. Generator's Name and Mailing Address | | | | Generator's Site Address (if different than mailing address) | | | | |
| Generator's Phone: | | | | | | | | |
| 6. Transporter 1 Company Name | | | | U.S. EPA ID Number | | | | |
| 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | | |
| 8. Designated Facility Name and Site Address | | | | U.S. EPA ID Number | | | | |
| Facility's Phone: | | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
| | | No. | Type | | | | | |
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 14. Special Handling Instructions and Additional Information 00361 | | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | | |
| Generator's/Offorer's Printed/Typed Name THOMAS VANNU | | | | Signature <i>Thomas Vannu</i> | | Month 11 | Day 24 | Year 98 |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ | | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | | |
| Transporter 1 Printed/Typed Name ... | | | | Signature <i>...</i> | | Month | Day | Year |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month | Day | Year |
| 18. Discrepancy | | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | | |
| Manifest Reference Number: | | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | U.S. EPA ID Number | | | | |
| Facility's Phone: | | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | Signature | | Month | Day | Year |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | | |
| 1. | 2. | 3. | 4. | | | | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | | |
| Printed/Typed Name ... | | | | Signature <i>...</i> | | Month 11 | Day 24 | Year 98 |



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

November 03, 2008

Ms. Sherri Vann
Old Dominion University
Radiation Safety Office
Hughes Hall, Rm. #2061
4807 Hampton Blvd.
Norfolk, VA 23529

Dear Ms. Sherri Vann,

As required by 10 CFR Part 20 (Appendix G), this letter is notification that Energy Solutions (formerly Duratek) has received the shipment recently picked up at your facility on **October 22, 2008**. 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 Energy Solutions 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 "Rene Guy", is written over a horizontal line.

Rene Guy
Administrative Manager

Cc: File GTS-08-32

| | | | | | | | | | | | |
|--|--|---|--|---|--|--|--|---|--|--|--|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY OLD DOMINION UNIVERSITY 1070 W. 47TH ST. NORFOLK VA 23508 | | SHIPPER I.D. NUMBER COLLECTOR <input type="checkbox"/> PROCESSOR <input type="checkbox"/> GENERATOR TYPE (Specify) <input checked="" type="checkbox"/> | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A 1 PAGE(S) NRC FORM 542 AND 542A 0 PAGE(S) ADDITIONAL INFORMATION 0 PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 1022088 | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER | | SHIPMENT NUMBER | | 3. CONSIGNEE - Name and Facility Address EMERGH SOLUTIONS 1560 BEAR CREEK RD OAK RIDGE TN 37831 | | CONTACT FRED SCHULTZ TELEPHONE NUMBER (include Area Code) (865) 481-0222 | |
| 1. EMERGENCY TELEPHONE NUMBER (include Area Code) (865) 220-8520 | | | | CONTACT SHERI VANN TELEPHONE NUMBER (include Area Code) (767) 683-4445 | | EPA I.D. NUMBER TN08216493 | | SIGNATURE - Authorized consignee acknowledging waste receipt D.W. VANN | | DATE 10/30/08 | |
| ORGANIZATION BIONOMICS, INC. | | | | 6. CARRIER - Name and Address BIONOMICS, INC 1550 BEAR CREEK RD OAK RIDGE TN 37830 | | SHIPPING DATE 10/22/08 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | DATE 10/22/08 | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1 | | CONTACT JOHN MCGORMICK SIGNATURE - Authorized carrier acknowledging waste receipt [Signature] | | DATE 10/22/08 | | 11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (including proper shipping name, hazard class, UN ID number, and any additional information) | | 12. DOT LABEL "RADIOACTIVE" | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number | | EPA MANIFEST NUMBER N/A | | 13. TRANSPORT INDEX | | 14. PHYSICAL AND CHEMICAL FORM | | 15. INDIVIDUAL RADIONUCLIDES | | 16. TOTAL PACKAGE ACTIVITY IN SI UNITS | |
| <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | N/A | | N/A | | SOLID/OXIDES | | C14, U238 | | 37.037 MBq | |
| | | | | | | | | | | 17. LSA/SCO CLASS LSA II | |
| | | | | | | | | | | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) 0.11 m ³ | |
| | | | | | | | | | | 19. IDENTIFICATION NUMBER OF PACKAGE 020-1 | |
| FOR CONSIGNEE USE ONLY | | | | | | | | | | | |

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number JJK | | | |
|--|--|------------------------|--------------|--|---|-----------------|-----|------|
| 5. Generator's Name and Mailing Address | | | | Generator's Site Address (if different than mailing address) | | | | |
| Generator's Phone: | | | | | | | | |
| 6. Transporter 1 Company Name | | | | U.S. EPA ID Number | | | | |
| 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | | |
| 8. Designated Facility Name and Site Address | | | | U.S. EPA ID Number | | | | |
| Facility's Phone: | | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit WL/Vol. | 13. Waste Codes | | |
| | | No. | Type | | | | | |
| 1. | | | | | | | | |
| 2. | | | | | | | | |
| 3. | | | | | | | | |
| 4. | | | | | | | | |
| 14. Special Handling Instructions and Additional Information | | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | | |
| Generator's/Offeror's Printed/Typed Name | | | | Signature | | Month | Day | Year |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____ | | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | | |
| Transporter 1 Printed/Typed Name | | | | Signature | | Month | Day | Year |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month | Day | Year |
| 18. Discrepancy | | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: _____ | | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | U.S. EPA ID Number | | | | |
| Facility's Phone: | | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | Month | Day | Year |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | | |
| 1. | | 2. | | 3. | | 4. | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | | |
| Printed/Typed Name | | | | Signature | | Month | Day | Year |

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

DSSI • M&EC • Perma-Fix of Florida

Generator Name: Old Dominion University
 Generator Address: 1070 West 47th Street
 State Manifest No.: N/A

Generator USEPA ID No.: VAD041448465
 City/ST/Zip: Norfolk, VA 23508
 Manifest Doc. No.: 003345614JJK

Instructions

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment.
- In Column 2, choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW).
- In Column 3, enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste can be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris).
- In Column 4, place an "x" in the block that corresponds to the appropriate LDR management category described at the bottom of this form.
- In Column 5, enter the Reference Number(s) from the LDR-UHC Constituent Table for any constituents subject to treatment in your waste stream.

Go to LDR-UHC Constituent Table

| Manifest Line Item # | 1. USEPA HAZARDOUS WASTE CODES | 2. NWW or WW | | 3. SUBCATEGORY | 4. HOW MUST THE WASTE BE MANAGED (Check one) | | | | | | | | | | | 5. REFERENCE NUMBER(s) of Hazardous Constituents contained in the waste. | | | | |
|----------------------|--------------------------------|--------------|-----|----------------|--|---|---|---|---|---|---|---|-----------|--|--|--|----------|----------|---------------|---------------|
| | | | | | A | B | C | D | E | F | G | H | Soil Only | | | | | | | |
| 11.A | D001, F003, FJ05 | X | NWW | High TOC | X | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | | | Does Not | | complies with |
| 11.B | | | NWW | | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | | Does Not | | complies with | |
| 11.C | | | NWW | | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | | Does Not | | complies with | |
| 11.D | | | NWW | | | | | | | | | | | | | | Does | | is subject to | |
| | | | WW | | | | | | | | | | | | | | Does Not | | complies with | |

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Name: SHERI VANN Title: RSO Date: 10/22/08

- THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD. This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land disposal.
- THIS HAZARDOUS DEBRIS MAY BE TREATED USING THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this waste meets the definition of debris and can be treated using the alternate methods specified in 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO THE APPLICABLE TREATMENT STANDARD(S). I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.
- THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making false certification, including the possibility of a fine and imprisonment.
- THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.
- THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in 268.48 Universal Treatment Standards. I am aware that there are significant, penalties for submitting false certification, including the possibility of fine and imprisonment.
- THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL. (Please include the date the waste is subject to the prohibitions in Column 5) This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under 40 CFR Part 268.5, or an exemption under 40 CFR 268.6.
- THIS CONTAMINATED SOIL (DOES / DOES NOT) CONTAIN LISTED HAZARDOUS WASTE AND (DOES / DOES NOT) EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND (IS SUBJECT TO / COMPLIES WITH) THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(c) OR THE UNIVERSAL TREATMENT STANDARDS. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

| | | | | | | | | | | | | |
|---|--|---|--|---|---------------------|---|------------------------------|---|--|---|--|--------------------------------------|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY _____ | | SHIPPER I.D. NUMBER _____ | | 7. NRC FORM 540 AND 540A PAGE 1 OF _____ PAGE(S) NRC FORM 541 AND 541A _____ PAGE(S) NRC FORM 542 AND 542A _____ PAGE(S) ADDITIONAL INFORMATION _____ PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) | | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER _____ SHIPMENT NUMBER _____ | | <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input type="checkbox"/> GENERATOR TYPE (Specify) _____ | | 9. CONSIGNEE - Name and Facility Address _____ | | CONTACT _____ | | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) _____ | | | | CONTACT _____ | | TELEPHONE NUMBER (Include Area Code) _____ | | TELEPHONE NUMBER (Include Area Code) _____ | | ORGANIZATION _____ | | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> | | 6. CARRIER - Name and Address _____ | | EPA I.D. NUMBER _____ | | SIGNATURE - Authorized consignee acknowledging waste receipt _____ | | DATE _____ | | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input type="checkbox"/> YES <input type="checkbox"/> NO | | EPA MANIFEST NUMBER _____ | | CONTACT _____ | | TELEPHONE NUMBER (Include Area Code) _____ | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | AUTHORIZED SIGNATURE _____ | | |
| | | | | SIGNATURE - Authorized carrier acknowledging waste receipt _____ | | DATE _____ | | | | TITLE _____ | | DATE _____ |
| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE |
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| FOR CONSIGNEE USE ONLY | | | | | | | | | | | | |

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|--|--|---|------------------------------|---|-------|----|---------------------------|
| NRC FORM 541 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste | 1. MANIFEST TOTALS | | | | | | 2. MANIFEST NUMBER |
| | NUMBER OF PACKAGES/ DISPOSAL CONTAINERS | NET WASTE VOLUME (m³) | NET WASTE WEIGHT (kg) | SPECIAL NUCLEAR MATERIAL (grams) | | | TOTAL |
| | | | | U-233 | U-235 | Pu | |
| | ACTIVITY (MBq) | | | | | | SOURCE (kg) |
| ALL NUCLIDES | | TRITIUM | C-14 | Tc-99 | I-129 | | |

| 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/ GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL <input type="checkbox"/> (µSv/hr) <input type="checkbox"/> (mSv/hr) | 10. SURFACE CONTAMINATION MBq/100cm ² ALPHA BETA-GAMMA | 11. PHYSICAL DESCRIPTION 11. WASTE DESCRIPTION (See Note 2) 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | | | 14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT WEIGHT % CHELATING AGENT IF > 0.1% | | 15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | | | |
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NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compactible Trash |
| 22. Soil | 31. Anion ion-exchange Media | 40. Noncompactible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100=NONE REQUIRED.

| | | | | | |
|--------------------------|------------------|--------------------|-----------------------|--|--|
| Sorption | | | Solidification | | |
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemsil 30 | 74. Petroset | 89. Other. Describe in item 13, or additional page | 94. Vinyl Ester Styrene |
| 61. Celetom | 65. Safe N Dri | 70. Chemsil 50 | 75. Petroset II | | 99. Other. Describe in item 13, or additional page |
| 62. Floor Dry/ Superfine | 66. Florco | 71. Chemsil 3030 | 76. Aquaset | | |
| 63. Hi Dri | 67. Florco X | 72. Dicaperl HP200 | 77. Aquaset II | | |
| | 68. Solid A Sorb | 73. Dicaperl HP500 | | | |

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|--|--|---|----------------------------------|----------------------------------|-------|----|----------------------------------|
| NRC FORM 541 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste | 1. MANIFEST TOTALS | | | | | | 2. MANIFEST NUMBER 4-1015 |
| | NUMBER OF PACKAGES/ DISPOSAL CONTAINERS 1 | NET WASTE VOLUME (m ³) 112 | NET WASTE WEIGHT (kg) 100 | SPECIAL NUCLEAR MATERIAL (grams) | | | |
| | | | | U-233 | U-235 | Pu | TOTAL |
| | ACTIVITY (MBq) | | | | | | SOURCE (kg) |
| ALL NUCLIDES | | TRITIUM | C-14 | Tc-99 | I-129 | | |
| 3.70E+09 | | NF | 0.000000 | NF | NF | NF | |

| 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/ GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL | | 10. SURFACE CONTAMINATION MBq/100cm ² | | 11. WASTE DESCRIPTION (See Note 2) | 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER | 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | 14. CHEMICAL DESCRIPTION | | 15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT |
| | | | | <input type="checkbox"/> (µSv/hr) <input checked="" type="checkbox"/> (mSv/hr) | ALPHA | BETA-GAMMA | CHEMICAL FORM/ CHELATING AGENT | | | | WEIGHT % CHELATING AGENT IF > 0.1% | | |
| ODU-4 | 4 | 112 | 110 | <input checked="" type="checkbox"/> (mSv/hr) | 23E-7 | 21.6E-7 | 28 | 112m ³ | 100 | ORGANIC / X | NA | C-14 = 3.7 C-14 = 3.7E+09 | |
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NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compactible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompactible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S." For all solidification media, the vendor (manufacturer) and brand name must also be identified in item 13. Code 100=NONE REQUIRED.

| Sorption | | | | Solidification | | | |
|--------------------------|------------------|--------------------|-----------------|--|------------------------------|--|--|
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemsil 30 | 74. Petroset | 89. Other. Describe in item 13, or additional page | 90. Cement | 94. Vinyl Ester Styrene | |
| 61. Celetom | 65. Safe N Dri | 70. Chemsil 50 | 75. Petroset II | | 91. Concrete (encapsulation) | 99. Other. Describe in item 13, or additional page | |
| 62. Floor Dry/ Superfine | 66. Florco | 71. Chemsil 3030 | 76. Aquaset | | 92. Bitumen | 100. None Required | |
| 63. Hi Dri | 67. Florco X | 72. Dicapert HP200 | 77. Aquaset II | | | | |
| | 68. Solid A Sorb | 73. Dicapert HP500 | | | | | |

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|---|--|--|---|--|---|--|--|--|--|---|--|---|--|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY 20000111 20000111 20000111 | | | SHIPPER I.D. NUMBER <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) A | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A 1 PAGE(S) NRC FORM 542 AND 542A 1 PAGE(S) ADDITIONAL INFORMATION 1 PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 1334 | | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER SHIPMENT NUMBER | | CONTACT SH. - I - A - N | | TELEPHONE NUMBER (Include Area Code) 301-211-1111 | | 9. CONSIGNEE - Name and Facility Address K... ... SIGNATURE - Authorized consignee acknowledging waste receipt DATE | | CONTACT ... TELEPHONE NUMBER (Include Area Code) ... | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) ... | | | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 1 | | | | EPA I.D. NUMBER ... | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | DATE ... | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | EPA MANIFEST NUMBER 1334-29-5116 | | 6. CARRIER - Name and Address ... | | SHIPPING DATE 3-2-09 | | AUTHORIZED SIGNATURE ... | | TITLE | | DATE 3/2/09 | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | CONTACT ... | | TELEPHONE NUMBER (Include Area Code) ... | | SIGNATURE - Authorized carrier acknowledging waste receipt ... | | DATE 3-2-09 | | AUTHORIZED SIGNATURE ... | | DATE ... | |
| 11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information) ... | | | 12. DOT LABEL "RADIOACTIVE" A-1 | 13. TRANSPORT INDEX | 14. PHYSICAL AND CHEMICAL FORM | | 15. INDIVIDUAL RADIONUCLIDES | | 16. TOTAL PACKAGE ACTIVITY IN SI UNITS 5.70319 B | | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE ...-4 |
| FOR CONSIGNEE USE ONLY | | | | | | | | | | | | | |

**UNIFORM LOW-LEVEL RADIOACTIVE MANIFEST
WASTE MANIFEST**

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS

| NUMBER OF PACKAGES/ DISPOSAL CONTAINERS | NET VOLUME (m3) | NET WEIGHT (kg) | SPECIAL NUCLEAR MATERIAL (grams) | | | |
|---|-----------------|-----------------|----------------------------------|-------|-------|-------------|
| | | | U-233 | U-235 | Pu | TOTAL |
| 3 | 0.19 | 50.1 | | | | |
| ACTIVITY (MBq) | | | | | | SOURCE (kg) |
| ALL NUCLIDES | | TRITIUM | C-14 | Tc-99 | I-129 | |
| 309.944 | | 251.711 | 57.646 | ND | ND | ND |

| | |
|------------------------|-------------------------|
| 2. MANIFEST NUMBER | 32509 |
| 3. PAGE 1 OF 1 PAGE(S) | |
| 4. SHIPPER NAME | Old Dominion University |
| SHIPMENT ID NUMBER | |

DISPOSAL CONTAINER DESCRIPTION

WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

| 5. CONTAINER IDENTIFICATION NUMBER / GENERATOR ID NUMBER | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m3) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL (mSv/hr) | 10. SURFACE CONTAMINATION MBq/100 cm ² | | 11. WASTE DESCRIP- TOR (See Note 2) | 12. PHYSICAL DESCRIPTION | | 13. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3) | 14. CHEMICAL DESCRIPTION | | 15. WEIGHT % CHELATING AGENT IF > 0.1% | 15. RADIOLOGICAL DESCRIPTION | | 16. WASTE CLASSIFI- CATION AS-Class A Stable AU- Class A Unstable B- Class B C- Class C |
|--|---------------------------------------|----------------|------------------------------------|-------------------------------------|---|-------------|-------------------------------------|---|---------------------------------|---|---|-----|--|------------------------------------|-----|---|
| | | | | | ALPHA | BETA- GAMMA | | SORBENT, SOLIDIFICATION, STABILIZATION MEDIA (See Note 3) | CHEMICAL FORM / CHELATING AGENT | | INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT | | | | | |
| 2009-1 | 19Other, Fiber Box | 0.15 | 15.7 | 0.0002 | <3.34E-7 | <1.67E-5 | 59. Other, Incinerable | | 100 | 0.15 | Oxides / N/A | N/A | H3 251.711 C14 57.646 C136 0.037 | Total 309.394 | A U | |
| ODU-2 | 4Metal Drum or Pail | 0.02 | 29.1 | 0.0002 | <3.34E-7 | <1.67E-5 | 59. Lead for recycling | | 100 | 0.02 | Oxides / N/A | N/A | C136 = 0.037 | | A U | |
| ODU-3 | 4Metal Drum or Pail | 0.02 | 5.3 | 0.0002 | <3.34E-7 | <1.67E-5 | 39. Compactable Trash | | 100 | 0.02 | Oxides / N/A | N/A | U238 = 0.037 Pb210 = 0.037 Ra226 = 0.037 | [3.3E-3 Rq] | A U | |
| | | | | | | | | | | | | | Th228 = 0.037 Th232 = 0.037 | [2.63E-08 Rq] [9.09E-03 Rq] | | |
| | | | | | | | | | | | | | TOTAL = 0.185 | | | |

NOTE1: Container Description Codes: For containers/ waste requiring disposal in approved structural overpacks, the numerical code must be followed by "-OP."

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

NOTE 1A: Process Type Codes Are Specific To Bionomics and Only Apply To How The Waste Will Be Processed / Handled By The Cinsignee. Use up to two process codes and one disposal site.

- 1A Supercompact
- 2A Incineration
- 3A Tranship
- 4A Solidify
- 5A Encapsulate
- 6A Metal Melt
- 7A Sort
- 8A
- 9A
- 10A Other. Specify in the block or on attached page.
- 11A Barnwell
- 12A Richland
- 13A Envirocare
- 14A Return
- 20A .Other. Specify in the block or on an attached page.

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

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

Note 3: For solidification media that meet disposal site structural stability requirements, the numerical code must be followed by "-S". For all solidification media, the vendor (manufacture) and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

- SORPTION
- 60 .Speedi Dri
- 61 .Celetom
- 62 .Floor Dry/ Superfine
- 63 .Hi Dri
- 64 .Safe T Sorb
- 65 .Safe N Dri
- 66 .Florco
- 67 .Florco X
- 68 .Solid A Sorb
- 69 .Chemsil 30
- 70 .Chemsil 50
- 71 .Chemsil 3030
- 72 .Dicaperl HP200
- 73 .Dicaperl HP500
- 74 .Petrosel
- 75 .Petrosel II
- 76 .Aquesel
- 77 .Aquesel II
- 78 .Other
- Describe in Item 13, or additional page.
- 89 .Other
- Describe in Item 13, or additional page.
- 90 .Cement
- 91 .Concrete (encapsulation)
- 92 .Bituman
- 93 .Vinyl Chloride
- 94 .Other. Describe in Item 13, or additional page.
- 100 .None Required

| | | | | | | | | | |
|---|--|--|--|--|--|---|--|--|--|
| <p>NRC FORM 540</p> <p style="text-align: center;">UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER</p> | | <p>BIONOMICS, INC.</p> <p>5. SHIPPER - NAME AND FACILITY</p> <p>Old Dominion University 5255 Hampton Blvd Norfolk, Va. 23529</p> | | <p>SHIPPER I.D. NUMBER</p> <p>COLLECTOR</p> <p>PROCESSOR</p> | | <p>7. NRC FORM 540 AND 540A PAGE 1 OF</p> <p>1 PAGE(S)</p> <p>2 PAGE(S)</p> <p>3 PAGE(S)</p> <p>4 PAGE(S)</p> <p>ADDITIONAL INFORMATION</p> | | <p>8. MANIFEST NUMBER</p> <p>(Use this number on all continuation pages)</p> <p style="text-align: center;">32509</p> | |
|---|--|--|--|--|--|---|--|--|--|

| | | | | | | | | | | |
|--|--|--|--|--|---|--|--|--|--|--|
| <p>1. EMERGENCY TELEPHONE NUMBER (Include Area Code)</p> <p style="text-align: center;">(865) 220-8520</p> | | | <p>USER PERMIT NUMBER</p> <p>SHIPMENT NUMBER</p> | | <p>GENERATOR TYPE (Specify)</p> <p style="text-align: center;">A</p> | | <p>9. CONSIGNEE - Name and Facility Address</p> <p>Energy Solutions 1560 Bear Creek Road Oak Ridge, TN 37831</p> | | <p>CONTACT</p> <p style="text-align: center;">DONNIE BRACKETT</p> | |
|--|--|--|--|--|---|--|--|--|--|--|

| | | | | | | | | | | |
|--|--|--|---|--|---|--|--------------------------|--|-------------|--|
| <p>ORGANIZATION</p> <p style="text-align: center;">BIONOMICS, INC.</p> | | | <p>CONTACT</p> <p style="text-align: center;">Sheri Vann</p> | | <p>TELEPHONE NUMBER (Including Area Code)</p> <p style="text-align: center;">(757)683-5834</p> | | <p>10. CERTIFICATION</p> | | <p>DATE</p> | |
|--|--|--|---|--|---|--|--------------------------|--|-------------|--|

| | | | | | | | | | | | |
|---|--|--|--|---|--|---|--|---|--|-------------|--|
| <p>2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | | <p>3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST</p> <p style="text-align: center;">3</p> | | <p>6. CARRIER - Name and Address</p> <p>Bionomics, Inc. 1550 Bear Creek Road Oak Ridge, Tn. 37830</p> | | <p>EPA I.D. NUMBER</p> <p style="text-align: center;">TND982116493</p> | | <p>SIGNATURE - Authorized consignee acknowledging waste receipt</p> | | <p>DATE</p> | |
|---|--|--|--|---|--|---|--|---|--|-------------|--|

| | | | | | | | | | | | |
|---|--|----------------------------|--|---|--|---|--|---|--|---|--|
| <p>4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?</p> <p>If "Yes" provide Manifest Number =====></p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> | | <p>EPA MANIFEST NUMBER</p> | | <p>CONTACT</p> <p style="text-align: center;">John McCormick</p> | | <p>TELEPHONE NUMBER (Including Area Code)</p> <p style="text-align: center;">(865)220-8501</p> | | <p>SIGNATURE - Authorized carrier acknowledging waste receipt</p> | | <p>DATE</p> <p style="text-align: center;">3-25-09</p> | |
|---|--|----------------------------|--|---|--|---|--|---|--|---|--|

| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE |
|---|-----------------------------|---------------------|--------------------------------|--------------------------------------|---------------|--|-------------------|---|--------------------------------------|
| Radioactive Material , excepted package- limited quantity of material, 7, UN2910 | N/A | N/A | Solid / Oxides | H3;C14 | C136 | 309.394MBq | N/A | 0.13m3 | 2009-1 |
| Radioactive Material , excepted package- limited quantity of material, 7, UN2910 | N/A | N/A | Solid / Oxides | <i>C136</i> | | <i>0.37 MBq</i> | N/A | 0.13m3 | ODU-2 |
| Radioactive Material , excepted package- limited quantity of material, 7, UN2910 | N/A | N/A | Solid / Oxides | <i>Ra-226; U-238; Pb-210; Th-232</i> | <i>Th-232</i> | <i>0.185 MBq</i> | N/A | 0.13m3 | ODU-3 |
| | | | | | | | | | |
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|-------------------------------|------------------------|
| <p>FOR CONSIGNEE USE ONLY</p> | <p>BIONOMICS, INC.</p> |
|-------------------------------|------------------------|

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

DSSI • M&EC • Florida of Florida

Generator Name: OLD DOMINION UNIVERSITY

Generator USLPA ID No: VAD041448465

Generator Address: 9255 HAMPTON BLVD, SPONG HALL

City/State/Zip: NORFOLK, VA. 23529

State Manifest No:

Manifest Doc No: 003345698 JTK

Instructions

- In Column 1 identify all USEPA hazardous waste codes that apply to this waste shipment
- In Column 2, choose the appropriate treatability group: Non-Wastewater (NWW) or Wastewater (WW)
- In Column 3, enter the appropriate Subcategory, if applicable, and also enter "Contaminated Soil" or "Debris" if the waste can be treated using one of the alternative treatment technologies provided by 268.49(c) (soil) or 268.45 (debris)
- In Column 4, circle the letter of the appropriate LDR management categories on the back of this form.
- In Column 5, enter the Reference Number(s) from the LDR-UHC Constituent Table for any constituents subject to treatment in your waste stream

Go to LDR-UHC Constituent Table

| Manifest Line Item # | 1. USEPA HAZARDOUS WASTE CODES | 2. NWW or WW | 3. SUBCATEGORY | 4. HOW MUST THE WASTE BE MANAGED (Check one) | | | | | | | | | | | 5. REFERENCE NUMBER(S) of Hazardous Constituents contained in the waste. | | | | | |
|----------------------|--------------------------------|--------------|----------------|--|---|---|---|---|---|---|---|-----------|--|--|--|--|--|----------|--|---------------|
| | | | | A | B | C | D | E | F | G | H | Soil Only | | | | | | | | |
| 9b.1 | D001 F003 F005 | NWW | | | | | | | | | | | | | | | | Does | | is subject to |
| | | WW | | | | | | | | | | | | | | | | Does Not | | complies with |
| 9b.2 | D001 F003 F005 | NWW | | | | | | | | | | | | | | | | Does | | is subject to |
| | | WW | | | | | | | | | | | | | | | | Does Not | | complies with |
| 9b.3 | | NWW | | | | | | | | | | | | | | | | Does | | is subject to |
| | | WW | | | | | | | | | | | | | | | | Does Not | | complies with |
| 9b.4 | | NWW | | | | | | | | | | | | | | | | Does | | is subject to |
| | | WW | | | | | | | | | | | | | | | | Does Not | | complies with |

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Name: Steve Hanna Title: RSC Date: 3/25/09

- A. THIS RESTRICTED WASTE REQUIRES TREATMENT TO THE APPLICABLE STANDARD. This waste must be treated to the applicable performance based treatment standard set forth in 40CFR Part 268 Subpart C, 268.32, Subpart D, 268.40 or RCRA Section 3004(d) prior to land disposal.
- B. THIS HAZARDOUS DEBRIS MAY BE TREATED USING THE DEBRIS ALTERNATIVE TREATMENT STANDARDS OF 40 CFR 268.45. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this waste meets the definition of debris and can be treated using the alternate methods specified in 40 CFR 268.45. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- C. THIS RESTRICTED WASTE HAS BEEN TREATED TO THE APPLICABLE TREATMENT STANDARD(S). I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR 268 Subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.
- D. THIS RESTRICTED DEBRIS HAS BEEN TREATED IN ACCORDANCE WITH 40 CFR 268.45. I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making false certification, including the possibility of a fine and imprisonment.
- E. THIS LAB PACK DOES NOT CONTAIN ANY WASTES IDENTIFIED AT APPENDIX IV TO PART 268. I certify under penalty of law that I personally have examined and am familiar with the waste and that the statement above is true and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.
- F. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.
- G. THIS RESTRICTED WASTE HAS BEEN TREATED TO REMOVE THE HAZARDOUS CHARACTERISTIC AND BEEN TREATED FOR UNDERLYING HAZARDOUS CONSTITUENTS. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting false certification, including the possibility of fine and imprisonment.
- H. THIS RESTRICTED WASTE IS SUBJECT TO AN EXEMPTION FROM LAND DISPOSAL. (Please include the date the waste is subject to the prohibitions in Column 5) This waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under 40 CFR Part 268.5, or an exemption under 40 CFR 268.6
- S. THIS CONTAMINATED SOIL (DOES / DOES NOT) CONTAIN LISTED HAZARDOUS WASTE AND (DOES / DOES NOT) EXHIBIT A CHARACTERISTIC OF HAZARDOUS WASTE AND (IS SUBJECT TO / COMPLIES WITH) THE SOIL TREATMENT STANDARDS AS PROVIDED BY 268.49(c) OR THE UNIVERSAL TREATMENT STANDARDS. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in 40 CFR 268.49 without impermissible dilution of the prohibited wastes. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.



16-Apr-09

OLD DOMINION UNIVERSITY
SHERI VANN
ENVIRONMENTAL SAFETY
5255 HAMPTON BLVD SPONG HALL
NORFOLK VA 23529

REF: MANIFEST NUMBER: 003345698JJK
SHIPMENT NUMBER: BIO-356
SHIPMENT DATE: 04/09/2009

ON THE ABOVE DATE, YOUR WASTE MATERIAL WAS RECEIVED AT OUR FACILITY.

THIS MATERIAL WILL BE DISPOSED OF IN FULL IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

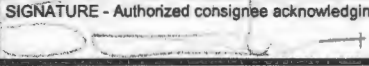
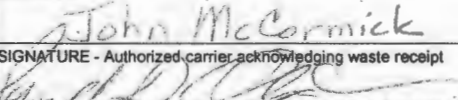
THIS ENTIRE PROCESS IS GENERALLY COMPLETED WITHIN A 30-DAY PERIOD FROM THE DATE OF THE SHIPMENT.

1940 N.W. 67th Place ◇ Gainesville, Florida 32653 ◇ (800) 365-6066 ◇ Telephone (352) 373-6066 ◇ Fax (352) 372-8963 ◇ www.perma-fix.com/florida

EPA-PERMITTED TSD FACILITY ◇ HAZARDOUS WASTE ◇ NON-HAZARDOUS WASTE ◇ MIXED WASTE



| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number 003345698 JJK | | |
|---|--|------------------------|--------------|--|---|-----------------|--|
| 5. Generator's Name and Mailing Address | | | | Generator's Site Address (if different than mailing address) | | | |
| Generator's Phone: | | | | | | | |
| 6. Transporter 1 Company Name | | | | | U.S. EPA ID Number | | |
| 7. Transporter 2 Company Name | | | | | U.S. EPA ID Number | | |
| 8. Designated Facility Name and Site Address | | | | | U.S. EPA ID Number | | |
| Facility's Phone: | | | | | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | |
| | | No. | Type | | | | |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 14. Special Handling Instructions and Additional Information | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | |
| Generator's/Offeror's Printed/Typed Name | | | | Signature | | Month Day Year | |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____ | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | |
| Transporter 1 Printed/Typed Name | | | | Signature | | Month Day Year | |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month Day Year | |
| 18. Discrepancy | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | |
| Manifest Reference Number: _____ | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | | U.S. EPA ID Number | | |
| Facility's Phone: | | | | | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | Month Day Year | | |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | |
| 1. | 2. | 3. | 4. | | | | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a | | | | | | | |
| Printed/Typed Name | | | | Signature | | Month Day Year | |

| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | 5. SHIPPER - NAME AND FACILITY OLD DOMINION UNIVERSITY 5255 HAMPTON BLVD. SPON, HALL NORFOLK, VA 23529 | | SHIPPER I.D. NUMBER <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) A | | 7. NRC FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) NRC FORM 541 AND 541A 1 PAGE(S) NRC FORM 542 AND 542A 8 PAGE(S) ADDITIONAL INFORMATION 8 PAGE(S) | | 8. MANIFEST NUMBER (Use this number on all continuation pages) 45698 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------|--|--------------------------------|---|--|---|---|---|--|--|--|---|-----------------------------|---------------------|--------------------------------|------------------------------|--|-------------------|---|--------------------------------------|--|----|----|-------------------------|--------|------------------------|----|---------------------|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | USER PERMIT NUMBER SHIPMENT NUMBER | | 9. CONSIGNEE - Name and Facility Address Perma-Fix 1940 NW 67th Place GAINESVILLE FL 32653 | | CONTACT Raymond Alexander TELEPHONE NUMBER (Include Area Code) (352) 373-6064 | | SIGNATURE - Authorized consignee acknowledging waste receipt  DATE 4/9/09 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) (360) 220-8520 | | ORGANIZATION Bionomics, Inc | | 6. CARRIER - Name and Address Bionomics Inc 1550 Bear Creek Rd. OAK RIDGE, TN 37830 | | EPA I.D. NUMBER TN0982116493 | | SHIPPING DATE 3-25-09 | | 10. CERTIFICATION | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | 3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 1 | | EPA MANIFEST NUMBER 003345698 JJK | | CONTACT John McCormick SIGNATURE - Authorized carrier acknowledging waste receipt  DATE 3-25-09 | | 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 are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "Yes," provide Manifest Number | | <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:25%;">11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)</th> <th style="width:5%;">12. DOT LABEL "RADIOACTIVE"</th> <th style="width:5%;">13. TRANSPORT INDEX</th> <th style="width:10%;">14. PHYSICAL AND CHEMICAL FORM</th> <th style="width:10%;">15. INDIVIDUAL RADIONUCLIDES</th> <th style="width:10%;">16. TOTAL PACKAGE ACTIVITY IN SI UNITS</th> <th style="width:5%;">17. LSA/SCO CLASS</th> <th style="width:10%;">18. TOTAL WEIGHT OR VOLUME (Use appropriate units)</th> <th style="width:10%;">19. IDENTIFICATION NUMBER OF PACKAGE</th> </tr> </thead> <tbody> <tr> <td> AHA RADIOACTIVE MATERIAL Waste Flammable Liquid, N.O.S., 3, UN1993, PGII, (TOLUENE/Xylene) Limited QUANTITY RADIOACTIVE MATERIAL </td> <td style="text-align: center;">NA</td> <td style="text-align: center;">NA</td> <td style="text-align: center;">LIQUID/ORGANIC SOLVENTS</td> <td style="text-align: center;">P33-C1</td> <td style="text-align: center;">3.70999^{mBq}</td> <td style="text-align: center;">NA</td> <td style="text-align: center;">0.12 m³</td> <td style="text-align: center;">ODU-4</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> | | | | | | | | | | 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE | AHA RADIOACTIVE MATERIAL Waste Flammable Liquid, N.O.S., 3, UN1993, PGII, (TOLUENE/Xylene) Limited QUANTITY RADIOACTIVE MATERIAL | NA | NA | LIQUID/ORGANIC SOLVENTS | P33-C1 | 3.70999 ^{mBq} | NA | 0.12 m ³ | ODU-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 IN SI UNITS | 17. LSA/SCO CLASS | 18. TOTAL WEIGHT OR VOLUME (Use appropriate units) | 19. IDENTIFICATION NUMBER OF PACKAGE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AHA RADIOACTIVE MATERIAL Waste Flammable Liquid, N.O.S., 3, UN1993, PGII, (TOLUENE/Xylene) Limited QUANTITY RADIOACTIVE MATERIAL | NA | NA | LIQUID/ORGANIC SOLVENTS | P33-C1 | 3.70999 ^{mBq} | NA | 0.12 m ³ | ODU-4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| FOR CONSIGNEE USE ONLY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

NRC FORM 540
(7-2007)

U.S. NUCLEAR REGULATORY COMMISSION

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
SHIPPING PAPER**

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
512-222-2222

ORGANIZATION
12000 PINE CREEK HWY

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
 YES
 NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST
=====> *1*

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT?
If "Yes," provide Manifest Number

YES
 NO

EPA MANIFEST NUMBER
234578755

5. SHIPPER - NAME AND FACILITY
...

SHIPPER I.D. NUMBER
...

COLLECTOR

PROCESSOR

GENERATOR TYPE (Specify)

USER PERMIT NUMBER
...

SHIPMENT NUMBER
...

CONTACT
...

TELEPHONE NUMBER (Include Area Code)
77632-411

6. CARRIER - Name and Address
...

EPA I.D. NUMBER
...

SHIPPING DATE
...

CONTACT
...

TELEPHONE NUMBER (Include Area Code)
...

SIGNATURE - Authorized carrier acknowledging waste receipt
...

DATE
...

7. NRC FORM 540 AND 540A PAGE 1 OF
NRC FORM 541 AND 541A
NRC FORM 542 AND 542A
ADDITIONAL INFORMATION

9. CONSIGNEE - Name and Facility Address
...

SIGNATURE - Authorized consignee acknowledging receipt
...

10. This is to certify that the herein-named materials are in proper condition for transportation according to the regulations. This certifies that the materials are classified, packaged, and disposed as described in accordance with the applicable regulations.

AUTHORIZED SIGNATURE
...

TIN

| 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 IN SI UNITS |
|--|-----------------------------|---------------------|--------------------------------|------------------------------|--|
| <i>WASTE RADIOACTIVE MATERIAL</i> | <i>N/A</i> | <i>N/A</i> | <i>...</i> | <i>...</i> | <i>2.1E-02</i> |
| <i>Low level waste</i> | | | | | |
| <i>...</i> | | | | | |
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FOR CONSIGNEE USE ONLY

NRC FORM 541
(7-2007)

U.S. NUCLEAR REGULATORY COMMISSION

**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 (m ³) | NET WASTE WEIGHT (kg) | 1. MANIFEST TOTALS | | | |
|--|------------------------------------|-----------------------|----------------------------------|-------|-------|-------------|
| | | | SPECIAL NUCLEAR MATERIAL (grams) | | | |
| | | | U-233 | U-235 | Pu | TOTAL |
| 1 | 2.374 | 1.724 | | | | |
| ACTIVITY (MBq) | | | | | | SOURCE (kg) |
| ALL NUCLIDES | | TRITIUM | C-14 | Tc-99 | I-129 | |
| | | | | | | |

| DISPOSAL CONTAINER DESCRIPTION | | | | | |
|---|---------------------------------------|-----------------------------|------------------------------------|---|--|
| 6. CONTAINER IDENTIFICATION NUMBER/GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL <input type="checkbox"/> (µSv/hr) <input checked="" type="checkbox"/> (mSv/hr) | 10. SURFACE CONTAMINATION MBq/100cm ² ALPHA BETA-GAMMA |
| P-11 | | 2.374 | 1.724 | 0.01 | 0.01 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER | | | | |
|--|--|---|-----------------------------------|--|
| PHYSICAL DESCRIPTION | | | CHEMICAL DESCRIPTION | |
| 11. WASTE DESCRIPTION (See Note 2) | 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER | 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | 14. CHEMICAL FORM/CHELATING AGENT | 15. WEIGHT % CHELATING AGENT IF > 0.1% |
| 29 | 2.374 | 1.724 | None | None |
| | | | | |
| | | | | |
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| | | | | |

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

| | |
|-------------------------------|---|
| 1. Wooden Box or Crates | 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compactible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompactible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability
For all solidification media, the vendor (manufacturer) and brand name must be listed.

Sorption

| | | | |
|--------------------------|------------------|--------------------|-----------------|
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemsil 30 | 74. Petrosel |
| 61. Celetom | 65. Safe N Dri | 70. Chemsil 50 | 75. Petrosel II |
| 62. Floor Dry/ Superfine | 66. Florco | 71. Chemsil 3030 | 76. Aquaset |
| 63. Hi Dri | 67. Florco X | 72. Dicaperl HP200 | 77. Aquaset II |
| | 68. Solid A Sorb | 73. Dicaperl HP500 | |

| | | | | | | | | | | |
|--|--|---|---------------------|--------------------------------|--|------------------------------|--|--|--|--|
| NRC FORM 540 (7-2007) | | U.S. NUCLEAR REGULATORY COMMISSION | | | 5. SHIPPER - NAME AND FACILITY [Handwritten: ...] | | SHIPPER I.D. NUMBER [Blank] | | 7. NRC FORM 540 AND 540A PAGE 1 OF NRC FORM 541 AND 541A _____ NRC FORM 542 AND 542A _____ ADDITIONAL INFORMATION _____ | |
| UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER | | | | | USER PERMIT NUMBER [Blank] SHIPMENT NUMBER [Blank] | | <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specify) | | 9. CONSIGNEE - Name and Facility Address [Handwritten: ...] | |
| 1. EMERGENCY TELEPHONE NUMBER (Include Area Code) [Blank] | | | | | CONTACT [Blank] | | TELEPHONE NUMBER (Include Area Code) [Blank] | | SIGNATURE - Authorized consignee acknowledging receipt [Handwritten: ...] | |
| ORGANIZATION [Blank] | | | | | 6. CARRIER - Name and Address [Handwritten: ...] | | EPA I.D. NUMBER [Blank] | | SHIPPING DATE [Blank] | |
| 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 [Handwritten: 2] | | | CONTACT [Blank] | | TELEPHONE NUMBER (Include Area Code) [Blank] | | 10. This is to certify that the herein-named materials are in proper condition for transportation according to the certifies that the materials are classified, packaged, m disposal as described in accordance with the applicat regulations. | |
| 4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO | | EPA MANIFEST NUMBER [Handwritten: N/A] | | | SIGNATURE - Authorized carrier acknowledging waste receipt [Handwritten: ...] | | DATE [Blank] | | AUTHORIZED SIGNATURE [Handwritten: ...] | |
| 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 IN SI UNITS | | |
| [Handwritten: ...] | | [Handwritten: ...] | [Handwritten: ...] | [Handwritten: ...] | | [Blank] | | [Handwritten: ...] | | |
| [Handwritten: ...] | | [Blank] | [Blank] | [Blank] | | [Blank] | | [Blank] | | |
| [Handwritten: ...] | | [Blank] | [Blank] | [Blank] | | [Blank] | | [Blank] | | |
| [Handwritten: ...] | | [Blank] | [Blank] | [Blank] | | [Blank] | | [Blank] | | |
| [Handwritten: ...] | | [Blank] | [Blank] | [Blank] | | [Blank] | | [Blank] | | |
| [Handwritten: ...] | | [Blank] | [Blank] | [Blank] | | [Blank] | | [Blank] | | |
| FOR CONSIGNEE USE ONLY | | | | | | | | | | |

NRC FORM 541
(7-2007)

U.S. NUCLEAR REGULATORY COMMISSION

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

| 1. MANIFEST TOTALS | | | | | | |
|---|------------------------------------|-----------------------|----------------------------------|-------|----|-------------|
| NUMBER OF PACKAGES/ DISPOSAL CONTAINERS | NET WASTE VOLUME (m ³) | NET WASTE WEIGHT (kg) | SPECIAL NUCLEAR MATERIAL (grams) | | | |
| | | | U-233 | U-235 | Pu | TOTAL |
| 2 | 0.27 | 1 | | | | |
| ACTIVITY (MBq) | | | | | | SOURCE (kg) |
| ALL NUCLIDES | TRITIUM | C-14 | Tc-99 | I-129 | | |
| | | | | | | |

DISPOSAL CONTAINER DESCRIPTION

WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

| 5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR ID NUMBER(S) | 6. CONTAINER DESCRIPTION (See Note 1) | 7. VOLUME (m ³) | 8. WASTE AND CONTAINER WEIGHT (kg) | 9. SURFACE RADIATION LEVEL | | 10. SURFACE CONTAMINATION MBq/100cm ² | | 11. PHYSICAL DESCRIPTION | | | 14. CHEMICAL DESCRIPTION | | 15. INDIVIDUAL F CONTAINER A | |
|--|---------------------------------------|-----------------------------|------------------------------------|-----------------------------------|-----------------------------------|--|------------|------------------------------------|--|---|--------------------------------|------------------------------------|------------------------------|---|
| | | | | <input type="checkbox"/> (µSv/hr) | <input type="checkbox"/> (mSv/hr) | ALPHA | BETA-GAMMA | 11. WASTE DESCRIPTION (See Note 2) | 12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER | 13. SORBENT SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3) | CHEMICAL FORM/ CHELATING AGENT | WEIGHT % CHELATING AGENT IF > 0.1% | | |
| P-2 | | 0.11 | 1 | | | | | | | | | | | 7 |
| | | | | | | | | | | | | | | |
| 1-2 | | 0.11 | 1 | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
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NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural 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 | 19. Other. Describe in item 6, or additional page |
| 7. Polyethylene Tank or Liner | |
| 8. Fiberglass Tank or Liner | |

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

| | | |
|----------------------------|----------------------------------|--|
| 20. Charcoal | 29. Demolition Rubble | 38. Evaporator Bottoms/Sludges/Concentrates |
| 21. Incinerator Ash | 30. Cation Ion-exchange Media | 39. Compressible Trash |
| 22. Soil | 31. Anion Ion-exchange Media | 40. Noncompressible Trash |
| 23. Gas | 32. Mixed Bed Ion-exchange Media | 41. Animal Carcass |
| 24. Oil | 33. Contaminated Equipment | 42. Biological Material (except animal carcass) |
| 25. Aqueous Liquid | 34. Organic Liquid (except oil) | 43. Activated Material |
| 26. Filter Media | 35. Glassware or Labware | 59. Other. Describe in item 11, or additional page |
| 27. Mechanical Filter | 36. Sealed Source/Device | |
| 28. EPA or State Hazardous | 37. Paint or Plating | |

NOTE 3: For solidification media that meet disposal site structural stability
For all solidification media, the vendor (manufacturer) and brand name must be listed.

Sorption

| | | | |
|--------------------------|------------------|--------------------|-----------------|
| 60. Speedi Dri | 64. Safe T Sorb | 69. Chemsil 30 | 74. Petroset |
| 61. Celatom | 65. Safe N Dri | 70. Chemsil 50 | 75. Petroset II |
| 62. Floor Dry/ Superfine | 66. Florco | 71. Chemsil 3030 | 76. Aquaset |
| 63. Hi Dri | 67. Florco X | 72. Dicaperl HP200 | 77. Aquaset II |
| | 68. Solid A Sorb | 73. Dicaperl HP500 | |

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number 003345787 JJK | | |
|---|--|------------------------|--------------|--|---|-----------------|----------|
| 5. Generator's Name and Mailing Address | | | | Generator's Site Address (if different than mailing address) | | | |
| Generator's Phone: | | | | U.S. EPA ID Number | | | |
| 6. Transporter 1 Company Name | | | | U.S. EPA ID Number | | | |
| 7. Transporter 2 Company Name | | | | U.S. EPA ID Number | | | |
| 8. Designated Facility Name and Site Address | | | | U.S. EPA ID Number | | | |
| Facility's Phone: | | | | U.S. EPA ID Number | | | |
| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers | | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | |
| | | No. | Type | | | | |
| X | 1. WASTE FURNITURE (WASTE) (HAZARDOUS) (HAZARDOUS) | 001 | HF | 002 | G | 001 | 003, 005 |
| X | 2. WASTE RADIOACTIVE MATERIALS (LDR SPECIFIC ACTIVITY (LSAW)) (HAZARDOUS) | 001 | HF | 004 | L | 001 | 0052 |
| | 3. | | | | | | |
| | 4. | | | | | | |
| 14. Special Handling Instructions and Additional Information | | | | | | | |
| 15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true. | | | | | | | |
| Generator's/Offeror's Printed/Typed Name | | | | Signature | | Month Day Year | |
| SHERI VANN | | | | <i>Sheri Vann</i> | | 11 06 09 | |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.: | | | | | | | |
| 17. Transporter Acknowledgment of Receipt of Materials | | | | | | | |
| Transporter 1 Printed/Typed Name | | | | Signature | | Month Day Year | |
| LEONARD KIRK | | | | <i>Leonard Kirk</i> | | 11 29 09 | |
| Transporter 2 Printed/Typed Name | | | | Signature | | Month Day Year | |
| 18. Discrepancy | | | | | | | |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection | | | | | | | |
| Manifest Reference Number: | | | | | | | |
| 18b. Alternate Facility (or Generator) | | | | U.S. EPA ID Number | | | |
| Facility's Phone: | | | | U.S. EPA ID Number | | | |
| 18c. Signature of Alternate Facility (or Generator) | | | | | | Month Day Year | |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) | | | | | | | |
| 1. | | 2. | | 3. | | 4. | |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a | | | | | | | |
| Printed/Typed Name | | | | Signature | | Month Day Year | |
| Steve Williams | | | | <i>Steve Williams</i> | | 11 06 09 | |

NRC FORM 540
(7-2007)

U.S. NUCLEAR REGULATORY COMMISSION

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)
(865) 220-3520

ORGANIZATION
BIONOMICS, INC.

2. IS THIS AN "EXCLUSIVE USE" SHIPMENT?
 YES
 NO

3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST
=====> *1*

4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number
 YES
 NO

EPA MANIFEST NUMBER
003345787 JJA

5. SHIPPER - NAME AND FACILITY
*OLD DOMINION L&B
5255 HAMPSHIRE BLVD
PO BOX 111111
NORFOLK VA 23529*

USER PERMIT NUMBER

SHIPMENT NUMBER

CONTACT
SHERI VANN

TELEPHONE NUMBER (Include Area Code)
(757) 683-4475

6. CARRIER - Name and Address
*BIONOMICS, INC.
1550 BEAR CREEK RD
OAK RIDGE TN 37830*

CONTACT
JOHN MCCORMICK

TELEPHONE NUMBER (Include Area Code)
(865) 220-3511

SIGNATURE - Authorized carrier acknowledging waste receipt
[Signature]

DATE
11/2/09

SHIPPER I.D. NUMBER

COLLECTOR
 PROCESSOR
 GENERATOR TYPE (Specify)

TELEPHONE NUMBER (Include Area Code)
(757) 683-4475

EPA I.D. NUMBER
IND952116473

SHIPPING DATE
11/2/09

TELEPHONE NUMBER (Include Area Code)
(865) 220-3511

DATE
11/2/09

7. NRC FORM 540 AND 540A PAGE 1 OF

NRC FORM 541 AND 541A

NRC FORM 542 AND 542A

ADDITIONAL INFORMATION

9. CONSIGNEE - Name and Facility Address
*PERMA-FIX
1940 NW 67TH PL
GAINESVILLE FL 32609*

SIGNATURE - Authorized consignee acknowledging receipt
[Signature]

DATE
11/2/09

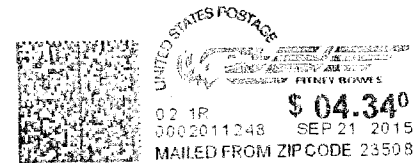
AUTHORIZED SIGNATURE
[Signature]

TR

| 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. TRANSPO INDEX | 14. PHYSICAL AND CHEMICAL FORM | 15. INDIVIDUAL RADIONUCLIDES | 16. TOTAL PACKAGE ACTIVITY IN SI UNITS |
|--|-----------------------------|-------------------|--------------------------------|------------------------------|--|
| <i>WASTE RADIOACTIVE MATERIAL LOW SPECIFIC ACTIVITY (LSAL) (315) T, UN 3321</i> | <i>N/A</i> | <i>N/A</i> | <i>LIQ 10/0X1003</i> | <i>C14, H2</i> | <i>1139 3.1352</i> |
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FOR CONSIGNEE USE ONLY

Sheri A. Vann
EH & S Department
Old Dominion University
5255 Hampton Blvd.
Spring Hall, Suite 2501
Norfolk, VA 23529



1ES00



USPS TRACKING #



80 Jan 2013
60087948

Licensing Assistant Section
Nuclear Materials Safety Branch
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
E. Pottsville PA 19406-2713

This is to acknowledge the receipt of your letter/application dated

09/18/2015, and to inform you that the initial processing which includes an administrative review has been performed.

45-09599-03 (Termination)
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

Please provide to this office within 30 days of your receipt of this card

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 588977.
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader