

IPD

PHARMACEUTICAL DISCOVERY, LLC

J-6

February 19, 2013

Mr. Dennis Lawyer
Health Physicist
Licensing Assistance Section
Nuclear Materials Safety Branch
U. S. Nuclear Regulatory Commission, Region I, DNMS
2100 Renaissance Boulevard, Suite 100
King of Russia, PA 19406-2713

NRC license number: 06-30480-01
Docket number: 030-34841

Dear Mr. Lawyer,

The Institutes for Pharmaceutical Discovery, LLC, (IPD) is requesting termination of its NRC License no. 06-30480-01, Docket no. 030-34841 located at 23 Business Park Drive, Branford, Connecticut 06405. The decommissioning surveys and report are attached. All records related to this license, decommissioning surveys and data will be maintained by Michael Fare, Chief Operating Officer. After the license has been terminated, IPD will maintain copies of all survey records and related materials at Cornerstone Records Management, 76 Halcyon Drive, Bristol, CT, 06410 or a similarly secure records retention facility for 5 years in the event they should be needed in the future. Please contact me at my home number (203) 458-3399 if there are any questions or additional information is required.

Thank you,



Mr. Michael Fare
Management Representative
Chief Operating Officer
The Institutes for Pharmaceutical Discovery, L.L.C.
317 Nortontown Road
Guilford, CT 06437

REC RG 10221 13PM1255

February 20, 2013

The Institute for Pharmaceutical Discovery's Decommissioning Report

Table of Contents & Attachments:

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7. Room history for radioactive materials use and storage
8. Color coded facility diagram of rooms and areas surveyed
9. Sanitary sewer release log sheets
10. Radioactive waste manifests
11. Facility diagrams, as-builts

cc: Mr. Michael Fare
Management Representative
Chief Operating Officer
(203) 458-3399

Ms. June Tamkin-Price
Radiation Safety Officer
(203) 230-2594 Office phone
(203) 507-3461 Cell phone

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 Information Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-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

The Institutes for Pharmaceutical Discovery, L.L.C.
23 Business Park Drive
Branford, CT 06405

LICENSE NUMBER

License No. 06-30480-01

DOCKET NUMBER

Docket No. 030-34841

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:
- ☒ 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.

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: _____ 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
Mr. Michael Fare	Chief Operating Officer	203-458-3399	michael.fare@gmail.com

Mail all future correspondence regarding this license to:

Mr. Michael Fare, 317 Nortontown Road, Guilford, CT 06437-2294

C. CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE

Mr. Michael Fare, Management Representative, COO

SIGNATURE

Michael Fare

DATE

1/31/13

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.



PHARMACEUTICAL DISCOVERY, LLC

February 19, 2013

Mr. Dennis Lawyer
Health Physicist
Licensing Assistance Section
Nuclear Materials Safety Branch
U. S. Nuclear Regulatory Commission, Region I, DNMS
2100 Renaissance Boulevard, Suite 100
King of Russia, PA 19406-2713

NRC license number: 06-30480-01

Docket number: 030-34841

Dear Mr. Lawyer:

On November 30, 2012, the Institutes for Pharmaceutical Discovery, LLC, (IPD) notified the NRC of its intent to terminate its specific research and development NRC license number 06-30480-01, Docket no. 030-34841 located at 23 Business Park Drive, Branford, Connecticut 06405. As a follow-up to the notification, IPD vacated the currently leased facility on 15 December 2012. Therefore, in an effort to initiate the decommissioning process, a thorough historical review and site characterization of the licensed radioactive materials received, used and/or stored in the radioactive materials laboratories and associated radioactive waste storage rooms were conducted. This review spanned the entire duration of the NRC license number 06-30480-01, 1999 through 2012.

IPD received approval for its original NRC License Application in 1999 and began working with licensed materials, having short half-lives of 120 days or less, involving minimal tracer studies shortly thereafter. According to IPD's radioisotope inventory records of purchases received, the first order of phosphorus-32, 0.250 milliCuries (mCi), was received on 4/23/1999. Twelve orders of phosphorus-32, 0.250 mCi each, were recorded as being received in 1999 with a total activity of 3.0 mCi of phosphorus-32. This was representative of phosphorus-32 orders received through 2003, at which point, phosphorus-32 use was discontinued, according to the available files. On May 15, 2000, 1.0 mCi of sulfur-35 was recorded representing the first and only order having been received. Also, there were approximately 4 orders of radioiodine-125, ranging in activities from 0.050 mCi to 0.250 mCi, and several orders of very low level activity IRA-I-125 kits over the course of the license and were discontinued by 2009. Although IPD's license was authorized to receive phosphorus-33, from the records, there were never any orders placed or received during the course of the license. In summary, due to



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the length of elapsed time between the last orders received of licensed materials with short half-lives of 120 days or less and the initiation of the termination surveys in November 2012, these licensed materials and associated use and storage, etc. would have been decayed (undergone greater than ten half-lives of decay).

The first orders of licensed materials with half lives greater than 120 days were of tritium, 5.0 mCi, and carbon-14, 0.250 mCi, and were recorded as being received on October 10, 2001. The last three orders of tritium, 1.0 mCi, 0.250 mCi and 0.250 mCi were received on 9/28/2011 and the last order of carbon-14, 1.0 mCi, was recorded as being received on May 11, 2010; however, it was never opened or used. Over the entire history of the use at IPD, approximately 50 mCi of tritium were recorded as being ordered and received, with the majority of orders being 1 mCi or less, ranging from 0.250 mCi up to 5.0 mCi in activity per order. For carbon-14 purchases, a total of approximately 10 mCi were recorded as being received in total, with typical activities of orders ranging from 0.05 mCi to 1.0 mCi per order.

Further, there was a cessation of isotope orders and use of radioactive materials orders and use that spanned approximately 1.5 years from the fall of 2009 until May 11, 2010, when approximately, 1 mCi of carbon-14 was received; however, it was never opened or used. On August 10, 2011, 1.0 mCi of tritium was received and minimal tracer work resumed. On August 19, 2011, 1.0 mCi of tritium was again received for minimal tracer work. The last three radioactive materials orders were received on September 28, 2011 and were approximately 0.250 mCi, 0.250 mCi and 1.0 mCi of tritium or 1.5 mCi in total. This represented a total of approximately 3.5 mCi of tritium and 1.0 mCi of carbon-14 having been ordered and received since early 2009 and May of 2010, respectively. Therefore, over the years, only minimal tracer studies were performed at IPD during its entire license history. Further, sealed sources of licensed materials were never possessed, purchased, used or stored at The Institutes for Pharmaceutical Discovery facility for the duration of the license.

Summary of unsealed licensed materials, purchase, receipt and use status:

Phosphorus-33 - Never purchased, received or used.

Phosphorus-32 - Discontinued purchase, receipt and use in 2003.

Tritium – Discontinued purchase & receipt in 2011 and use in May 2012.

Carbon-14 - Discontinued purchase, receipt and use in 2010.

Sulfur-35 - Discontinued purchase, receipt and use in 2000.

Iodine-125 - Discontinued purchase, receipt and use in 2009.

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In preparation for the license termination at IPD, a thorough history of the radioactive materials use and storage was performed covering the entire duration of the NRC License #06-30480-01. Specifically, reviews of research protocols, room usage and storage of licensed materials; Principal Investigators', Authorized Users' and/or RSO's surveys; purchase orders; radioisotope inventories; emergency response or spill history; sanitary sewer disposals; and waste storage and disposal records were conducted. Radioactive materials use was performed in the approved research laboratory areas only. There were no significant spills or releases that occurred or were reported in the licensed facilities at IPD. Any radioactive contamination detected during routine work and/or radiation safety surveys was documented to be decontaminated to levels well below the NRC's release guidance criteria, NRC License requirements and/or Regulatory Guide 8.23 limits at the time. Further, based on the surveys done over the years and historical site assessment, it was expected that no radioactive contamination would be detected above or a significant fraction of the DCGL values per the NRC's guidance provided in the Federal Register, Vol. 63, No. 222, Wednesday, November 18, 1998, page 64134, Table 1. for DCGL values for building surface contamination levels.

The table below represents the highest routine work and monthly wipe test survey results recorded during IPD's NRC license history. Further, there was a trend of radioactive materials use being tapered off over the years during the NRC license period to very minimal and infrequent use.

REPRESENTATIVE WIPE TEST SURVEY HISTORY INITIAL RESULTS EXCEEDING 220 DPM/100CM² POST DECONTAMINATION AND RE-WIPE RESULTS

Date	Room Location	Wipe Test Description	Initial Result dpm/100cm ²	Post-decontamination Result dpm/100cm ²
3/1/2002	305/306	Radioactive waste container	1,562	27
5/1/2002		Floor (work area)	1,084	26
2/2/2004	305/306	door	902	62
12/16/2009	305/306	Two glucose machines	791	52.9

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A review of room histories licensed for radioactive materials use and storage was performed. Rooms 201, 300, 305, 306, 141 and RW2 were used for licensed materials usage and storage during the NRC license period. Rooms 309, 310, 322, 174, 427, 131, 132, 133, 134 were never utilized for radioactive material studies; these rooms were included on the initial license in the event of a need arising at a later date. Therefore, the licensed materials work was confined to very limited areas of the IPD facility. Please see the attached summary with descriptions. A facility as-built diagram is also attached, identifying the licensed rooms and areas that were surveyed

Final Status Surveys

IPD was considered to be under Group 2 decommissioning, and the “Simplified Survey Procedure” in NUREG 1757, Volume 1, was followed for the termination survey. One hundred percent of the scanning of all surfaces in the area of the facility where licensed material was used or stored was surveyed using an appropriate detection instrument. The Ludlum GM survey meter model #3 with a Ludlum model #44-9 detector was used to perform surveys at IPD. The information provided in MARSSIM manual (NUREG 1757) was utilized to determine decision levels and minimum detectable activities. The default values for the observational interval (T) default = 1 second and index of sensitivity (d') default = 2 were used. The background for the meter was 100 cpm. Therefore, the minimum detectable count rate (MDCR) for carbon-14 was 155 cpm and the decision level (DL) was 255 cpm or greater for a surveyor to consider a meter reading to be significant for the detection of carbon-14 contamination. Further, the minimum detectable concentration (MDC) for the detection of building surface contamination for carbon-14 was 256 dpm/cm².

In an effort to be as conservative as possible, very thorough and extensive wipe test surveys were performed. Therefore, one hundred percent of all surfaces in the areas of the facility where licensed material was used or stored were surveyed with wipe tests, at a frequency of one wipe comprising 1 square yard, within which the entire surface area of each individual 3 foot by 3 foot square area was wiped.

All floors were marked off and numbered with 3 foot by 3 foot squares, and wipe tests were taken of each 3 foot square and counted using a liquid scintillation counter. A GM meter Ludlum model #3 and model #44-9 detector was used to survey the entire floor surface and measure ambient external gamma exposure rates. External ambient gamma radiation exposure rates were obtained at one meter above and away from all surfaces using a calibrated GM survey meter, Ludlum model #3 and model #44-9 detector, and no positive readings were detected in the facility. Walls were surveyed up to a height of 7

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feet, using a similar grid pattern of 5 feet x 5 feet, as appropriate. Wall surfaces were wipe tested. Meter and wipe test surveys were obtained from the sink drains, the traps, and as far down the drain pipes as possible. The hood and vacuum line were also surveyed where licensed material was used or stored. All wipe test results were well below the DCGL levels as per the NRC's guidance provided in the Federal Register, Vol. 63, No. 222, Wednesday, November 18, 1998, page 64134, Table 1. for DCGL values for building surface contamination levels. All survey results and wipe tests were analyzed by an independent outside agent, RSA Laboratories (RSA), 19 Pendleton Drive, Hebron, CT 06428 (Office: 860-228-0487; fax: 860-228-4402) and are attached.

In an effort to be as conservative as possible, even though the following licensed rooms, 309, 310, 322, 174, 427, 131, 132, 133, 134, were never used for radioactive material use or storage, as determined during the historical review, thorough GM meter and wipe test surveys were also performed in these areas. Additionally, representative GM meter and wipe test surveys were performed of general access or unrestricted areas at IPD. All wipe test results were well below the DCGL levels as per the NRC's guidance provided in the Federal Register, Vol. 63, No. 222, Wednesday, November 18, 1998, page 64134, Table 1. for DCGL values for building surface contamination levels.

Further, in support of the decommissioning process, surveys were also performed of all accessible areas of equipment having been used for licensed materials work and/or storage. With the exception a small refrigerator/freezer unit in room 201 involving melted ice sampling described below, all results were well below the DCGL levels as per the NRC's guidance provided in the Federal Register, Vol. 63, No. 222, Wednesday, November 18, 1998, page 64134, Table 1. for DCGL values for building surface contamination levels.

The small refrigerator/freezer unit located under the bench top in room 201 was GM meter and wipe test surveyed and found to be indistinguishable from background. We also did preliminary sampling of the ice melt inside of this unit, including a defrosted sample, and the results were indistinguishable from background, using the company's liquid scintillation counter. Unknowingly, the RSO later found that a lab member had taken the refrigerator/freezer unit outside and inadvertently discarded the defrosted water, approximately, 500 ml in volume. Therefore, to be as conservative as possible, it was decided to have the water sample analyzed again by the independent outside agent, RSA. In an independent evaluation, RSA found that the defrosted water samples contained a small amount of tritium, 64,000 DPM/ml or 14.4 μCi in a total volume of 500 ml. Further, a soil sample was obtained in the area where the defrosted water was discarded to see if there was any residual contamination in the soil. When the third-party analysis

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indicated tritium contamination of the water from the initial wipe, the company survey team collected soil samples and submitted them to RSA for an analysis of both dried and undried samples, the latter to detect tritium in the aqueous phase. Both dried and undried samples showed that the soil samples was well below the DCGL values as per the NRC's guidance provided in the Federal Register, Vol. 64, No. 234, Tuesday, December 7, 1999, page 68396, Table 3. for DCGL values for soil surface contamination levels.

As part of the preliminary ice water sampling of the freezer compartment within the small refrigerator described above, one very small droplet of melted ice fell on the floor in front of this unit. As a precautionary measure, it was immediately absorbed onto a wipe test for LSC analysis and floor area cleaned or decontaminated. The floor final survey results were indistinguishable from background and well below the DCGL levels as per the NRC's guidance provided in the Federal Register, Vol. 63, No. 222, Wednesday, November 18, 1998, page 64134, Table 1. for DCGL values for building surface contamination levels.

The annual sanitary sewer release limits for this room were Alara or significantly below the limits designated in 10 CFR part 20.2003. All releases corresponded to the solubility criteria in 10 CFR part 20.2003. Copies of records that were in the files of the radioisotopes, dates released, and estimated quantities released into the sanitary sewer are being included as an attachment. In addition, there were no sanitary sewer disposals of liquid radioactive waste in either of the two designated sinks during the decommissioning surveys or in the recent past. Sanitary sewer disposals were ceased prior to May 2012, when research involving tracer levels of tritium was discontinued. Over the years, only trace quantities of tritium and carbon-14 were disposed of into the sanitary sewer, as per the files.

Radioactive waste (i.e. tritium and carbon-14) was always transferred to a licensed waste broker and disposal facility during the duration of IPD's license. In preparation for the termination of this license no. 06-30480-01, The Institutes for Pharmaceutical Discovery, L.L.C. enlisted services from Philotechnics, Ltd, 201 Renovare Blvd, Oak Ridge, TN 37830, Office: 865-285-3064, Cell: 865-805-2416 and Fax: 865-220-0686. All licensed materials and radioactive waste were prepared, packaged, and shipped for disposal by Philotechnics, Ltd. As requested, copies of all of the radioactive manifests are attached. On November 26, 2012, a final radioactive waste shipment was conducted to remove all remaining licensed materials, equipment, and radioactive waste from the Branford, Connecticut, site. The exterior surfaces of all radioactive waste containers were surveyed with the GM survey meter and wipe test. The results were indistinguishable from background.

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A final decommissioning radiation safety survey was performed of the pathway that followed the approved vendors' exit of the building during transportation of the sealed radioactive waste containers to their truck (i.e., path of egress). Radiological surveys indicated there was no residual radioactive contamination present. The building remained in the secured state. As per IPD's files, copies of records of the radioactive waste manifests covering the duration of the NRC license are being included as an attachment.

In conclusion, a review of the final status survey results indicates that the IPD facility meets the requirements for unconditional release.

If you require additional information or have questions, please contact Mr. Michael Fare at his home phone number (203) 458-3399.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Fare", with a long horizontal flourish extending to the right.

Mr. Michael Fare

Management Representative

Chief Operating Officer

The Institutes for Pharmaceutical Discovery, L.L.C.

317 Nortontown Road

Guilford, CT 06437

RSA Laboratories **Radiochemistry Analysis Data Sheet**

Customer: June Tamkin

Sample Type: Wipes

Matrix: Wipes

RSA

Isotope 1 H-3

Isotope 2 C-14

Isotope 3 HE Beta

RSA ID#:

Location

Collect Date: Not Indicated

Count Date: 12/4/2013

Project: Decommissioning

Location: Institute for Pharmaceutical Discovery

Cust ID #:

of Pages:

Report No.	Location	POS	ID #	Cust ID #	Background	CPMA	DPMA	CPMB	DPMB	CPMC	
1			1 BG			8.80		15.10		3.20 bg	
2			2 33276-1		1	1.33	5.87	0.91	1.29	0.00	1
3			3 33276-2		2	0.00	0.00	2.93	4.44	0.00	2
4			4 33276-3		3	0.00	0.00	5.96	8.87	0.00	3
			5 33276-4		4	4.65	15.22	6.97	10.30	0.00	4
			6 33276-5		5	2.44	14.61	0.00	0.00	0.00	5
			7 33276-6		6	0.00	0.00	0.00	0.00	0.00	6
			8 33276-7		7	1.33	0.00	6.97	10.42	0.80	7
			9 33276-8		8	0.00	0.00	6.97	10.43	1.80	8
			10 33276-9		9	1.33	4.46	1.92	2.83	0.00	9
			11 33276-10		10	0.22	1.24	0.00	0.00	2.80	10
			12 33276-11		11	0.00	0.00	5.96	8.91	0.80	11
			13 33276-12		12	2.44	14.24	0.00	0.00	1.80	12
			14 33276-13		13	0.00	0.00	7.98	12.19	0.00	13
			15 33276-14		14	0.22	1.28	0.00	0.00	0.80	14
			16 33276-15		15	5.76	1.66	18.08	27.39	9.80	15
			17 33276-16		16	0.00	0.00	11.01	16.50	0.00	16
			18 33276-17		17	4.65	25.87	0.91	1.16	0.80	17
			19 33276-18		18	7.98	35.56	5396.00	8.58	15.80	18
			20 33276-19		19	4.65	27.01	0.00	0.00	4.80	19
			21 33276-20		20	2.44	7.50	3.94	5.84	0.80	20
			22 33276-21		21	3.55	21.24	0.00	0.00	0.00	21
			23 33276-22		22	0.22	1.32	0.00	0.00	0.00	22
			24 33276-23		23	2.44	10.79	1.92	2.77	0.00	23
			25 QC H-3		QC H-3	41253.80	183605.00	888.96	0.00	0.00 QCH3	
			26 33276-24		24	1.33	7.84	0.00	0.00	0.80	24
			27 33276-25		25	0.22	0.00	0.91	1.40	0.00	25
			28 33276-26		26	0.00	0.00	4.95	7.58	0.00	26
			29 33276-27		27	0.00	0.00	10.00	15.47	0.00	27
			30 33276-28		28	0.00	0.00	7.98	12.29	0.00	28
			31 33276-29		29	0.00	0.00	2.93	4.55	0.00	29
			32 33276-30		30	0.00	0.00	2.93	4.53	0.00	30
			33 33276-31		31	4.65	30.68	0.00	0.00	0.00	31
			34 33276-32		32	7.98	50.29	0.00	0.00	0.00	32
			35 33276-33		33	0.00	0.00	0.00	0.00	0.00	33
			36 33276-34		34	0.00	0.00	0.91	1.40	0.00	34
			37 33276-35		35	0.00	0.00	2.93	4.61	0.00	35
			38 33276-36		36	0.00	0.00	1.92	2.95	0.00	36
			39 33276-37		37	0.00	0.00	1.92	2.98	0.00	37
			40 33276-38		38	0.00	0.00	15.05	2.92	0.00	38
			41 33276-39		39	1.33	0.00	20.10	30.96	0.00	39
			42 33276-40		40	0.00	0.00	3.94	6.05	0.00	40
			43 33276-41		41	0.00	0.00	0.00	0.00	0.00	41
			44 33276-42		42	0.00	4.88	1.92	2.89	0.00	42

45 33276-43	43
46 33276-44	44
47 33276-45	45
48 33276-46	46
49 QC C-14	QC C-14
50 33276-47	47
51 33276-48	48
52 33276-49	49
53 33276-50	50
54 33276-51	51
55 33276-52	52
56 33276-53	53
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65 33276-62	62
66 33276-63	63
67 33276-64	64
68 33276-65	65
69 33276-66	66
70 33276-67	67
71 33276-68	68
72 33276-69	69
73 QC BL	QC BL
74 33276-70	70
75 33276-71	71
76 33276-72	72
77 33276-73	73
78 33276-74	74
79 33276-75	75
80 33276-76	76
81 33276-77	77
82 33276-78	78
83 33276-79	79
84 33276-80	80
85 33276-81	81
86 33276-82	82
87 33276-83	83
88 33276-84	84
89 33276-85	85
90 33276-86	86
91 33276-87	87
92 33276-88	88
93 33276-89	89
94 33276-90	90
95 33276-91	91
96 33276-92	92
97 QC H-3	QC H-3
98 33276-93	93

1.33	9.16	0.00	0.00	0.00	43
6.87	42.16	0.00	0.00	1.80	44
9.08	38.10	10.00	14.85	3.80	45
9.08	57.15	0.91	0.97	3.80	46
26919.30	6767.60	95876.20	133699.00	0.00	QCCMA
3.55	21.75	0.00	0.00	0.00	47
0.00	0.00	0.00	0.00	0.00	48
7.98	32.01	8.99	13.27	1.80	49
0.00	0.00	0.00	0.00	0.00	50
0.00	0.00	2.93	4.46	0.00	51
0.22	1.44	0.00	0.00	0.00	52
0.00	0.00	8.99	14.25	0.80	53
0.00	0.00	0.00	0.00	0.00	54
4.65	27.13	0.91	1.17	0.00	55
0.00	0.00	0.91	1.38	2.80	56
0.22	0.00	6.97	10.64	0.00	57
3.55	17.10	2.93	4.33	2.80	58
2.44	5.89	4.95	7.44	0.00	59
0.00	0.00	13.03	20.21	0.00	60
2.44	9.90	2.93	4.37	1.80	61
0.00	0.00	6.97	10.63	2.80	62
0.00	0.00	0.00	0.00	0.00	63
2.44	12.15	1.92	2.84	2.80	64
1.33	0.73	3.94	6.04	1.80	65
1.33	0.00	6.97	10.72	2.80	66
0.22	0.00	0.91	1.40	1.80	67
24.59	146.36	5.96	7.99	7.80	68
4.65	27.18	1.92	2.74	0.00	69
2.44	0.42	7.98	11.89	0.00	QCBL
0.22	0.00	2.93	4.52	2.80	70
0.00	0.00	7.98	12.41	0.80	71
1.33	0.00	6.97	10.64	0.00	72
0.00	0.00	5.90	8.99	0.00	73
2.44	13.74	0.91	1.28	1.80	74
0.00	0.00	8.99	13.78	0.00	75
0.00	0.00	3.94	5.97	0.00	76
0.00	0.00	4.95	7.49	0.00	77
0.00	0.00	12.02	18.39	0.00	78
0.00	0.00	0.00	0.00	0.00	79
3.55	17.62	1.92	2.74	3.80	80
46.75	332.51	0.91	0.00	18.80	81
0.00	0.00	3.94	6.05	0.00	82
6.87	2.68	21.12	32.08	3.80	83
0.22	0.00	11.01	16.73	0.00	84
0.00	0.00	8.99	29.44	0.00	85
2.44	7.40	3.94	5.82	0.00	86
2.44	13.80	0.91	1.28	3.80	87
0.00	0.00	7.98	12.04	0.00	88
0.00	0.00	2.93	6.82	0.00	89
0.00	0.00	2.93	4.71	0.00	90
15.73	89.50	7.98	11.60	0.80	91
0.00	0.00	4.95	7.61	0.00	92
34348.00	181786.00	856.63	0.00	0.00	QCH3
1.33	0.00	5.96	8.92	0.80	93

99 33276-94	94	5.76	31.29	2.93	4.22	0.00	94
100 33276-95	95	0.22	1.26	0.00	0.00	0.00	95
101 33276-96	96	4.65	30.44	0.00	0.00	3.80	96
102 33276-97	97	2.44	6.11	4.95	7.53	0.00	97
103 33276-98	98	0.00	0.00	10.00	15.46	1.80	98
104 33276-99	99	0.00	0.00	1.92	3.01	0.00	99
105 33276-100	100	0.00	0.00	2.93	4.43	0.00	100
106 33276-101	101	0.00	0.00	3.94	5.94	0.00	101
107 33276-102	102	1.33	9.31	0.00	0.00	0.00	102
108 33276-103	103	0.00	0.00	10.00	15.47	0.80	103
109 33276-104	104	3.55	14.39	3.94	5.82	0.00	104
110 33276-105	105	3.55	20.19	0.00	0.00	0.00	105
111 33276-106	106	1.33	8.34	0.00	0.00	0.00	106
112 33276-107	107	9.08	56.80	0.00	0.00	0.00	107
113 33276-108	108	0.00	0.00	0.91	1.40	0.00	108
114 33276-109	109	0.22	0.00	1.92	2.86	0.00	109
115 33276-110	110	0.00	0.00	4.95	7.68	0.00	110
116 33276-111	111	0.00	0.00	0.00	0.00	0.00	111
117 33276-112	112	1.33	8.27	0.00	0.00	1.80	112
118 33276-113	113	3.55	21.77	0.00	0.00	2.80	113
119 33276-114	114	2.44	15.54	0.00	0.00	0.00	114
120 33276-115	115	0.00	0.00	4.95	7.79	1.80	115
121 QC C-14	QC C-14	27578.90	4598.66	92731.30	135713.00	0.00	QCC14
122 33276-116	116	6.87	45.70	0.00	0.00	0.80	116
123 33276-117	117	0.00	0.00	4.95	7.52	0.80	117
124 33276-118	118	0.00	0.00	5.96	9.15	0.00	118
125 33276-119	119	0.00	0.00	0.00	0.00	0.00	119
126 33276-120	120	0.00	0.00	2.93	4.57	0.00	120
127 33276-121	121	0.00	0.00	3.94	6.17	0.00	121
128 33276-122	122	0.00	0.00	0.00	0.00	0.00	122
129 33276-123	123	0.00	0.00	0.00	0.00	0.00	123
130 33276-124	124	0.00	0.00	2.93	4.56	2.80	124
131 33276-125	125	0.22	0.00	13.03	20.11	0.00	125
132 33276-126	126	0.00	0.00	0.00	0.00	0.00	126
133 33276-127	127	0.00	0.00	11.01	16.96	1.80	127
134 33276-128	128	0.00	0.00	5.96	9.40	0.00	128
135 33276-129	129	8132.17	60323.80	171.65	0.00	0.00	129
136 33276-130	130	302.68	1871.88	13.03	5.91	0.00	130
137 33276-131	131	0.00	0.00	4.95	7.55	3.80	131
138 33276-132	132	0.00	0.00	8.99	14.52	0.00	132
139 33276-133	133	0.00	0.00	3.94	6.21	0.00	133
140 33276-134	134	3.55	19.01	1.92	2.78	1.80	134
141 33276-135	135	0.00	0.00	4.95	7.60	0.00	135
142 33276-136	136	1.33	0.00	4.95	7.55	0.00	136
143 33276-137	137	0.00	0.00	0.00	0.00	1.80	137
144 33276-138	138	31.24	178.05	3.94	4.53	6.80	138
145 QC BL	QC BL	0.00	0.00	8.99	13.52	2.80	BL
146 33276-139	139	0.00	0.00	6.97	10.60	0.00	139
147 33276-140	140	2.44	2.21	6.97	10.30	0.00	140
148 33276-141	141	1.33	0.00	5.96	9.03	0.80	141
149 33276-142	142	0.22	0.00	7.98	12.09	0.00	142
150 33276-143	143	0.00	0.00	0.00	0.00	0.00	143
151 33276-144	144	0.00	0.00	10.00	15.44	0.80	144
152 33276-145	145	32.35	188.85	1.92	1.43	7.80	145

153 33276-146	146	0.00	0.00	4.95	7.62	0.00	146
154 33276-147	147	1.33	6.98	0.91	1.34	0.80	147
155 33276-148	148	5.76	11.88	13.03	20.29	0.00	148
156 33276-149	149	5.76	26.43	4.95	7.27	2.80	149
157 33276-150	150	0.00	0.00	0.00	0.00	0.00	150
158 33276-151	151	2.44	13.31	0.00	0.00	0.00	151
159 33276-152	152	26.81	159.15	2.93	3.22	12.80	152
160 33276-153	153	0.00	0.00	8.99	13.44	2.80	153
161 33276-154	154	2.44	3.93	5.96	8.92	3.80	154
162 33276-155	155	2.44	15.12	0.00	0.00	1.80	155
163 33276-156	156	0.00	0.00	2.93	4.45	0.00	156
164 33276-157	157	0.00	0.00	0.00	0.00	0.00	157
165 33276-158	158	0.00	0.00	0.00	0.00	0.00	158
166 33276-159	159	4.65	29.48	0.00	0.00	0.00	159
167 33276-160	160	2.44	16.74	0.00	0.00	0.00	160
168 33276-161	161	1.33	0.00	4.95	7.64	0.00	161
169 QC H-3	QC H-3	27611.40	185422.00	706.10	0.00	0.00 H3	
170 33276-162	162	7.98	50.17	0.00	0.00	0.80	162
171 33276-163	163	1.33	8.56	0.00	0.00	0.00	163
172 33276-164	164	5.76	38.64	0.00	0.00	0.00	164
173 33276-165	165	2.44	16.15	0.00	0.00	0.00	165
174 33276-166	166	0.00	0.00	10.00	15.38	0.80	166
175 33276-167	167	0.22	1.49	0.00	0.00	0.80	167
176 33276-168	168	0.00	0.00	0.00	0.00	0.00	168
177 33276-169	169	0.22	1.50	0.00	0.00	0.00	169
178 33276-170	170	0.00	0.00	0.00	0.00	0.00	170
179 33276-171	171	0.00	0.00	0.00	0.00	0.00	171
180 33276-172	172	13.52	115.37	0.00	0.00	0.00	172
181 33276-173	173	4.65	24.85	2.93	4.30	0.80	173
182 33276-174	174	0.22	0.00	3.94	6.05	0.80	174
183 33276-175	175	0.00	0.00	0.00	0.00	0.00	175
184 33276-176	176	2.44	15.77	0.00	0.00	0.00	176
185 33276-177	177	0.00	0.00	0.00	0.00	1.80	177
186 33276-178	178	0.22	2.35	0.00	0.00	0.00	178
187 33276-179	179	4.65	25.42	1.92	2.71	0.80	179
188 33276-180	180	0.00	0.00	2.93	4.53	0.00	180
189 33276-181	181	0.00	0.00	2.93	4.53	0.00	181
190 33276-182	182	2.44	13.71	0.91	1.28	0.00	182
191 33276-183	183	0.00	0.00	0.00	0.00	0.00	183
192 33276-184	184	0.22	0.00	0.91	1.38	0.00	184
193 QC C-14	QC C-14	28892.30	13022.20	86309.00	133061.00	0.00 C14	
194 33276-185	185	5.76	26.69	4.95	7.28	0.00	185
195 33276-186	186	0.22	1.33	0.00	0.00	0.00	186
196 33276-187	187	0.00	0.00	0.00	0.00	0.00	187
197 33276-188	188	0.00	0.00	0.00	0.00	0.80	188
198 33276-189	189	0.00	0.00	0.00	0.00	0.00	189
199 33276-190	190	1.33	8.02	0.00	0.00	0.80	190
200 33276-191	191	0.22	1.25	0.00	0.00	1.80	191
201 33276-192	192	0.22	1.26	0.00	0.00	0.00	192
202 33276-193	193	0.22	1.25	0.00	0.00	0.80	193
203 33276-194	194	0.00	0.00	0.00	0.00	0.00	194
204 33276-195	195	6.87	35.59	2.93	4.11	0.00	195
205 33276-196	196	4.65	28.05	0.00	0.00	0.00	196
206 33276-197	197	0.00	0.00	4.95	7.44	0.00	197

207 33276-198	198	0.00	0.00	0.00	0.00	0.00	198
208 33276-199	199	0.00	0.00	0.00	0.00	0.00	199
209 33276-200	200	0.22	0.00	5.96	9.03	0.80	200
210 33276-201	201	2.44	14.41	0.00	0.00	1.80	201
211 33276-202	202	0.00	0.00	0.00	0.00	0.00	202
212 33276-203	203	3.55	15.66	2.93	4.25	0.00	203
213 33276-204	204	0.00	0.00	2.93	4.40	2.80	204
214 33276-205	205	0.22	0.00	4.95	7.38	0.80	205
215 33276-206	206	1.33	7.67	0.00	0.00	0.80	206
216 33276-207	207	2.44	9.08	2.93	4.29	1.80	207
217 QC BL	QC BL	0.00	0.00	0.00	0.00	0.80 BL	
218 33276-208	208	0.00	0.00	0.00	0.00	1.80	208
219 33276-209	209	0.00	0.00	6.97	10.54	4.80	209
220 33276-210	210	7.98	24.65	13.03	19.39	2.80	210
221 33276-211	211	0.00	0.00	0.91	1.38	2.80	211
222 33276-212	212	0.00	0.00	0.00	0.00	0.80	212
223 33276-213	213	0.22	0.00	3.94	5.92	0.80	213
224 33276-214	214	3.55	12.33	4.95	7.32	0.00	214
225 33276-215	215	0.00	0.00	10.00	21.17	1.80	215
226 33276-216	216	1.33	0.00	5.96	8.94	2.80	216
227 33276-217	217	0.00	0.00	2.93	4.00	3.80	217
228 33276-218	218	5.76	34.57	0.00	0.41	5.80	218
229 33276-219	219	1.33	6.20	0.91	0.00	0.00	219
230 33276-220	220	0.00	0.00	0.00	1.31	0.00	220
231 33276-221	221	0.00	0.00	0.00	0.00	0.00	221
232 33276-222	222	0.00	0.00	0.00	0.00	0.00	222
233 33276-223	223	0.00	0.00	0.00	0.00	0.00	223
234 33276-224	224	0.00	0.00	0.91	1.34	0.00	224
235 33276-225	225	0.22	1.13	0.00	0.00	0.80	225
236 33276-226	226	0.00	0.00	7.98	11.93	0.80	226
237 33276-227	227	0.00	0.00	0.00	0.00	0.00	227
238 33276-228	228	1.33	0.00	4.95	7.51	0.00	228
239 33276-229	229	3.55	17.52	0.00	0.00	1.80	229
240 33276-230	230	4.65	22.49	2.93	4.21	0.00	230
241 QC H-3	QC H-3	41598.30	186023.00	972.82	0.00	0.00 H3	
242 33276-231	231	79.98	45.18	0.00	0.00	0.00	231
243 33276-232	232	0.00	0.00	3.94	5.91	0.00	232
244 33276-233	233	9.08	48.99	0.00	0.00	0.80	233
245 33276-234	234	0.00	0.00	0.00	0.00	0.80	234
246 33276-235	235	12.41	73.48	0.00	0.00	11.80	235
247 33276-236	236	2.44	14.14	0.00	0.00	3.80	236
1 33276-237	237	0.00	0.00	2.93	4.58	0.00	237
2 33276-238	238	0.00	0.00	0.00	0.00	0.80	238
3 33276-239	239	0.00	0.00	0.00	0.00	0.00	239
4 33276-240	240	0.00	0.00	0.00	0.00	0.00	240
5 33276-241	241	2.44	15.59	0.00	0.00	0.00	241
6 33276-242	242	2.44	14.91	0.00	0.00	1.80	242
7 33276-243	243	0.00	0.00	5.96	9.10	1.80	243
8 33276-244	244	0.22	1.28	0.00	0.00	0.00	244
9 33276-245	245	0.00	0.00	0.91	1.39	0.80	245
10 33276-246	246	0.22	1.32	0.00	0.00	0.00	246
11 33276-247	247	10.19	64.80	0.00	0.00	0.00	247
12 33276-248	248	1.33	7.87	0.00	0.00	0.00	248
13 33276-249	249	0.00	0.00	7.98	12.14	2.80	249

	14	33276-250	250	0.22	0.00	6.97	10.77	2.80	250
	15	33276-251	251	2.44	14.26	0.91	1.29	0.80	251
	16	33276-252	252	0.22	1.33	0.00	0.00	1.80	252
	17	33276-253	253	0.00	0.00	4.95	7.56	0.80	253
	18	QC C-14	QC, C-14	26842.00	6673.04	95717.10	133434.00	0.00	C14
	19	33276-254	254	1.33	7.98	0.00	0.00	0.00	254
	20	33276-255	255	0.00	0.00	6.97	10.32	0.00	255
	21	33276-256	256	0.00	0.00	0.91	1.39	0.00	256
	22	33276-257	257	2.44	14.06	0.91	1.28	0.00	257
	23	33276-258	258	0.00	0.00	0.00	0.00	0.00	258
	24	33276-259	259	0.00	0.00	0.00	0.00	0.00	259
	25	33276-260	260	0.00	0.00	0.00	0.00	2.80	260
	26	33276-261	261	2.44	10.31	3.94	6.54	2.80	261
	27	33276-262	262	0.00	0.00	13.03	19.66	1.80	262
	28	33276-263	263	1.33	0.00	16.06	25.29	1.80	263
	29	33276-264	264	34.57	275.26	7.98	11.26	16.80	264
	30	33276-265	265	3.55	12.15	5.96	9.20	3.80	265
	31	33276-266	266	3.55	0.80	11.01	16.93	3.80	266
	32	33276-267	267	0.22	0.00	5.96	9.36	0.00	267
	33	33276-268	268	0.00	0.00	7.98	21.76	0.00	268
	34	33276-269	269	0.00	0.00	5.96	15.37	0.00	269
	35	33276-270	270	0.00	0.00	19.09	29.97	0.80	270
	36	33276-271	271	2.44	0.00	11.01	17.04	0.80	271
	37	33276-272	272	5.76	32.57	2.93	4.25	3.80	272
	38	33276-273	273	5271.77	39308.80	122.15	0.00	0.00	273
	39	33276-274	274	0.00	0.00	10.00	15.31	1.80	274
	40	33276-275	275	1.33	0.00	5.96	8.83	2.80	275
	41	33276-276	276	4.65	21.38	3.94	5.78	3.80	276
	42	QC BL	QC, BL	0.00	0.00	4.95	7.51	0.80	BL
	43	33276-277	277	0.00	0.00	0.00	0.00	0.00	277
	44	33276-278	278	0.22	0.00	11.01	18.05	1.80	278
	45	33276-279	279	0.00	0.00	4.95	8.09	1.80	279
	46	33276-280	280	2.44	0.00	8.99	13.56	0.00	280
	47	33276-281	281	0.22	0.00	0.91	1.36	0.80	281
	48	33276-282	282	0.00	0.00	0.00	0.00	0.80	282
	49	33276-283	283	0.22	0.00	8.99	18.59	0.00	283
	50	33276-284	284	1.33	0.00	8.99	13.48	5.80	284
	51	33276-285	285	0.00	0.00	8.99	13.47	2.80	285
	52	33276-286	286	0.22	0.00	11.01	16.70	3.80	286
	53	33276-287	287	0.00	0.00	5.96	8.98	1.80	287
	54	33276-288	288	0.00	0.00	0.00	0.00	0.00	288
	55	33276-289	289	3.55	20.45	0.00	0.00	0.00	289
	56	33276-290	290	0.22	0.00	3.94	5.94	0.00	290
	57	33276-291	291	0.00	0.00	0.00	0.00	0.00	291
	58	33276-292	292	0.00	0.00	5.96	9.05	0.00	292
	59	33276-293	293	2.44	7.47	3.94	5.83	1.80	293
	60	33276-294	294	2.44	5.79	4.95	7.40	2.80	294
	61	33276-295	295	0.00	0.00	0.00	0.00	0.00	295
	62	33276-296	296	9.09	54.02	0.00	0.00	0.00	296
	63	33276-297	297	0.00	0.00	6.97	10.42	0.00	297
	64	33276-298	298	0.00	0.00	0.00	0.00	3.80	298
	65	33276-299	299	0.00	0.00	0.00	0.00	0.00	299
	66	QC H-3	QC, H-3	34125.90	182593.00	814.21	0.00	0.00	H3
	67	33276-300	300	1.33	8.31	0.00	0.00	0.00	300

68 33276-301	301	0.00	0.00	0.00	0.00	0.80	301
69 33276-302	302	5.76	25.78	3.94	5.62	1.80	302
70 33276-303	303	1.33	0.00	4.95	7.38	0.00	303
71 33276-304	304	0.22	0.00	5.96	9.06	0.00	304
72 33276-305	305	2.44	5.44	4.95	7.24	2.80	305
73 33276-306	306	0.22	0.00	8.99	13.26	0.80	306
74 33276-307	307	0.22	0.00	11.01	16.06	5.80	307
75 33276-308	308	0.00	0.00	2.93	4.36	0.00	308
76 33276-309	309	5.76	30.34	0.00	0.00	2.80	309
77 33276-310	310	0.22	0.00	3.94	5.76	3.80	310
78 33276-311	311	1.33	6.74	0.00	0.00	0.00	311
79 33276-312	312	1.33	0.90	3.94	5.91	0.00	312
80 33276-313	313	1.33	0.00	13.03	19.69	3.80	313
81 33276-314	314	1.33	0.00	11.01	16.35	0.80	314
82 33276-315	315	0.22	0.00	3.94	5.92	0.00	315
83 33276-316	316	2.44	0.00	8.99	13.53	5.80	316
84 33276-317	317	0.00	0.00	0.91	1.37	2.80	317
85 33276-318	318	0.00	0.00	10.00	14.93	1.80	318
86 33276-319	319	3.55	0.00	10.00	14.67	0.80	319
87 33276-320	320	0.00	0.00	7.98	11.91	0.00	320
88 33276-321	321	3.55	3.50	0.91	1.19	0.00	321
89 33276-322	322	0.00	0.00	6.97	10.52	0.80	322
90 QC C-14	QC, C-14	27571.50	17.85	92146.90	135022.00	0.00 C14	
91 33276-323	323	9.09	0.00	0.00	0.00	0.00	323
92 33276-324	324	0.00	5201.93	4.95	7.30	2.80	324
93 33276-325	325	0.00	42.59	2.93	4.35	4.80	325
94 33276-326	326	6.87	0.00	3.94	5.55	3.80	326
95 33276-327	327	0.00	0.00	14.04	20.76	4.80	327
96 33276-328	328	0.00	31.20	5.96	8.77	5.80	328
97 33276-329	329	0.00	0.00	5.96	9.10	0.80	329
98 33276-330	330	0.00	0.00	2.93	4.41	2.80	330
99 33276-331	331	0.00	0.00	0.91	1.37	0.00	331
100 33276-332	332	0.00	0.00	5.96	9.10	0.80	332
101 33276-333	333	2.44	5.93	4.95	7.42	4.80	333
102 33276-334	334	0.00	0.00	0.00	0.00	1.80	334
103 33276-335	335	1.33	8.31	0.00	0.00	0.00	335
104 33276-336	336	0.22	0.00	1.92	3.00	0.80	336
105 33276-337	337	5.76	37.71	0.00	0.00	0.80	337
106 33276-338	338	0.22	0.00	1.92	2.94	0.80	338
107 33276-339	339	0.22	0.00	19.09	29.21	2.80	339
108 33276-340	340	0.00	0.00	7.98	18.26	0.00	340
109 33276-341	341	0.00	0.00	7.98	20.86	0.00	341
110 33276-342	342	1.33	0.00	11.01	20.13	0.00	342
111 33276-343	343	1.33	7.10	1.00	3.40	0.00	343
112 33276-344	344	2.44	17.95	0.92	0.00	0.00	344
113 33276-345	345	6.87	45.92	0.00	0.00	1.80	345
114 QC BL	QC, BL	1.33	2.70	0.00	4.36	0.80 BL	
115 33276-346	346	2.44	15.96	2.93	0.00	0.00	346
116 33276-347	347	0.00	0.00	0.00	0.00	1.80	347
117 33276-348	348	1.33	9.08	0.00	0.00	0.00	348
118 33276-349	349	0.22	1.37	0.00	0.00	1.80	349
119 33276-350	350	0.00	0.00	0.00	0.00	0.80	350
120 33276-351	351	2.44	3.94	5.96	9.30	0.00	351
121 33276-352	352	3.55	13.52	3.94	5.74	0.00	352

122 33276-353	353	0.00	0.00	0.00	0.00	0.00	353
123 33276-354	354	1.33	5.90	0.91	1.30	0.00	354
124 33276-355	355	0.00	0.00	1.92	2.83	0.00	355
125 33276-356	356	0.00	0.00	0.00	0.00	0.00	356

[REDACTED]

[REDACTED]

[REDACTED]

SELECT CONFIDENCE LEVEL: 90% (1) 2 <=====

 (enter the number next to the 95% (2)

 desired confidence level in box 99% (3)

 F3 {left of arrow}

 MDA CALCULATION

RSA ID #	SAMPLE COUNT TIME	BKGD COUNT TIME	BKGD CPM	DETECTOR EFICENCY	SAMPLE VOLUME L/g	LLD DPM	MDA pCi
H-3	1	1	7.5	0.1831	1	84.37	38.00
C-14	1	1	15.1	0.6662	1	31.20	14.05
HE Beta	1	1	5		1	#DIV/0!	#DIV/0!

0.6662

 0.1831

MDA
uCi

3.80E-05

1.41E-05

#DIV/0!

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Report No. **Report 2**

Customer: **June Tamkin**

Customer Samp No. **N/A**

Location: **Institute for Pharmaceutical Discovery**

RSA Lab Sample No. **30410 -30412**

Project: **Decommissioning**

Date Collected: **Not Indicated**

Samp. Description: **Wipes**

Date Counted: **12/4/2013**

Matrix: **Wipes**

H-3 LLD dpm= 84.37

H-3 QC = 177500 dpm +/- 10%

C-14 LLD dpm= 31.20

C-14 QC = 134800 dpm +/- 10%

RSA ID#	CUST. ID#	Location	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM	
BG		BACKGROUND	8.80		15.10		3.20	
33276-1	1		1.33	6	0.91	1.29	0.00	
33276-2	2		0.00	0.00	2.93	4.44	0.00	
33276-3	3		0.00	0.00	5.96	8.87	0.00	
33276-4	4		4.65	15.22	6.97	10.30	0.00	
33276-5	5		2.44	14.61	0.00	0.00	0.00	
33276-6	6		0.00	0.00	0.00	0.00	0.00	
33276-7	7		1.33	0.00	6.97	10.42	0.80	
33276-8	8		0.00	0.00	6.97	10.43	1.80	
33276-9	9		1.33	4.46	1.92	2.83	0.00	
33276-10	10		0.22	1.24	0.00	0.00	2.80	
33276-11	11		0.00	0	5.96	8.91	0.80	
33276-12	12		2.44	14.24	0.00	0.00	1.80	
33276-13	13		0.00	0.00	7.98	12.19	0.00	
33276-14	14		0.22	1.28	0.00	0.00	0.80	
33276-15	15		5.76	1.66	18.08	27.39	9.80	
33276-16	16		0.00	0.00	11.01	16.50	0.00	
33276-17	17		4.65	25.87	0.91	1.16	0.80	
33276-18	18		7.98	35.56	5396.00	8.58	15.80	
33276-19	19		4.65	27.01	0.00	0.00	4.80	
33276-20	20		2.44	7.50	3.94	5.84	0.80	
33276-21	21		3.55	21.24	0.00	0.00	0.00	
33276-22	22		0.22	1.32	0.00	0.00	0.00	
33276-23	23		2.44	10.79	1.92	2.77	0.00	
QC H-3	QC H-3	QC H-3	41253.80	183605.00	888.96	0.00	0.00	
33276-24	24		1.33	7.84	0.00	0.00	0.80	
33276-25	25		0.22	0.00	0.91	1.40	0.00	
33276-26	26		0.00	0.00	4.95	7.58	0.00	
33276-27	27		0.00	0.00	10.00	15.47	0.00	
33276-28	28		0.00	0.00	7.98	12.29	0.00	
33276-29	29		0.00	0.00	2.93	4.55	0.00	
33276-30	30		0.00	0.00	2.93	4.53	0.00	
33276-31	31		4.65	30.68	0.00	0.00	0.00	
33276-32	32		7.98	50.29	0.00	0.00	0.00	
33276-33	33		0.00	0.00	0.00	0.00	0.00	
33276-34	34		0.00	0.00	0.91	1.40	0.00	



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM	
33276-35	35.00		0.00	0.00	2.93	4.61	0.00	
33276-36	36.00		0.00	0.00	1.92	2.95	0.00	
33276-37	37.00		0.00	0.00	1.92	2.98	0.00	
33276-38	38.00		0.00	0.00	15.05	2.92	0.00	
33276-39	39.00		1.33	0.00	20.10	30.96	0.00	
33276-40	40.00		0.00	0.00	3.94	6.05	0.00	
33276-41	41.00		0.00	0.00	0.00	0.00	0.00	
33276-42	42.00		0.00	4.88	1.92	2.89	0.00	
33276-43	43.00		1.33	9.16	0.00	0.00	0.00	
33276-44	44.00		6.87	42.16	0.00	0.00	1.80	
33276-45	45.00		9.08	38.10	10.00	14.85	3.80	
33276-46	46.00		9.08	57.15	0.91	0.97	3.80	
QC C-14	QC C-14	QC C-14	26919.30	6767.60	95876.20	133699.00	0.00	
33276-47	47.00		3.55	21.75	0.00	0.00	0.00	
33276-48	48.00		0.00	0.00	0.00	0.00	0.00	
33276-49	49.00		7.98	32.01	8.99	13.27	1.80	
33276-50	50.00		0.00	0.00	0.00	0.00	0.00	
33276-51	51.00		0.00	0.00	2.93	4.46	0.00	
33276-52	52.00		0.22	1.44	0.00	0.00	0.00	
33276-53	53.00		0.00	0.00	8.99	14.25	0.80	
33276-54	54.00		0.00	0.00	0.00	0.00	0.00	
33276-55	55.00		4.65	27.13	0.91	1.17	0.00	
33276-56	56.00		0.00	0.00	0.91	1.38	2.80	
33276-57	57.00		0.22	0.00	6.97	10.64	0.00	
33276-58	58.00		3.55	17.10	2.93	4.33	2.80	
33276-59	59.00		2.44	5.89	4.95	7.44	0.00	
33276-60	60.00		0.00	0.00	13.03	20.21	0.00	
33276-61	61.00		2.44	9.90	2.93	4.37	1.80	
33276-62	62.00		0.00	0.00	6.97	10.63	2.80	
33276-63	63.00		0.00	0.00	0.00	0.00	0.00	
33276-64	64.00		2.44	12.15	1.92	2.84	2.80	
33276-65	65.00		1.33	0.73	3.94	6.04	1.80	
33276-66	66.00		1.33	0.00	6.97	10.72	2.80	
33276-67	67.00		0.22	0.00	0.91	1.40	1.80	
33276-68	68.00		24.59	146.36	5.96	7.99	7.80	
33276-69	69.00		4.65	27.18	1.92	2.74	0.00	
QC BL	QC BL	QC BL	2.44	0.42	7.98	11.89	0.00	
33276-70	70.00		0.22	0.00	2.93	4.52	2.80	
33276-71	71.00		0.00	0.00	7.98	12.41	0.80	
33276-72	72.00		1.33	0.00	6.97	10.64	0.00	
33276-73	73.00		0.00	0.00	5.90	8.99	0.00	
33276-74	74.00		2.44	13.74	0.91	1.28	1.80	
33276-75	75.00		0.00	0.00	8.99	13.78	0.00	
33276-76	76.00		0.00	0.00	3.94	5.97	0.00	
33276-77	77.00		0.00	0.00	4.95	7.49	0.00	
33276-78	78.00		0.00	0.00	12.02	18.39	0.00	
33276-79	79.00		0.00	0.00	0.00	0.00	0.00	



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-80	80		3.55	17.62	1.92	2.74	3.80
33276-81	81		46.75	332.51	0.91	0.00	18.80
33276-82	82		0.00	0.00	3.94	6.05	0.00
33276-83	83		6.87	2.68	21.12	32.08	3.80
33276-84	84		0.22	0.00	11.01	16.73	0.00
33276-85	85		0.00	0.00	8.99	29.44	0.00
33276-86	86		2.44	7.40	3.94	5.82	0.00
33276-87	87		2.44	13.80	0.91	1.28	3.80
33276-88	88		0.00	0.00	7.98	12.04	0.00
33276-89	89		0.00	0.00	2.93	6.82	0.00
33276-90	90		0.00	0.00	2.93	4.71	0.00
33276-91	91		15.73	89.50	7.98	11.60	0.80
33276-92	92		0.00	0.00	4.95	7.61	0.00
QC H-3	QC H-3	QC H-3	34348.00	181786.00	856.63	0.00	0.00
33276-93	93		1.33	0.00	5.96	8.92	0.80
33276-94	94		5.76	31.29	2.93	4.22	0.00
33276-95	95		0.22	1.26	0.00	0.00	0.00
33276-96	96		4.65	30.44	0.00	0.00	3.80
33276-97	97		2.44	6.11	4.95	7.53	0.00
33276-98	98		0.00	0.00	10.00	15.46	1.80
33276-99	99		0.00	0.00	1.92	3.01	0.00
33276-100	100		0.00	0.00	2.93	4.43	0.00
33276-101	101		0.00	0.00	3.94	5.94	0.00
33276-102	102		1.33	9.31	0.00	0.00	0.00
33276-103	103		0.00	0.00	10.00	15.47	0.80
33276-104	104		3.55	14.39	3.94	5.82	0.00
33276-105	105		3.55	20.19	0.00	0.00	0.00
33276-106	106		1.33	8.34	0.00	0.00	0.00
33276-107	107		9.08	56.80	0.00	0.00	0.00
33276-108	108		0.00	0.00	0.91	1.40	0.00
33276-109	109		0.22	0.00	1.92	2.86	0.00
33276-110	110		0.00	0.00	4.95	7.68	0.00
33276-111	111		0.00	0.00	0.00	0.00	0.00
33276-112	112		1.33	8.27	0.00	0.00	1.80
33276-113	113		3.55	21.77	0.00	0.00	2.80
33276-114	114		2.44	15.54	0.00	0.00	0.00
33276-115	115		0.00	0.00	4.95	7.79	1.80
QC C-14	QC C-14	QC C-14	27578.90	4598.66	92731.30	135713.00	0.00
33276-116	116		6.87	45.70	0.00	0.00	0.80
33276-117	117		0.00	0.00	4.95	7.52	0.80
33276-118	118		0.00	0.00	5.96	9.15	0.00
33276-119	119		0.00	0.00	0.00	0.00	0.00
33276-120	120		0.00	0.00	2.93	4.57	0.00
33276-121	121		0.00	0.00	3.94	6.17	0.00
33276-122	122		0.00	0.00	0.00	0.00	0.00
33276-123	123		0.00	0.00	0.00	0.00	0.00
33276-124	124		0.00	0.00	2.93	4.56	2.80



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-125	125		0.22	0.00	13.03	20.11	0.00
33276-126	126		0.00	0.00	0.00	0.00	0.00
33276-127	127		0.00	0.00	11.01	16.96	1.80
33276-128	128		0.00	0.00	5.96	9.40	0.00
33276-129	129		8132.17	60323.80	171.65	0.00	0.00
33276-130	130		302.68	1871.88	13.03	5.91	0.00
33276-131	131		0.00	0.00	4.95	7.55	3.80
33276-132	132		0.00	0.00	8.99	14.52	0.00
33276-133	133		0.00	0.00	3.94	6.21	0.00
33276-134	134		3.55	19.01	1.92	2.78	1.80
33276-135	135		0.00	0.00	4.95	7.60	0.00
33276-136	136		1.33	0.00	4.95	7.55	0.00
33276-137	137		0.00	0.00	0.00	0.00	1.80
33276-138	138		31.24	178.05	3.94	4.53	6.80
QC BL	QC BL	QC BL	0.00	0.00	8.99	13.52	2.80
33276-139	139		0.00	0.00	6.97	10.60	0.00
33276-140	140		2.44	2.21	6.97	10.30	0.00
33276-141	141		1.33	0.00	5.96	9.03	0.80
33276-142	142		0.22	0.00	7.98	12.09	0.00
33276-143	143		0.00	0.00	0.00	0.00	0.00
33276-144	144		0.00	0.00	10.00	15.44	0.80
33276-145	145		32.35	188.85	1.92	1.43	7.80
33276-146	146		0.00	0.00	4.95	7.62	0.00
33276-147	147		1.33	6.98	0.91	1.34	0.80
33276-148	148		5.76	11.88	13.03	20.29	0.00
33276-149	149		5.76	26.43	4.95	7.27	2.80
33276-150	150		0.00	0.00	0.00	0.00	0.00
33276-151	151		2.44	13.31	0.00	0.00	0.00
33276-152	152		26.81	159.15	2.93	3.22	12.80
33276-153	153		0.00	0.00	8.99	13.44	2.80
33276-154	154		2.44	3.93	5.96	8.92	3.80
33276-155	155		2.44	15.12	0.00	0.00	1.80
33276-156	156		0.00	0.00	2.93	4.45	0.00
33276-157	157		0.00	0.00	0.00	0.00	0.00
33276-158	158		0.00	0.00	0.00	0.00	0.00
33276-159	159		4.65	29.48	0.00	0.00	0.00
33276-160	160		2.44	16.74	0.00	0.00	0.00
33276-161	161		1.33	0.00	4.95	7.64	0.00
QC H-3	QC H-3	QC H-3	27611.40	185422.00	706.10	0.00	0.00
33276-162	162		7.98	50.17	0.00	0.00	0.80
33276-163	163		1.33	8.56	0.00	0.00	0.00
33276-164	164		5.76	38.64	0.00	0.00	0.00
33276-165	165		2.44	16.15	0.00	0.00	0.00
33276-166	166		0.00	0.00	10.00	15.38	0.80
33276-167	167		0.22	1.49	0.00	0.00	0.80
33276-168	168		0.00	0.00	0.00	0.00	0.00
33276-169	169		0.22	1.50	0.00	0.00	0.00



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-170	170		0.00	0.00	0.00	0.00	0.00
33276-171	171		0.00	0.00	0.00	0.00	0.00
33276-172	172		13.52	115.37	0.00	0.00	0.00
33276-173	173		4.65	25	2.93	4.30	0.80
33276-174	174		0.22	0.00	3.94	6.05	0.80
33276-175	175		0.00	0.00	0.00	0.00	0.00
33276-176	176		2.44	15.77	0.00	0.00	0.00
33276-177	177		0.00	0.00	0.00	0.00	1.80
33276-178	178		0.22	2.35	0.00	0.00	0.00
33276-179	179		4.65	25.42	1.92	2.71	0.80
33276-180	180		0.00	0.00	2.93	4.53	0.00
33276-181	181		0.00	0.00	2.93	4.53	0.00
33276-182	182		2.44	13.71	0.91	1.28	0.00
33276-183	183		0.00	0.00	0.00	0.00	0.00
33276-184	184		0.22	0.00	0.91	1.38	0.00
QC C-14	QC C-14	QC C-14	28892.30	13022.20	86309.00	133061.00	0.00
33276-185	185		5.76	26.69	4.95	7.28	0.00
33276-186	186		0.22	1.33	0.00	0.00	0.00
33276-187	187		0.00	0.00	0.00	0.00	0.00
33276-188	188		0.00	0.00	0.00	0.00	0.80
33276-189	189		0.00	0.00	0.00	0.00	0.00
33276-190	190		1.33	8.02	0.00	0.00	0.80
33276-191	191		0.22	1.25	0.00	0.00	1.80
33276-192	192		0.22	1.26	0.00	0.00	0.00
33276-193	193		0.22	1.25	0.00	0.00	0.80
33276-194	194		0.00	0.00	0.00	0.00	0.00
33276-195	195		6.87	35.59	2.93	4.11	0.00
33276-196	196		4.65	28.05	0.00	0.00	0.00
33276-197	197		0.00	0	4.95	7.44	0.00
33276-198	198		0.00	0.00	0.00	0.00	0.00
33276-199	199		0.00	0.00	0.00	0.00	0.00
33276-200	200		0.22	0.00	5.96	9.03	0.80
33276-201	201		2.44	14.41	0.00	0.00	1.80
33276-202	202		0.00	0.00	0.00	0.00	0.00
33276-203	203		3.55	15.66	2.93	4.25	0.00
33276-204	204		0.00	0.00	2.93	4.40	2.80
33276-205	205		0.22	0.00	4.95	7.38	0.80
33276-206	206		1.33	7.67	0.00	0.00	0.80
33276-207	207		2.44	9.08	2.93	4.29	1.80
QC BL	QC BL	QC BL	0.00	0.00	0.00	0.00	0.80
33276-208	208		0.00	0.00	0.00	0.00	1.80
33276-209	209		0.00	0.00	6.97	10.54	4.80
33276-210	210		7.98	24.65	13.03	19.39	2.80
33276-211	211		0.00	0.00	0.91	1.38	2.80
33276-212	212		0.00	0.00	0.00	0.00	0.80
33276-213	213		0.22	0.00	3.94	5.92	0.80
33276-214	214		3.55	12.33	4.95	7.32	0.00



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-215	215		0.00	0.00	10.00	21.17	1.80
33276-216	216		1.33	0.00	5.96	8.94	2.80
33276-217	217		0.00	0.00	2.93	4.00	3.80
33276-218	218		5.76	34.57	0.00	0.41	5.80
33276-219	219		1.33	6.20	0.91	0.00	0.00
33276-220	220		0.00	0.00	0.00	1.31	0.00
33276-221	221		0.00	0.00	0.00	0.00	0.00
33276-222	222		0.00	0.00	0.00	0.00	0.00
33276-223	223		0.00	0.00	0.00	0.00	0.00
33276-224	224		0.00	0.00	0.91	1.34	0.00
33276-225	225		0.22	1.13	0.00	0.00	0.80
33276-226	226		0.00	0.00	7.98	11.93	0.80
33276-227	227		0.00	0.00	0.00	0.00	0.00
33276-228	228		1.33	0.00	4.95	7.51	0.00
33276-229	229		3.55	17.52	0.00	0.00	1.80
33276-230	230		4.65	22.49	2.93	4.21	0.00
QC H-3	QC H-3	QC H-3	41598.30	186023.00	972.82	0.00	0.00
33276-231	231		79.98	45.18	0.00	0.00	0.00
33276-232	232		0.00	0.00	3.94	5.91	0.00
33276-233	233		9.08	48.99	0.00	0.00	0.80
33276-234	234		0.00	0.00	0.00	0.00	0.80
33276-235	235		12.41	73.48	0.00	0.00	11.80
33276-236	236		2.44	14.14	0.00	0.00	3.80
33276-237	237		0.00	0.00	2.93	4.58	0.00
33276-238	238		0.00	0.00	0.00	0.00	0.80
33276-239	239		0.00	0.00	0.00	0.00	0.00
33276-240	240		0.00	0.00	0.00	0.00	0.00
33276-241	241		2.44	15.59	0.00	0.00	0.00
33276-242	242		2.44	14.91	0.00	0.00	1.80
33276-243	243		0.00	0.00	5.96	9.10	1.80
33276-244	244		0.22	1.28	0.00	0.00	0.00
33276-245	245		0.00	0.00	0.91	1.39	0.80
33276-246	246		0.22	1.32	0.00	0.00	0.00
33276-247	247		10.19	64.80	0.00	0.00	0.00
33276-248	248		1.33	7.87	0.00	0.00	0.00
33276-249	249		0.00	0.00	7.98	12.14	2.80
33276-250	250		0.22	0.00	6.97	10.77	2.80
33276-251	251		2.44	14.26	0.91	1.29	0.80
33276-252	252		0.22	1.33	0.00	0.00	1.80
33276-253	253		0.00	0.00	4.95	7.56	0.80
QC C-14	QC C-14	QC, C-14	26842.00	6673.04	95717.10	133434.00	0.00
33276-254	254		1.33	7.98	0.00	0.00	0.00
33276-255	255		0.00	0.00	6.97	10.32	0.00
33276-256	256		0.00	0.00	0.91	1.39	0.00
33276-257	257		2.44	14.06	0.91	1.28	0.00
33276-258	258		0.00	0.00	0.00	0.00	0.00
33276-259	259		0.00	0.00	0.00	0.00	0.00



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-260	260		0.00	0.00	0.00	0.00	2.80
33276-261	261		2.44	10.31	3.94	6.54	2.80
33276-262	262		0.00	0.00	13.03	19.66	1.80
33276-263	263		1.33	0.00	16.06	25.29	1.80
33276-264	264		34.57	275.26	7.98	11.26	16.80
33276-265	265		3.55	12.15	5.96	9.20	3.80
33276-266	266		3.55	0.80	11.01	16.93	3.80
33276-267	267		0.22	0.00	5.96	9.36	0.00
33276-268	268		0.00	0.00	7.98	21.76	0.00
33276-269	269		0.00	0.00	5.96	15.37	0.00
33276-270	270		0.00	0.00	19.09	29.97	0.80
33276-271	271		2.44	0.00	11.01	17.04	0.80
33276-272	272		5.76	32.57	2.93	4.25	3.80
33276-273	273		5271.77	39308.80	122.15	0.00	0.00
33276-274	274		0.00	0.00	10.00	15.31	1.80
33276-275	275		1.33	0.00	5.96	8.83	2.80
33276-276	276		4.65	21.38	3.94	5.78	3.80
QC BL	QC BL	QC, BL	0.00	0.00	4.95	7.51	0.80
33276-277	277		0.00	0.00	0.00	0.00	0.00
33276-278	278		0.22	0.00	11.01	18.05	1.80
33276-279	279		0.00	0.00	4.95	8.09	1.80
33276-280	280		2.44	0.00	8.99	13.56	0.00
33276-281	281		0.22	0.00	0.91	1.36	0.80
33276-282	282		0.00	0.00	0.00	0.00	0.80
33276-283	283		0.22	0.00	8.99	18.59	0.00
33276-284	284		1.33	0.00	8.99	13.48	5.80
33276-285	285		0.00	0.00	8.99	13.47	2.80
33276-286	286		0.22	0.00	11.01	16.70	3.80
33276-287	287		0.00	0.00	5.96	8.98	1.80
33276-288	288		0.00	0.00	0.00	0.00	0.00
33276-289	289		3.55	20.45	0.00	0.00	0.00
33276-290	290		0.22	0.00	3.94	5.94	0.00
33276-291	291		0.00	0.00	0.00	0.00	0.00
33276-292	292		0.00	0.00	5.96	9.05	0.00
33276-293	293		2.44	7.47	3.94	5.83	1.80
33276-294	294		2.44	5.79	4.95	7.40	2.80
33276-295	295		0.00	0.00	0.00	0.00	0.00
33276-296	296		9.09	54.02	0.00	0.00	0.00
33276-297	297		0.00	0.00	6.97	10.42	0.00
33276-298	298		0.00	0.00	0.00	0.00	3.80
33276-299	299		0.00	0.00	0.00	0.00	0.00
QC H-3	QC H-3	QC, H-3	34125.90	182593.00	814.21	0.00	0.00
33276-300	300		1.33	8.31	0.00	0.00	0.00
33276-301	301		0.00	0.00	0.00	0.00	0.80
33276-302	302		5.76	25.78	3.94	5.62	1.80
33276-303	303		1.33	0.00	4.95	7.38	0.00
33276-304	304		0.22	0.00	5.96	9.06	0.00



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM
33276-305	305		2.44	5.44	4.95	7.24	2.80
33276-306	306		0.22	0.00	8.99	13.26	0.80
33276-307	307		0.22	0.00	11.01	16.06	5.80
33276-308	308		0.00	0.00	2.93	4.36	0.00
33276-309	309		5.76	30.34	0.00	0.00	2.80
33276-310	310		0.22	0.00	3.94	5.76	3.80
33276-311	311		1.33	6.74	0.00	0.00	0.00
33276-312	312		1.33	0.90	3.94	5.91	0.00
33276-313	313		1.33	0.00	13.03	19.69	3.80
33276-314	314		1.33	0.00	11.01	16.35	0.80
33276-315	315		0.22	0.00	3.94	5.92	0.00
33276-316	316		2.44	0.00	8.99	13.53	5.80
33276-317	317		0.00	0.00	0.91	1.37	2.80
33276-318	318		0.00	0.00	10.00	14.93	1.80
33276-319	319		3.55	0.00	10.00	14.67	0.80
33276-320	320		0.00	0.00	7.98	11.91	0.00
33276-321	321		3.55	3.50	0.91	1.19	0.00
33276-322	322		0.00	0.00	6.97	10.52	0.80
QC C-14	QC C-14	QC, C-14	27571.50	17.85	92146.90	135022.00	0.00
33276-323	323		9.09	0.00	0.00	0.00	0.00
33276-324	324		0.00	5201.93	4.95	7.30	2.80
33276-325	325		0.00	42.59	2.93	4.35	4.80
33276-326	326		6.87	0.00	3.94	5.55	3.80
33276-327	327		0.00	0.00	14.04	20.76	4.80
33276-328	328		0.00	31.20	5.96	8.77	5.80
33276-329	329		0.00	0.00	5.96	9.10	0.80
33276-330	330		0.00	0.00	2.93	4.41	2.80
33276-331	331		0.00	0.00	0.91	1.37	0.00
33276-332	332		0.00	0.00	5.96	9.10	0.80
33276-333	333		2.44	5.93	4.95	7.42	4.80
33276-334	334		0.00	0.00	0.00	0.00	1.80
33276-335	335		1.33	8.31	0.00	0.00	0.00
33276-336	336		0.22	0.00	1.92	3.00	0.80
33276-337	337		5.76	37.71	0.00	0.00	0.80
33276-338	338		0.22	0.00	1.92	2.94	0.80
33276-339	339		0.22	0.00	19.09	29.21	2.80
33276-340	340		0.00	0.00	7.98	18.26	0.00
33276-341	341		0.00	0.00	7.98	20.86	0.00
33276-342	342		1.33	0.00	11.01	20.13	0.00
33276-343	343		1.33	7.10	1.00	3.40	0.00
33276-344	344		2.44	17.95	0.92	0.00	0.00
33276-345	345		6.87	45.92	0.00	0.00	1.80
QC BL	QC BL	QC, BL	1.33	2.70	0.00	4.36	0.80
33276-346	346		2.44	15.96	2.93	0.00	0.00
33276-347	347		0.00	0.00	0.00	0.00	1.80
33276-348	348		1.33	9.08	0.00	0.00	0.00
33276-349	349		0.22	1.37	0.00	0.00	1.80



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[illegible]

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RSA Laboratories Radiochemistry Analysis Data Sheet

Customer: June Tamkin

Sample Type: Wipes

Matrix: Wipes

RSA

Isotope 1 H-3

Isotope 2 C-14

Isotope 3 HE Beta

RSA ID#:

Location

Collect Date: Not Indicated

Count Date: 12/4/2013

Project: Decommissioning

Location: Institute for Pharmaceutical Discovery

Cust ID # :

of Pages:

Report No.	Location	POS	ID #	Cust ID #	Background	CPMA	DPMA	CPMB	DPMB	CPMC	BG
1			1 BG			11.30		19.30		4.60	
2			2 33276-357		357	0.00	0.00	3.74	5.53	5.40	357
3			3 33276-358		358	0.00	0.00	0.00	0.00	5.40	358
4			4 33276-359		359	0.00	0.00	5.76	8.48	0.00	359
			5 33276-360		360	2.99	14.94	0.00	0.00	0.40	360
			6 33276-361		361	1.88	5.74	2.73	3.93	0.40	361
			7 33276-362		362	0.00	0.00	0.00	0.00	0.00	362
			8 33276-363		363	0.00	0.00	0.00	0.00	2.40	363
			9 33276-364		364	0.00	0.00	3.74	5.61	0.00	364
			10 33276-365		365	0.00	0.00	0.00	0.00	6.40	365
			11 33276-366		366	0.78	4.07	0.00	0.00	0.00	366
			12 33276-367		367	0.00	0.00	0.00	0.00	3.40	367
			13 33276-368		368	0.00	0.00	0.00	0.00	1.40	368
			14 33276-369		369	0.00	0.00	6.77	9.00	0.00	369
			15 33276-370		370	0.78	3.84	0.00	0.00	2.40	370
			16 33276-371		371	0.00	0.00	0.00	0.00	0.00	371
			17 33276-372		372	0.00	0.00	4.75	6.88	2.40	372
			18 33276-373		373	0.00	0.00	0.00	0.00	0.40	373
			19 33276-374		374	1.88	2.73	4.75	6.90	0.00	374
			20 33276-375		375	0.00	0.00	0.00	0.00	1.40	375
			21 33276-376		376	0.00	0.00	0.71	1.06	0.00	376
			22 33276-377		377	0.00	0.00	0.00	0.00	2.40	377
			23 33276-378		378	0.00	0.00	0.00	0.00	0.00	378
			24 33276-379		379	0.00	0.00	0.00	0.00	2.40	379
			25 QC H-3		QC H-3	26936.70	183953.00	767.54	0.00	0.00	H-3
			26 33276-380		380	1.88	10.05	0.00	0.00	0.00	380
			27 33276-381		381	0.00	0.00	0.00	0.00	0.00	381
			28 33276-382		382	0.00	0.00	0.00	0.00	0.00	382
			29 33276-383		383	1.88	9.60	0.00	0.00	0.00	383
			30 33276-384		384	0.00	0.00	0.00	0.00	0.00	384
			31 33276-385		385	0.78	4.59	0.00	0.00	0.00	385
			32 33276-386		386	0.78	4.61	0.00	0.00	0.00	386
			33 33276-387		387	0.78	4.64	0.00	0.00	0.40	387
			34 33276-388		388	0.00	0.00	0.00	0.00	0.00	388
			35 33276-389		389	0.00	0.00	4.75	7.12	0.40	389
			36 33276-390		390	0.00	0.00	0.00	0.00	2.40	390
			37 33276-391		391	0.78	4.62	0.00	0.00	0.40	391
			38 33276-392		392	0.00	0.00	5.76	15.01	0.00	392
			39 33276-393		393	0.00	0.00	0.00	0.00	0.40	393
			40 33276-394		394	2.99	15.70	0.00	0.00	0.00	394
			41 33276-395		395	0.00	0.00	0.71	1.07	0.00	395
			42 33276-396		396	0.78	41.55	0.00	0.00	0.00	396
			43 33276-397		397	0.00	0.00	0.00	0.00	0.00	397
			44 33276-398		398	0.00	0.00	2.73	4.14	0.00	398

45 33276-399	399	25.15	160.74	0.00	0.00	0.00	399
46 33276-400	400	0.00	0.00	0.00	0.00	0.00	400
47 33276-401	401	5.21	27.24	2.73	391.00	0.40	401
48 33276-402	402	0.00	0.00	0.00	0.00	0.40	402
49 QC C-14	QC C-14	26606.60	5256.35	95922.30	133811.00	0.00	C-14
50 33276-403	403	0.00	0.00	0.00	0.00	2.40	403
51 33276-404	404	0.00	0.00	1.72	2.65	0.00	404
52 33276-405	405	0.00	0.00	0.00	0.00	0.00	405
53 33276-406	406	0.00	0.00	0.00	0.00	0.00	406
54 33276-407	407	0.00	0.00	0.00	0.00	0.00	407
55 33276-408	408	0.00	0.00	0.00	0.00	0.00	408
56 33276-409	409	2.99	19.12	0.00	0.00	0.40	409
57 33276-410	410	0.00	0.00	0.00	0.00	2.40	410
58 33276-411	411	0.00	0.00	0.00	0.00	0.40	411
59 33276-412	412	1.88	11.12	0.00	0.00	0.00	412
60 33276-413	413	0.00	0.00	5.76	0.00	1.40	413
61 33276-414	414	0.00	0.00	0.00	0.00	0.00	414
62 33276-415	415	0.00	0.00	15.86	30.77	2.40	415
63 33276-416	416	4783.22	35424.90	112.85	0.00	0.00	416
64 33276-417	417	4543.88	32550.90	119.92	0.00	0.00	417
65 33276-418	418	0.78	0.00	6.77	10.68	3.40	418
66 33276-419	419	116.02	859.27	4.75	1.93	0.00	419
67 33276-420	420	0.78	6.02	0.00	0.00	1.40	420
68 33276-421	421	0.00	0.00	0.00	0.00	5.40	421
69 33276-422	422	0.00	0.00	0.00	0.00	0.40	422
70 33276-423	423	0.00	0.00	0.00	0.00	8.40	423
71 33276-424	424	0.00	0.00	2.73	5.17	3.40	424
72 33276-425	425	0.00	0.00	0.00	0.00	0.00	425
73 QC BL	QC BL	0.00	0.00	3.74	5.65	0.00	BL
74 33276-426	426	0.00	0.00	0.00	0.00	0.00	426
75 33276-427	427	0.00	0.00	0.00	0.00	0.00	427
76 33276-428	428	0.78	4.44	0.00	0.00	0.40	428
78 33276-429	305-4118-1	0.00	0.00	0.00	0.00	0.00	1
79 33276-430	305-4118-2	0.00	0.00	7.78	11.85	0.40	2
80 33276-431	305-4118-3	0.00	0.00	0.00	0.00	0.00	3
81 33276-432	305-4118-4	0.00	0.00	0.00	0.00	0.00	4
82 33276-433	305-4118-5	0.00	0.00	0.00	0.00	0.40	5
83 33276-434	305-4118-6	0.00	0.00	6.77	10.39	0.00	6
84 33276-435	305-4118-7	0.00	0.00	0.00	0.00	0.00	7
85 33276-436	305-4118-8	0.00	0.00	0.00	0.00	0.00	8
86 33276-437	305-4118-9	0.00	0.00	0.00	0.00	1.40	9
87 33276-438	305-4118-10	0.00	0.00	0.00	0.00	0.40	10
88 33276-439	305-4118-11	0.00	0.00	1.72	2.63	0.00	11
89 33276-440	305-4118-12	0.00	0.00	0.00	0.00	2.40	12
90 33276-441	305-4118-13	0.78	4.75	0.00	0.00	0.00	13
91 33276-442	305-4118-14	0.00	0.00	0.71	1.08	0.00	14
92 33276-443	305-4118-15	4.10	26.20	0.00	0.00	0.00	15
93 33276-444	305-4118-16	0.00	0.00	0.71	1.09	0.00	16
95 33276-445	204-4118-1	0.00	0.00	3.74	5.77	0.40	
96 33276-446	204-4118-2	0.00	0.00	0.71	1.08	0.40	
97 QC H-3	QC H-3	34247.10	182759.00	860.49	0.00	0.00	H-3
98 33276-447	204-4118-3	0.00	0.00	0.00	0.00	0.00	

99	33276-448	204-4118-4	0.00	0.00	0.00	0.00	0.00	
100	33276-449	204-4118-5	129.31	855.61	0.00	0.00	0.00	
101	33276-450	204-4118-6	0.00	0.00	0.00	0.00	0.00	
102	33276-451	204-4118-7	8.53	42.93	6.77	10.04	0.00	
103	33276-452	204-4118-8	0.00	0.00	0.00	0.00	0.00	
104	33276-453	204-4118-9	0.00	0.00	3.74	0.00	0.00	
105	33276-454	204-4118-10	0.00	0.00	0.00	0.00	0.00	
106	33276-455	204-4118-11	0.00	0.00	0.00	0.00	0.40	
107	33276-456	204-4118-12	2.99	19.19	0.00	288.10	0.00	
109	33276-457	LSC-4118-1	0.00	0.00	0.00	0.00	0.00	1
110	33276-458	LSC-4118-2	6.32	35.02	1.72	149.40	2.40	2
111	33276-459	LSC-4118-3	0.00	0.00	0.00	0.00	0.00	3
112	33276-460	LSC-4118-4	0.00	0.00	0.00	0.00	0.40	-
113	33276-461	LSC-4118-5	0.00	0.00	0.00	0.00	0.00	-

SELECT CONFIDENCE LEVEL: 90% (1) 2 <=====

 (enter the number next to the 95% (2)

 desired confidence level in box 99% (3)

 F3 {left of arrow}

 MDA CALCULATION

RSA ID #	SAMPLE COUNT TIME	BKGD COUNT TIME	BKGD CPM	DETECTOR EFICENCY	SAMPLE VOLUME L/g	LLD DPM	MDA pCi
H-3	1	1	7.5	0.1831	1	84.37	38.00
C-14	1	1	19.3	0.6662	1	34.74	15.65
HE Beta	1	1	5		1	#DIV/0!	#DIV/0!

0.6662

 0.1831

MDA uCi

3.80E-05

1.57E-05

#DIV/0!

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Report No. **Report 2**

Customer: **June Tamkin**

Customer Samp No. **N/A**

Location: **Institute for Pharmaceutical Discovery**

RSA Lab Sample No. **30410 -30412**

Project: **Decommissioning**

Date Collected: **Not Indicated**

Samp. Description: **Wipes**

Date Counted: **12/4/2013**

Matrix: **Wipes**

H-3 LLD dpm= 84.37

H-3 QC = 177500 dpm +/- 10%

C-14 LLD dpm= 34.74

C-14 QC = 134800 dpm +/- 10%

RSA ID#	CUST. ID#	Location	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM	
BG		BACKGROUND	11.30		19.30		4.60	
33276-357	357		0.00	0	3.74	5.53	5.40	
33276-358	358		0.00	0.00	0.00	0.00	5.40	
33276-359	359		0.00	0.00	5.76	8.48	0.00	
33276-360	360		2.99	14.94	0.00	0.00	0.40	
33276-361	361		1.88	5.74	2.73	3.93	0.40	
33276-362	362		0.00	0.00	0.00	0.00	0.00	
33276-363	363		0.00	0.00	0.00	0.00	2.40	
33276-364	364		0.00	0.00	3.74	5.61	0.00	
33276-365	365		0.00	0.00	0.00	0.00	6.40	
33276-366	366		0.78	4.07	0.00	0.00	0.00	
33276-367	367		0.00	0	0.00	0.00	3.40	
33276-368	368		0.00	0.00	0.00	0.00	1.40	
33276-369	369		0.00	0.00	6.77	9.00	0.00	
33276-370	370		0.78	3.84	0.00	0.00	2.40	
33276-371	371		0.00	0.00	0.00	0.00	0.00	
33276-372	372		0.00	0.00	4.75	6.88	2.40	
33276-373	373		0.00	0.00	0.00	0.00	0.40	
33276-374	374		1.88	2.73	4.75	6.90	0.00	
33276-375	375		0.00	0.00	0.00	0.00	1.40	
33276-376	376		0.00	0.00	0.71	1.06	0.00	
33276-377	377		0.00	0.00	0.00	0.00	2.40	
33276-378	378		0.00	0.00	0.00	0.00	0.00	
33276-379	379		0.00	0.00	0.00	0.00	2.40	
QC H-3	QC H-3	QC H-3	26936.70	183953.00	767.54	0.00	0.00	
33276-380	380		1.88	10.05	0.00	0.00	0.00	
33276-381	381		0.00	0.00	0.00	0.00	0.00	
33276-382	382		0.00	0.00	0.00	0.00	0.00	
33276-383	383		1.88	9.60	0.00	0.00	0.00	
33276-384	384		0.00	0.00	0.00	0.00	0.00	
33276-385	385		0.78	4.59	0.00	0.00	0.00	
33276-386	386		0.78	4.61	0.00	0.00	0.00	
33276-387	387		0.78	4.64	0.00	0.00	0.40	
33276-388	388		0.00	0.00	0.00	0.00	0.00	
33276-389	389		0.00	0.00	4.75	7.12	0.40	
33276-390	390		0.00	0.00	0.00	0.00	2.40	



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Laboratory Director

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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM	C-14 CPM	C-14 DPM	HE Beta CPM	
33276-391	391.00		0.78	4.62	0.00	0.00	0.40	
33276-392	392.00		0.00	0.00	5.76	15.01	0.00	
33276-393	393.00		0.00	0.00	0.00	0.00	0.40	
33276-394	394.00		2.99	15.70	0.00	0.00	0.00	
33276-395	395.00		0.00	0.00	0.71	1.07	0.00	
33276-396	396.00		0.78	41.55	0.00	0.00	0.00	
33276-397	397.00		0.00	0.00	0.00	0.00	0.00	
33276-398	398.00		0.00	0.00	2.73	4.14	0.00	
33276-399	399.00		25.15	160.74	0.00	0.00	0.00	
33276-400	400.00		0.00	0.00	0.00	0.00	0.00	
33276-401	401.00		5.21	27.24	2.73	391.00	0.40	
33276-402	402.00		0.00	0.00	0.00	0.00	0.40	
QC C-14	QC C-14	QC C-14	26606.60	5256.35	95922.30	133811.00	0.00	
33276-403	403.00		0.00	0.00	0.00	0.00	2.40	
33276-404	404.00		0.00	0.00	1.72	2.65	0.00	
33276-405	405.00		0.00	0.00	0.00	0.00	0.00	
33276-406	406.00		0.00	0.00	0.00	0.00	0.00	
33276-407	407.00		0.00	0.00	0.00	0.00	0.00	
33276-408	408.00		0.00	0.00	0.00	0.00	0.00	
33276-409	409.00		2.99	19.12	0.00	0.00	0.40	
33276-410	410.00		0.00	0.00	0.00	0.00	2.40	
33276-411	411.00		0.00	0.00	0.00	0.00	0.40	
33276-412	412.00		1.88	11.12	0.00	0.00	0.00	
33276-413	413.00		0.00	0.00	5.76	0.00	1.40	
33276-414	414.00		0.00	0.00	0.00	0.00	0.00	
33276-415	415.00		0.00	0.00	15.86	30.77	2.40	
33276-416	416.00		4783.22	35424.90	112.85	0.00	0.00	
33276-417	417.00		4543.88	32550.90	119.92	0.00	0.00	
33276-418	418.00		0.78	0.00	6.77	10.68	3.40	
33276-419	419.00		116.02	859.27	4.75	1.93	0.00	
33276-420	420.00		0.78	6.02	0.00	0.00	1.40	
33276-421	421.00		0.00	0.00	0.00	0.00	5.40	
33276-422	422.00		0.00	0.00	0.00	0.00	0.40	
33276-423	423.00		0.00	0.00	0.00	0.00	8.40	
33276-424	424.00		0.00	0.00	2.73	5.17	3.40	
33276-425	425.00		0.00	0.00	0.00	0.00	0.00	
QC BL	QC BL	QC BL	0.00	0.00	3.74	5.65	0.00	
33276-426	426.00		0.00	0.00	0.00	0.00	0.00	
33276-427	427.00		0.00	0.00	0.00	0.00	0.00	
33276-428	428.00		0.78	4.44	0.00	0.00	0.40	
33276-429	305-4118-1		0.00	0.00	0.00	0.00	0.00	
33276-430	305-4118-2		0.00	0.00	7.78	11.85	0.40	
33276-431	305-4118-3		0.00	0.00	0.00	0.00	0.00	
33276-432	305-4118-4		0.00	0.00	0.00	0.00	0.00	
33276-433	305-4118-5		0.00	0.00	0.00	0.00	0.40	
33276-434	305-4118-6		0.00	0.00	6.77	10.39	0.00	



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Laboratory Director

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[illegible]

Jay R. Dockendorff
Laboratory Director

RSA Laboratories **Radiochemistry Analysis Data Sheet**

Customer: June Tamkin				Isotope 1 H-3		Collect Date: 20 min count X 10		Cust ID # :	
Sample Type: Wipes				Isotope 2 C-14		Count Date: 12/6/2013		# of Pages:	
Matrix: Wipes				Isotope 3 HE Beta		Project: Decommissioning			
RSA				RSA ID#:		Location: Institute for Pharmaceutical Discovery			
Report No.	Location	POS	ID #	Cust ID #	Background	CPMA	DPMA		
1			1 BG						BG
2			2 33276-129	129-R1		8354.08	62410.70		357
3			3 33276-129	129-R2		8347.28	62601.80		358
4			4 33276-129	129-R3		8344.20	62470.30		359
			5 33276-129	129-R4		8315.79	62400.10		360
			6 33276-129	129-R5		8361.36	63327.30		361
			7 33276-129	129-R6		8357.11	63034.40		362
			8 33276-129	129-R7		8382.62	63421.00		363
			9 33276-129	129-R8		8387.62	64062.30		364
			10 33276-129	129-R9		8399.17	63659.20		365
			11 33276-129	129-R10		8386.94	63841.20		366
			12	129-R-avg		8363.62	63118.30		
			13						368
			14 33276-130	130-R1		310.92	1855.48		369
			15 33276-131	130-R2		311.97	1868.25		370
			16 33276-132	130-R3		306.77	1821.08		371
			17 33276-133	130-R4		311.92	1862.23		372
			18 33276-134	130-R5		298.29	1750.35		373
			19 33276-135	130-R6		307.49	1846.12		374
			20 33276-136	130-R7		299.07	1772.15		375
			21 33276-137	130-R8		311.20	1877.85		376
			22 33276-138	130-R9		309.04	1870.54		377
			23 33276-139	130-R10		305.88	1830.71		
			24	130-R-avg		307.25	1835.13		379
			25						H-3
			26 33276-273	273-R1		5646.66	40129.40		380
			27 33276-273	273-R2		5690.01	40982.70		381
			28 33276-273	273-R3		5696.62	41075.00		382
			29 33276-273	273-R4		5659.95	40369.80		383
			30 33276-273	273-R5		5667.00	40281.90		384
			31 33276-273	273-R6		5668.06	40222.60		385
			32 33276-273	273-R7		5609.50	39491.50		386
			33 33276-273	273-R8		5654.12	39676.60		387
			34 33276-273	273-R9		5650.76	40061.60		388
			35 33276-273	273-R10		5665.68	40706.20		
			36	273-R-avg		5660.84	40295.20		390
			37						391
			38 33276-416	416-R1		4831.92	36518.00		392
			39 33276-416	416-R2		4784.71	35419.90		393
			40 33276-416	416-R3		4811.77	35955.70		394
			41 33276-416	416-R4		4810.95	35777.10		395
			42 33276-416	416-R5		4819.88	36281.80		396
			43 33276-416	416-R6		4847.49	36923.30		397
			44 33276-416	416-R7		4854.26	37293.40		398

45	33276-416	416-R8	4824.84	36081.90	399
46	33276-416	416-R9	4854.12	36966.50	400
47	33276-416	416-R10	4851.30	36463.60	
48		416-R-avg	4829.12	36361.40	402
49					C-14
50	33276-417	417-R1	4671.71	33301.40	403
51	33276-417	417-R2	4678.26	32885.40	404
52	33276-417	417-R3	4668.35	33357.60	405
53	33276-417	417-R4	4703.71	33939.10	406
54	33276-417	417-R5	4683.17	33684.60	407
55	33276-417	417-R6	4670.15	33160.20	408
56	33276-417	417-R7	4681.97	33322.70	409
57	33276-417	417-R8	4684.86	33662.60	410
58	33276-417	417-R9	4669.30	33068.30	411
59	33276-417	417-R10	4665.48	33686.80	
60		417-R-avg	4677.70	33458.30	413
61					414
62	33276-419	419-R1	9.64	21.09	415
63	33276-419	419-R2	10.09	26.19	416
64	33276-419	419-R3	10.03	28.19	417
65	33276-419	419-R4	8.81	17.74	418
66	33276-419	419-R5	8.81	15.46	419
67	33276-419	419-R6	9.48	24.89	420
68	33276-419	419-R7	9.64	21.67	421
69	33276-419	419-R8	10.03	27.94	422
70	33276-419	419-R9	10.47	30.15	423
71	33276-419	419-R10	9.53	24.66	
72		419-R-avg	9.65	23.80	425
					BL
74	33276-85	85-R1	5.27	0.00	426
75	33276-85	85-R2	5.99	0.00	427
76	33276-85	85-R3	4.77	0.00	428
	33276-85	85-R4	6.21	0.00	
78	33276-85	85-R5	5.71	0.00	1
79	33276-85	85-R6	6.60	0.00	2
80	33276-85	85-R7	4.94	0.00	3
81	33276-85	85-R8	5.71	0.00	4
82	33276-85	85-R9	5.38	0.00	5
83	33276-85	85-R10	6.71	0.00	
84		85-R-avg	5.73	0.00	7
85					8
86	33276-264	264-R1	9.60	29.85	9
87	33276-264	264-R2	9.43	26.46	10
88	33276-264	264-R3	9.04	30.07	11
89	33276-264	264-R4	8.60	27.07	12
90	33276-264	264-R5	8.76	29.60	13
91	33276-264	264-R6	9.15	29.70	14
92	33276-264	264-R7	7.99	23.68	15
93	33276-264	264-R8	7.93	27.13	16
	33276-264	264-R9	7.27	18.57	
	33276-264	264-R10	8.60	24.59	
		264-R-avg	8.64	26.64	

H-3 C-14

SELECT CONFIDENCE LEVEL: 90% (1) 2 <=====

 (enter the number next to the 95% (2)

 desired confidence level in box 99% (3)

 F3 {left of arrow})

 MDA CALCULATION

RSA ID #	SAMPLE COUNT TIME	BKGD COUNT TIME	BKGD CPM	DETECTOR EFICENCY	SAMPLE VOLUME L/g	LLD DPM	MDA pCi
H-3	1	1	7.5	0.1831	1	84.37	38.00
C-14	1	1		0.6662	1	#VALUE!	#VALUE!
HE Beta	1	1	5		1	#DIV/0!	#DIV/0!

0.6662

 0.1831

MDA
uCi

3.80E-05

#VALUE!

#DIV/0!

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Report No. **Report 2**

Customer: **June Tamkin**

Customer Samp No. **Various**

Location: **Institute for Pharmaceutical Discovery**

RSA Lab Sample No. **33276**

Project: **Decommissioning**

20 min count X 10

Samp. Description: **Wipes**

Date Counted: **12/6/2013**

Matrix: **Wipes**

H-3 LLD dpm= 84.37

RSA ID#	CUST. ID#	Location	H-3 CPM	H-3 DPM				
BG		BACKGROUND	0.00					
33276-129	129-R1		8354.08	62411				
33276-129	129-R2		8347.28	62601.80				
33276-129	129-R3		8344.20	62470.30				
33276-129	129-R4		8315.79	62400.10				
33276-129	129-R5		8361.36	63327.30				
33276-129	129-R6		8357.11	63034.40				
33276-129	129-R7		8382.62	63421.00				
33276-129	129-R8		8387.62	64062.30				
33276-129	129-R9		8399.17	63659.20				
33276-129	129-R10		8386.94	63841.20				
	129-R-avg		8363.62	63118				
33276-130	130-R1		310.92	1855.48				
33276-131	130-R2		311.97	1868.25				
33276-132	130-R3		306.77	1821.08				
33276-133	130-R4		311.92	1862.23				
33276-134	130-R5		298.29	1750.35				
33276-135	130-R6		307.49	1846.12				
33276-136	130-R7		299.07	1772.15				
33276-137	130-R8		311.20	1877.85				
33276-138	130-R9		309.04	1870.54				
33276-139	130-R10		305.88	1830.71				
	130-R-avg		307.25	1835.13				
33276-273	273-R1		5646.66	40129.40				
33276-273	273-R2		5690.01	40982.70				
33276-273	273-R3		5696.62	41075.00				
33276-273	273-R4		5659.95	40369.80				
33276-273	273-R5		5667.00	40281.90				
33276-273	273-R6		5668.06	40222.60				
33276-273	273-R7		5609.50	39491.50				
33276-273	273-R8		5654.12	39676.60				
33276-273	273-R9		5650.76	40061.60				
33276-273	273-R10		5665.68	40706.20				
	273-R-avg		5660.84	40295.20				



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RSA ID#	CUST. ID#	LOCATION	H-3 CPM	H-3 DPM				
33276-416	416-R1		4831.92	36518.00				
33276-416	416-R2		4784.71	35419.90				
33276-416	416-R3		4811.77	35955.70				
33276-416	416-R4		4810.95	35777.10				
33276-416	416-R5		4819.88	36281.80				
33276-416	416-R6		4847.49	36923.30				
33276-416	416-R7		4854.26	37293.40				
33276-416	416-R8		4824.84	36081.90				
33276-416	416-R9		4854.12	36966.50				
33276-416	416-R10		4851.30	36463.60				
	416-R-avg		4829.12	36361.40				
33276-417	417-R1		4671.71	33301.40				
33276-417	417-R2		4678.26	32885.40				
33276-417	417-R3		4668.35	33357.60				
33276-417	417-R4		4703.71	33939.10				
33276-417	417-R5		4683.17	33684.60				
33276-417	417-R6		4670.15	33160.20				
33276-417	417-R7		4681.97	33322.70				
33276-417	417-R8		4684.86	33662.60				
33276-417	417-R9		4669.30	33068.30				
33276-417	417-R10		4665.48	33686.80				
	417-R-avg		4677.70	33458.30				
33276-419	419-R1		9.64	21.09				
33276-419	419-R2		10.09	26.19				
33276-419	419-R3		10.03	28.19				
33276-419	419-R4		8.81	17.74				
33276-419	419-R5		8.81	15.46				
33276-419	419-R6		9.48	24.89				
33276-419	419-R7		9.64	21.67				
33276-419	419-R8		10.03	27.94				
33276-419	419-R9		10.47	30.15				
33276-419	419-R10		9.53	24.66				
	419-R-avg		9.65	23.80				
33276-85	85-R1		5.27	0.00				
33276-85	85-R2		5.99	0.00				
33276-85	85-R3		4.77	0.00				
33276-85	85-R4		6.21	0.00				
33276-85	85-R5		5.71	0.00				
33276-85	85-R6		6.60	0.00				
33276-85	85-R7		4.94	0.00				
33276-85	85-R8		5.71	0.00				
33276-85	85-R9		5.38	0.00				
33276-85	85-R10		6.71	0.00				



Jay R. Dockendorff
Laboratory Director

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[illegible]

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Laboratory Director

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Radiochemistry Analysis Data Sheet

COC #: 30656ATL Rpt:30

Client: **June Tamkin**

Client Samp. No.: **Sample Dry prep**

Location: **Not Specified**

RSA Lab. Samp. No. **33278Dry**

Project: **IPD**

Date Collected: **12/13/12**


Sample Type: **Soil**

Date Received: **12/15/12**

Matrix: **Soil**

State of Connecticut Laboratory Cert # : PH-0111

Parameter	Method	Result	LLD	Units	Date
Tritium	906.0	0.19 +/- 1.18	3.27	PCi/g	12/27/12



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Radiochemistry Analysis Data Sheet

COC #: 30656ATL Rpt:31

Client: June Tamkin

Client Samp. No.: Sample Wet prep

Location: Not Specified

RSA Lab. Samp. No. 33278Wet

Project: IPD

Date Collected: 12/13/12

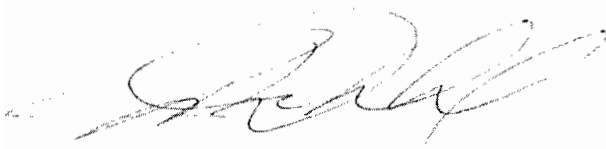
Sample Type: Soil

Date Received: 12/15/12

Matrix: Soil

State of Connecticut Laboratory Cert # : PH-0111

Parameter	Method	Result	LLD	Units	Date
Tritium	906.0	0.00 +/- 1.02	3.35	PCi/g	01/02/13



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Laboratory Director

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Radiochemistry Analysis Data Sheet

COC #: 30656ATL Rpt:29

Client: June Tamkin

Client Samp. No.: Background

Location: Front of Bldg.

RSA Lab. Samp. No. 33277

Project: IPD

Date Collected: 12/13/12


Sample Type: Soil

Date Received: 12/15/12

Matrix: Soil

State of Connecticut Laboratory Cert # : PH-0111

Parameter	Method	Result	LLD	Units	Date
Tritium	906.0	0.00 +/- 1.07	3.27	PCi/g	12/27/12


Jay R. Dockendorff
Laboratory Director

Termination/decommissioning Surveys: Rooms and Wipe Test Locations

SAMPLE	ROOM	WIPE TEST LOCATION
Unk_1	305	FLR1
Unk_2	305	FLR2
Unk_3	305	FLR3
Unk_4	305	FLR4
Unk_5	305	FLR5
Unk_6	305	FLR6
Unk_7	305	FLR7
Unk_8	305	FLR8
Unk_9	305	FLR9
Unk_10	305	FLR10
Unk_11	305	FLR11
Unk_12	305	FLR12
Unk_13	305	FLR13
Unk_14	305	FLR14
Unk_15	305	FLR15
Unk_16	305	FLR16
Unk_17	305	FLR17
Unk_18	305	FLR18
Unk_19	305	FLR19
Unk_20	305	FLR20
Unk_21	305	FLR20
Unk_22	305	FLR21
Unk_23	305	FLR22
Unk_24	305	FLR23
Unk_25	305	room 201, hood, top inside (3)
Unk_26	305	room 201, hood, sash, bottom (1)
Unk_27	305	left wall
Unk_28	305	right wall
Unk_29	305	back wall
Unk_30	305	glass hood sash inside & out
Unk_31	305	inside of hood
Unk_32	305	bench/table 6
Unk_33	305	glucose analyzer 4
Unk_34	305	metal table /bench 2
Unk_35	305	BKG 15
Unk_36	305	door handle door entry 305 13
Unk_37	305	refrigerator 11
Unk_38	305	floor 9
Unk_39	305	table 7
Unk_40	305	cart 5
Unk_41	305	floor 3
Unk_42	305	carcass freezer 16
Unk_43	305	wall 35 & shelves
Unk_44	305	wall 36
Unk_45	305	pipeter 37
Unk_46	305	cart & back wall
Unk_47	305	inside
Unk_48	305	pens
Unk_49	305	FLR 24
Unk_50	305	FLR 25 sink basin
Unk_51	305	FLR 26
Unk_52	305	FLR 27
Unk_53	305	FLR 28
Unk_54	305	FLR 29
Unk_55	305	FLR 30
Unk_56	305	FLR 31
Unk_57	305	FLR 32
Unk_58	305	FLR 33
Unk_59	305	FLR 34
Unk_60	LSC	3
Unk_61	LSC	2
Unk_62	LSC	1
Unk_63	Hood 201	cabinet under hood inside doors(12)
Unk_64	Hood 201	cabinet under hood right wall (10)
Unk_65	Hood 201	cabinet under hood left wall (8)
Unk_66	Hood 201	the hood inside + outside sash (6)
Unk_67	Hood 201	the hood inside right wall (4)
Unk_68	Hood 201	the hood inside left wall (2)
Unk_69	Hood 201	cabinet under hood , back wall (11)
Unk_70	Hood 201	cabinet under hood , top roof (9)
Unk_71	Hood 201	cabinet under hood , bottom (7)
Unk_72	Hood 201	the hood back wall (5)

Unk_73	306	first Cabinet over sink
Unk_74	306	sink and handles (42)
Unk_75	306	inside draws near sink (43)
Unk_76	306	Bench (44)
Unk_77	306	Bench door and cabinet (45)
Unk_78	306	Bench door and cabinet (46)
Unk_79	306	Bench 47
Unk_80	306	glucose analyzer (48)
Unk_81	305	inside sm box
Unk_82	305	outside sm box
Unk_83	305	inside lg box
Unk_84	305	outside lg box
Unk_85	306	right glucose analyzer liquid (1)
Unk_86	306	right glucose analyzer liquid handle(2)
Unk_87	306	right glucose analyzer buttens (3)
Unk_88	306	left glucose analyzer buttens (4)
Unk_89	306	left glucose analyzer liquid (5)
Unk_90	305	sink drain (6)
Unk_91	305	refre freezer inside (7)
Unk_92	305	refre freezer outside (8)
Unk_93	305	Refre inside (9)
Unk_94	305	Counter left of sink(10)
Unk_95	300	Inside carcass freezer (11)
Unk_96	300	Outside carcass freezer (12)
Unk_97	300	Area #1 of flooring left of freezer (13)
Unk_98	300	Area #2 of flooring front of freezer (14)
Unk_99	300	Area #3 of flooring right of freezer (15)
Unk_100	300	Area #3 of flooring right of freezer (16)
Unk_101	310	room 310, inside door on left 2D
Unk_102	310	room 310, sink and drain floor 2C
Unk_103	310	room 310, floor inside 2B
Unk_104	310	room 310, inside and ousude door handle 2A
Unk_105	310	5
Unk_106	310	6
Unk_107	309 1C	room 309, bench
Unk_108	309 1B	room 309, inside flood at door entry
Unk_109	309 1A	room 309, inside and outside of door, handles
Unk_110	427 4B	room 427, floor in front of door
Unk_111	reception 6E	reception area, coffee machine area and sink
Unk_112	427 4A	room 427, outer door handle into room from hallway]
Unk_113	surgical rm anim	Surgical Suite, steel bench
Unk_114	surg rm 3C	Surgical Suite, outside door handle and door
Unk_115	recept 6F	reception area, floor in front of door
Unk_116	surg floor 3B	Surgical Suite, floor
Unk_117	surg floor 3A	Surgical Suite, door handle and door
Unk_118	310 2F	room 310, floor swipe right door closest to clamp room
Unk_119	310 2E	room 310, inside door on right
Unk_120	recpt 6D	reception area, desktops secretarial area
Unk_121	recept 6B	reception area, cabinet in front of door
Unk_122	recpt 6A	reception area, door handle to exit
Unk_123	174 5D	room 174, floor in front of door
Unk_124	174 5C	room 174, bench to immediate left from door entry
Unk_125	174 5B	room 174, sink/drain cover
Unk_126	174 5A	room 174, door/door handle into PK lab
Unk_127	427 4D	room 427, bench top at far end of room from door
Unk_128	427 4C	room 427, sink/drain cover
Unk_129	room 201	water freeze 201
Unk_130	room 201	wipe floor droplet-melted ice
Unk_131	room 201	unknow under hood
Unk_132	room 201	l125 aspirate
Unk_133	room 201	unknow solution in clinder
Unk_134	room 201	unknow under hood bottle
Unk_135	room 201	l125 aspirate bottle
Unk_136	room 201	lead
Unk_137	room 201	bottle outside
Unk_138	room 201	bottle inside
Unk_139	room 201	incubator outside
Unk_140	room 201	incubator inside
Unk_141	room 201	Incubator inside,glass+upper shelf
141.rerun	room 201	incubator inside,glass+upper shelf
Unk_142	room 201	jitterbug outside
Unk_143	room 201	jitterbug inside
Unk_144	room 201	jitterbug inside
Unk_145	room 201	hybrid oven outside
Unk_146	room 201	hybrid oven inside
Unk_147	room 201	hybrid oven inside
Unk_148	room 201	cent inside

Unk_149	room 201	cent outside
Unk_150	room 201	cent outside
Unk_151	room 201	refrig door
151.rerun	room 201	refrig door
Unk_152	room 201	refrig inside
Unk_153	room 201	refrig inside
Unk_154	Room 131-134	desk laptop facing Mike's office (1)
Unk_155	Room 131-134	desk laptop facing Mike's office (2)
Unk_156	Room 131-134	desk laptop facing Mike's office (3)
Unk_157	Room 131-134	bench top adjacent to fume hood (4)
Unk_158	Room 131-134	bench top adjacent to fume hood (5)
Unk_159	Room 131-134	bench top adjacent to fume hood (6)
Unk_160	Room 131-134	bench top adjacent to cold room (7)
Unk_161	Room 131-134	bench top adjacent to cold room (8)
Unk_162	Room 131-134	bench top adjacent to cold room (9)
Unk_163	Room 131-134	bench top adjacent to dark room (10)
Unk_164	Room 131-134	bench top adjacent to dark room (11)
Unk_165	Room 131-134	bench top adjacent to dark room (12)
Unk_166	Room 131-134	bench top adjacent to freezer room (13)
Unk_167	Room 131-134	bench top adjacent to freezer room (14)
Unk_168	Room 131-134	bench top adjacent to freezer room (15)
Unk_169	Room 131-134	bench top adjacent to last fume hood (16)
Unk_170	Room 131-134	bench top adjacent to last fume hood (17)
Unk_171	Room 131-134	floor of last lab bay (18)
Unk_172	room 201	hood 1 Repeat
Unk_173	room 201	hood 2 repeat
Unk_174	room 201	hood 3 repeat
Unk_175	room 201	hood 4 repeat
Unk_176	room 201	hood 5 repeat
Unk_177	room 201	hood 6 repeat
Unk_178	room 201	hood 7 repeat
Unk_179	room 201	hood 8 repeat
Unk_180	room 201	hood 9 repeat
Unk_181	room 201	hood 10 repeat
Unk_182	room 201	hood 11 repeat
Unk_183	room 201	hood 12 repeat
Unk_184	room 201	Regre door, repeat of 151
Unk_185	room 201	Regre door, repeat of 151
Unk_186	room 201	incubator inside,repeat of 141
Unk_187	room 201	incubator inside. Lower shelf
Unk_188	room 201	heating block
Unk_189	room 201	shaker
Unk_190	room 201	eppendorf mini spin
Unk_191	room 201	power supply biorad
Unk_192	room 201	plexglass#1 inside
Unk_193	room 201	plexglass#1 outside
Unk_194	room 201	plexglass#2 inside
Unk_195	room 201	plexglass#2 outside
Unk_196	room 201	spill kit top lid
Unk_197	room 201	spill kit side
Unk_198	room 201	spill kit bottom
Unk_199	room 201	stir plate
Unk_200	room 201	gel box #1 outside
Unk_201	room 201	gel box #1 inside
Unk_202	room 201	lead shielding
Unk_203	room 201	gel box #2 outside
Unk_204	room 201	gel box #2 inside
Unk_205	room 201	cassette inside
Unk_206	room 201	gel box#3 outside
Unk_207	room 201	gel box#3 inside
Unk_208	room 201	gel box#4 outside
Unk_209	room 201	gel box#4 inside
Unk_210	room 201	safe box outside
Unk_211	room 201	stratagene outside
Unk_212	room 201	small container #1 outside
Unk_213	room 201	small container #1 inside
Unk_214	room 201	small container #2 outside
Unk_215	room 201	small container #2 inside
Unk_216	room 201	small container #3 outside
Unk_217	room 201	small container #3 inside
Unk_218	room 201	small container#4 outside
Unk_219	room 201	small container #4 inside
Unk_220	room 201	small container #5 outside
Unk_221	room 201	small container #5 inside
Unk_222	room 201	small container #6 outside
Unk_223	room 201	small container #6 inside
Unk_224	room 201	small container #7 outside

Unk_225	room 201	small container #7 inside
Unk_226	room 201	small container #8 outside
Unk_227	room 201	small container #8 inside
Unk_228	room 201	BOX outside
Unk_229	room 201	box inside
Unk_230	room 201	container red top outside
Unk_231	room 201	container red top inside
Unk_232	room 201	thick shield glass
Unk_233	room 201	beaker
Unk_234	room 201	amersham
Unk_235	room 201	small container #2 inside repeat
Unk_236	room 201	small container #5 inside repeat
Unk_237	RW 2	outside empty lead pigs (small fiberboard 125l decayed)
Unk_238	RW 2	inside empty lead pigs (decayed)
Unk_239	RW 2	large dry waste box (3)
Unk_240	RW 2	inside/outside plexiglass carboy (4)
Unk_241	RW 2	external surface plexiglass box A (5)
Unk_242	RW 2	inside surface plexiglass box A (6)
Unk_243	RW 2	external surface plexiglass box B (7)
Unk_244	RW 2	inside surface plexiglass box B (8)
Unk_245	RW 2	lead foil first sheet (9)
Unk_246	RW 2	lead foil second strip (10)
Unk_247	RW 2	carboy-2 inside and external (11)
Unk_248	RW 2	carboy-2 outside surfaces (12)
Unk_249	RW 2	Plexiglass container/shields small boxes (13)
Unk_250	RW 2	outside grey basin, plastic (14)
Unk_251	RW 2	inside grey basin, plastic (15)
Unk_252	RW 2	pipette washer, external surfaces (16)
Unk_253	RW 2	plexiglass box-larger outside surface (17)
Unk_254	RW 2	plexiglass box- larger inside surface (18)
Unk_255	RW 2	4-walls (19)
Unk_256	RW 2	door handle and door inside/outside (20)
Unk_257	RW 2	door inside/outside (21)
Unk_258	RW 1	bench surface and cabinets/drawers (22)
Unk_259	RW 1	equipment bulk water bath 1st (23)
Unk_260	RW 1	equipment bulk water bath 2nd (24)
Unk_261	RW 1	floor-broad wipe (25)
Unk_262	RW 1	fluoromax interior (26)
Unk_263	RW 1	fluoromax exterior (27)
Unk_264	RW 1	outside of 55 gallon drum (28)
Unk_265	RW 1	outside of 55 gallon drum (29)
Unk_266	RW 1	4 walls (30)
Unk_267	RW 1	microwave-research use (31)
Unk_268	room 201	sink#1 tail piece & plumbing
Unk_269	room 201	sink #2 fluid sample inside sink trap
Unk_270	room 164, 165,	room 164, 165,
Unk_271	room 164, 165,	room 164, 165,
Unk_272	room 164, 165,	room 164, 165,
Unk_273	room 201	refr ice melt
Unk_274	room 201	counter tops 50
Unk_275	room 201	counter tops 51
Unk_276	room 201	counter tops 52
Unk_277	room 201	counter tops 53
Unk_278	room 201	counter tops 54
Unk_279	room 201	counter tops 55
Unk_280	room 201	counter tops 56
Unk_281	room 201	counter tops 57
Unk_282	room 201	counter tops 58
Unk_283	room 201	counter tops 59
Unk_284	room 201	counter tops 60
Unk_285	room 201	counter tops 61
Unk_286	room 201	counter tops 62
Unk_287	room 201	counter tops 63
Unk_288	room 201	counter tops 64
Unk_289	room 201	counter tops 65
Unk_290	room 201	counter tops 66
Unk_291	room 201	counter tops 67
Unk_292	room 201	(cabinets and draws, exterior)68
Unk_293	room 201	(cabinets and draws, exterior)69
Unk_294	room 201	(cabinets and draws, exterior)70
Unk_295	room 201	(cabinets and draws, exterior)71
Unk_296	room 201	(cabinets and draws, exterior)72
Unk_297	room 201	(cabinets and draws, exterior)73
Unk_298	room 201	(cabinets and draws, exterior)74
Unk_299	room 201	(cabinets and draws, exterior)75
Unk_300	room 201	(cabinets and draws, exterior)76
Unk_301	room 201	(cabinets and draws, exterior)77

Unk_302	room 201	(cabinets and draws, exterior)78
Unk_303	room 201	(cabinets and draws, exterior)79
Unk_304	room 201	(cabinets and draws, exterior)80
Unk_305	room 201	(cabinets and draws, exterior)81
Unk_306	room 201	(cabinets and draws, exterior)82
Unk_307	room 201	(cabinets and draws, exterior)83
Unk_308	room 201	(cabinets and draws, exterior)84
Unk_309	room 201	(cabinets and draws, exterior)85
Unk_310	room 201	(cabinets and draws, exterior)86
Unk_311	room 201	(cabinets and draws, exterior)87
Unk_312	room 201	(cabinets and draws, exterior)88
Unk_313	room 201	(cabinets and draws, exterior)89
Unk_314	room 201	(cabinets and draws, exterior)90
Unk_315	room 201	(cabinets and draws, exterior)91
Unk_316	room 201	floor(see map) 121
Unk_317	room 201	floor(see map) 122
Unk_318	room 201	floor(see map) 123
Unk_319	room 201	floor(see map) 124
Unk_320	room 201	floor(see map) 125
Unk_321	room 201	floor(see map) 126
Unk_322	room 201	floor(see map) 127
Unk_323	room 201	floor(see map) 128
Unk_324	room 201	floor(see map) 129
Unk_325	room 201	floor(see map) 130
Unk_326	room 201	floor(see map) 131
Unk_327	room 201	floor(see map) 132
Unk_328	room 201	floor(see map) 133
Unk_329	room 201	floor(see map) 134
Unk_330	room 201	floor(see map) 135
Unk_331	room 201	floor(see map) 136
Unk_332	room 201	floor(see map) 137
Unk_333	room 201	floor(see map) 138
Unk_334	room 201	floor(see map) 139
Unk_335	room 201	floor(see map) 140
Unk_336	room 201	floor(see map) 141
Unk_337	room 201	floor(see map) 142
Unk_338	room 201	floor(see map) 143
Unk_339	room 201	floor(see map) 144
Unk_340	room 201	floor(see map) 145
Unk_341	room 201	floor(see map) 146
Unk_342	room 201	floor(see map) 147
Unk_343	room 201	floor(see map) 148
Unk_344	room 201	floor(see map) 149
Unk_345	room 201	floor(see map) 150
Unk_346	room 201	floor(see map) 151
Unk_347	room 201	floor(see map) 152
Unk_348	room 201	floor(see map) 153
Unk_349	room 201	floor(see map) 154
Unk_350	room 201	floor(see map) 155
Unk_351	room 201	floor(see map) 156
Unk_352	room 201	bottom of container(small box with racks) 157
Unk_353	room 201	bottom of container(small box with racks) 158
Unk_354	room 201	bottom of container(small box with racks) 159
Unk_355	room 201	bottom of container (large box with the shaker) 160
Unk_356	room 201	bottom of container (large box with the shaker) 161
Unk_357	room 201	bottom of container (large box with the shaker) 162
Unk_358	room 201	bottom of container (large waste box)163
Unk_359	room 201	bottom of container (large waste box)164
Unk_360	room 201	bottom of container (large waste box)165
Unk_361	room 201	bottom of container (large black bag of waste)166
Unk_362	room 201	bottom of container (large black bag of waste)167
Unk_363	room 201	bottom of container (large black bag of waste)168
Unk_364	room 201	(cabinets and draws, exterior) 92
Unk_365	room 201	(cabinets and draws, exterior) 93
Unk_366	room 201	(cabinets and draws, exterior) 94
Unk_367	room 201	(cabinets and draws, exterior) 95
Unk_368	room 201	(cabinets and draws, exterior) 96
Unk_369	room 201	(cabinets and draws, exterior) 97
Unk_370	room 201	(cabinets and draws, exterior) 98
Unk_371	room 201	(cabinets and draws, exterior) 99
Unk_372	room 201	(cabinets and draws, exterior) 100
Unk_373	room 201	(cabinets and draws, exterior) 101
Unk_374	room 201	(cabinets and draws, exterior) 102
Unk_375	room 201	(cabinets and draws, exterior) 103
Unk_376	room 201	(cabinets and draws, exterior) 104
Unk_377	room 201	(cabinets and draws, exterior) 105
Unk_378	room 201	(cabinets and draws, exterior) 106

Unk_379	room 201	(cabinets and draws, exterior) 107
Unk_380	room 201	(cabinets and draws, exterior) 108
Unk_381	room 201	(cabinets and draws, exterior) 109
Unk_382	room 201	light switch 110
Unk_383	room 201	Thermostat 111
Unk_384	room 201	door knob 112
Unk_385	room 201	Counter tops 113
Unk_386	room 201	Counter tops 114
Unk_387	room 201	Counter tops 115
Unk_388	room 201	Counter tops 116
Unk_389	room 201	Counter tops 117
Unk_390	room 201	Counter tops 118
Unk_391	room 201	Counter tops 119
Unk_392	room 201	Counter tops 120
Unk_393	room 201	59 after decontamination
Unk_394	room 201	59 after decontamination
Unk_395	room 201	901 inside cabinet #1 wipe
Unk_396	room 201	902 inside cabinet #2 wipe
Unk_397	room 201	903 inside cabinet #3 wipe
Unk_398	room 201	904 inside cabinet #4 wipe
Unk_399	room 201	905 inside drawer 1 bulk
Unk_400	room 201	906 inside drawer 2 bulk
Unk_401	room 201	907 inside drawer 3 bulk
Unk_402	room 201	908 inside drawer 4 bulk
Unk_403	room 201	909 inside cabinet 5
Unk_404	room 201	910 wall
Unk_405	room 201	911 black bench counter and wall surface
Unk_406	room 201	912 wall over bench counter
Unk_407	room 201	913 wall around light switch
Unk_408	room 201	914 inside of lower fume hood cabinet floor
Unk_409	room 201	915 door and wall
Unk_410	room 300	Floor Carcass Freezer (916)
Unk_411	room 306	306/5/306 tabletop bench (917)
Unk_412	room 306	305/306 metal cart (918)
Unk_413	room 306	Liquid Sample Glucose analyzer 305/306 (919)
Unk_414	room 306	Liquid Sample Glucose analyzer 2 wash 305/306 (920)
Unk_415	room 306	Liquid Sample analysis 305/306 (921)
BKG1		BKG1
BKG2		BKG2
BKG3		BKG3
BKG4		BKG4
BKG5		BKG5
BKG6		BKG6
BKG7		BKG7
BKG8		BKG8
BKG9		BKG9
BKG10		BKG10
Unk_416		Thawed Liquid in refrig/freezer
Unk_417		Thawed Liquid in refrig/freezer
Unk_418	room 201	Floor in front of hood
Unk_419	room 201	Floor middle of the room
Unk_420	room 201	floor to refrig/freezer and the exit
Unk_421	outside 201	hallway floor
Unk_422	outside 201	hallway floor/immediately at the door
Unk_423	outside 201	hallway floor/outside exit
Unk_424	parking lot	ground by the exit outside
Unk_425	door to exit	handle of the door
Unk_426	LSC	inside rack
Unk_427	LSC	inside door
Unk_428		

Pre-Termination Wipe Test Rooms and Locations

Unk 429	305/306	Floor (work area)
Unk 430	305/306	Table
Unk 431	305/306	Floor (work area)
Unk 432	305/306	Glucose analyzer 4
Unk 433	305/306	Cart
Unk 434	305/306	Table
Unk 435	305/306	Table
Unk 436	305/306	Sink
Unk 437	305/306	Floor
Unk 438	305/306	Table
Unk 439	305/306	Refrigerator
Unk 440	305/306	Sink
Unk 441	305/306	Door handle

Unk 442	305/306	Door handle
Unk 443	305/306	Background
Unk 444	305/306	Carcass freezer
Unk 445	201	Outer jdoor to 201
Unk 446	201	Inner door to 201
Unk 447	201	Minifridge
Unk 448	201	Countertop
Unk 449	201	Floor
Unk 450	201	Countertop
Unk 451	201	Sink
Unk 452	201	Hood
Unk 453	201	Floor
Unk 454	201	Under hood
Unk 455	201	Door to parking and floor
Unk 456	141	Door handles
Unk 457	141	Floor
Unk 458	141	Countertop
Unk 459	141	Liquid scintillation counter
Unk 460	141	Keyboard of computer
Unk 461	141	Wall

Isotope Room Descriptions

The Institutes For Pharmaceutical Discovery, L.L.C.

[REDACTED] room was utilized for freezer storage of ^3H - and ^{14}C -labelled carcasses. No procedures were done in this room. One freezer was present and was decommissioned.

[REDACTED] This room was used for storage of ^3H and ^{14}C samples generated in room 306. Air treatment, flooring, cabinetry and sink areas have been surveyed and swiped.

[REDACTED] room was used for in vivo ^3H and ^{14}C studies. All equipment, flooring and cabinetry have been surveyed and swiped.

Room 309: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 310: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 322: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 174: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 427: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

[REDACTED] primary room for radioactive procedures and waste storage. ^{14}C , ^{125}I , ^3H , ^{32}P , ^{33}P and ^{35}S were utilized in this room. ^{32}P , ^{33}P and ^{35}S were not used in this room since 2006. All equipment, flooring, cabinetry, hood and sink areas have been surveyed and swiped. One area of contamination was identified and decontaminated using RadCon (verified by wipe test).

Room 131: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 132: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

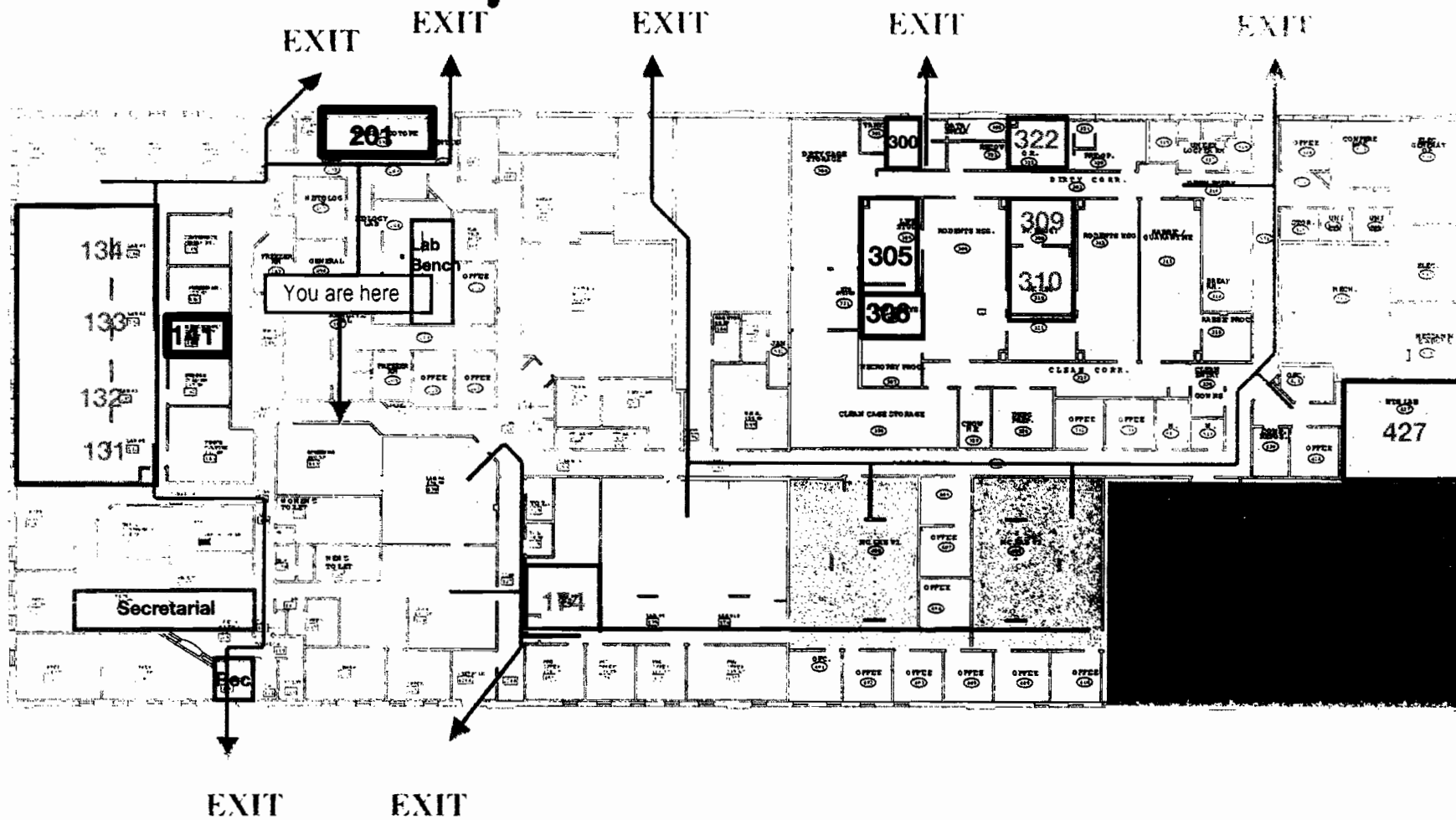
Room 133: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

Room 134: Never utilized for radioactive studies, included on the initial license in the event of need at a later date.

[REDACTED] room that housed the liquid scintillation counter, gamma counter and film developer (H, C, ^{125}I , ^{32}P , ^{33}P and ^{35}S).

[REDACTED] This room was used for long-term storage of ^{14}C , ^3H , ^{32}P , ^{33}P and ^{35}S and ^{125}I waste. Flooring, walls, door handles have been surveyed and swiped.

66 17 27



RADIOISOTOPE DISPOSAL - SINK

[illegible]

RADIOISOTOPE DISPOSAL - SINK

[illegible]

RADIOISOTOPE DISPOSAL - SINK

[illegible]

Liquid (Sink) Radioactivity Disposal Form

Date	Material or Chemical	Isotope(s)	Activity (μCi)	User Initials
7 Nov-01	3MB / mannitol	$^3H / ^{14}C$	78 / 11.7	DD
9 Nov-01	3MB / mannitol	$^3H / ^{14}C$	127 / 19	DD
13 Nov-01	3MB / mannitol	$^3H / ^{14}C$	214.5 / 34	DD
19 Nov-01	3MB / mannitol	$^3H / ^{14}C$	234 / 125 35	DD
26 Nov-01	3MB / mannitol	$^3H / ^{14}C$	254 / 38	DD
29 Nov-01	3MB / mannitol	$^3H / ^{14}C$	156 / 23.4	DD
4 Dec-01	3MB / mannitol	$^3H / ^{14}C$	312 / 46.8	DD
7 Dec-01	3MB / mannitol	$^3H / ^{14}C$	210 / 35.6	DD
10 Dec-01	3MB / mannitol	$^3H / ^{14}C$	292.5 / 43.9	DD
12 Dec-01	3MB / mannitol	$^3H / ^{14}C$	292.5 / 43.9	DD
14 Dec-01	3MB / mannitol	$^3H / ^{14}C$	243.8 / 36.6	DD
17 Dec-01	3MB / mannitol	$^3H / ^{14}C$	214.5 / 42.9	DD
19 Dec-01	3MB / mannitol	$^3H / ^{14}C$	195 / 29.3	DD
17 Jan-02	3MB / mannitol	$^3H / ^{14}C$	195 / 29.3	DD
24 Jan-02	3MB / mannitol	$^3H / ^{14}C$	195 / 29.3	DD
31 Jan-02	3MB / mannitol	$^3H / ^{14}C$	195 / 29.3	DD
7 Feb-02	3MB / mannitol	$^3H / ^{14}C$	215 / 32.2	DD
15 Feb-02	3MB / mannitol	$^3H / ^{14}C$	195 / 29.3	DD
26 Feb-02	3MB / mannitol	$^3H / ^{14}C$	273 / 41	DD
6 Mar-02	3MB / mannitol	$^3H / ^{14}C$	102.3 / 16.1	DD
7 Mar-02	3MB / mannitol	$^3H / ^{14}C$	101.4 / 15.2	DD
13 Mar-02	3MB / mannitol	$^3H / ^{14}C$	148 / 22.3	DD
19 Mar-02	3MB / mannitol	$^3H / ^{14}C$	78 / 11.7	DD
25 Mar-02	3MB / mannitol	$^3H / ^{14}C$	214.5 / 32.2	DD
4 Apr-02	3MB / mannitol	$^3H / ^{14}C$	148 / 22.3	DD
10 Apr-02	3MB / mannitol	$^3H / ^{14}C$	126.9 / 19	DD
25 Apr-02	3MB / mannitol	$^3H / ^{14}C$	175.5 / 26.3	DD
14 May-02	3MB / mannitol	$^3H / ^{14}C$	234 / 35.1	DD
16 May-02	2DOB / mannitol	$^3H / ^{14}C$	253.5 / 38	DD
22 May-02	3MB / mannitol	$^3H / ^{14}C$	214.5 / 32.2	DD
14 Jun-02	3MB / mannitol	$^3H / ^{14}C$	263 / 39.5	DD
2 Jul-02	Glucose	3H	15.25	CF
29 July-02	Glucose	3H	31.50	CF
11 July-02	Glucose	3H	25	CF
17 July-02	Glucose	3H	10	CF
22 Jul-02	3MB / mannitol	$^3H / ^{14}C$	195 / 29.2	DD
25 Jul-02	3MB	3H	4.9	DD
25 Jul-02	Glucose	3H	2	CF
21 Aug-02	Glucose	3H	2	CF
28 Aug-02	Glucose	3H	2	CF
09 Aug-02	palmitate	^{14}C	13.3	DD

Liquid (Sink) Radioactivity Disposal Form

Date	Material or Chemical	Isotope	Activity (μCi)	User Initials
15 Aug 02	glucose	3H	0.4	CF
20 Aug 02	3MB/mannitol	3H / 14C	351 / 41.4	DD
21 Aug 02	glucose	3H	2.4	CF
5 Sep 02	glucose	3H	2.4	CF
6 Sep 02	glucose	3H	2.4	CF
12 Sep 02	glucose	3H	1.2	CF
18 Sep 02	3MB/mannitol	3H / 14C	234 / 35.1	DD
19 Sep 02	Palmitate	14C	13.3	DD
19 Sep 02	glucose	3H	2.4	CF
23 Sep 02	glucose	3H	1.2	CF
26 Sep 02	3MB/mannitol	3H / 14C	156 / 23.4	DD
26 Sep 02	glucose	3H	1.2	CF
02 Oct 02	glucose	3H	1.2	CF
03 Oct 02	3MB/mannitol	3H / 14C	136.5 / 20.5	DD
08 Oct 02	palmitate	14C	11.6	DD
09 Oct 02	glucose	3H	2.4	CF
14 Oct 02	palmitate	14C	14.1	DD
15 Oct 02	glucose	3H	2.4	CF
16 Oct 02	glucose	3H	1.2	CF
17 Oct 02	palmitate	14C	12.5	DD
21 Oct 02	glucose	3H	2.4	CF
24 Oct 02	palmitate	14C	12.5	DD
31 Oct 02	glucose	3H	2.4	CF
31 Oct 02	3MB/mannitol	3H / 14C	136.5 / 20.5	DD
01 Nov 02	glucose	3H	1.2	CF
4 Nov 02	3MB/mannitol	3H / 14C	97.5 / 14.6	DD
6 Nov 02	3MB/mannitol	3H / 14C	78 / 11.7	DD
07 Nov 02	glucose	3H	1.2	CF
07 Nov 02	3MB/mannitol	3H / 14C	73 / 11.7	DD
13 Nov 02	palmitate	14C	12.5	DD
13 Nov 02	glucose	3H	2.4	CF
14 Nov 02	glucose	3H	1.2	CF
19 Nov 02	glucose	3H	2.4	CF
21 Nov 02	glucose	3H	1.2	CF
21 Nov 02	3MB/mannitol	3H / 14C	156 / 23.4	DD
22 Nov 02	3MB/mannitol	3H / 14C	156 / 23.4	DD
29 Nov 02	3MB/mannitol	3H / 14C	78 / 9.4	DD
4 Dec 02	palmitate	14C	13.4	DD
9 Dec 02	3MB/mannitol	3H / 14C	195 / 23.4	DD
11 Dec 02	glucose	3H	2.4	CF
12 Dec 02	glucose	3H	2.4	CF
17 Dec 02	glucose	3H	2.4	CF
15 Jan 03	glucose	3H	2.4	CF
16 Jan 03	glucose	3H	2.4	CF

Liquid (Sink) Radioactivity Disposal Form

Date	Material or Chemical	Isotope	Activity (μCi)	User Initials
1/7/03	glucose	3H	2.4	CF
1/22/03	glucose	3H	2.6	CF
1/23/03	glucose	3H	2.4	CF
1/24/03	glucose	3H	2.4	CF
2/2/03	glucose	3H	2.4	CF
2/13/03	glucose	3H	2.4	CF
2/14/03	glucose	3H	2.4	CF
3/25/03	glucose	3H	2.4	CF
3/26/03	glucose	3H	1.2	CF
4/2/03	glucose	3H	2.4	CF
4/9/03	glucose	3H	2.4	CF
4/10/03	glucose	3H	2.4	CF
4/11/03	glucose	3H	1.2	CF
4/22/03	glucose	3H	2.4	CF
4/23/03	glucose	3H	2.4	CF
4/24/03	glucose	3H	2.4	CF
5/13/03	glucose	3H	2.4	CF
5/14/03	glucose	3H	2.4	CF
5/15/03	glucose	3H	2.4	CF
5/29/03	glucose	3H	2.4	CF
6/6/03	glucose	3H	2.4	CF
6/10/03	glucose	3H	2.4	CF
6/11/03	glucose	3H	2.4	CF
6/20/03	glucose	3H	2.4	CF
6/26/03	glucose	3H	2.4	CF
6/27/03	glucose	3H	2.4	CF
7/11/03	glucose	3H	2.4	CF
7/17/03	glucose	3H	2.4	CF
7/18/03	glucose	3H	2.4	CF
8/12/03	glucose	3H	2.4	CF
10/7/03	glucose	3H	2.4	CF
10/8/03	glucose	3H	2.4	CF
10/25/03	glucose	3H	2.4	CF
10/29/03	glucose	3H	2.4	CF
10/19/03	glucose	3H	2.4	CF
11/20/03	glucose	3H	2.4	CF
220603	2D06-mannitol	3H/14C	51/51	DD
230603	2D06-mannitol	3H/14C	51/51	DD
310603	2D06-mannitol	3H/14C	51/51	DD
4Nov03	2D06-mannitol	3H/14C	51/51	DD

5Nov03	2D06-mannitol	3H/14C	51/51	DD
7Nov03	2D06-mannitol	3H/14C	51/51	DD
12Nov03	2D06-mannitol	3H/14C	51/51	DD
14Nov03	2D06-mannitol	3H/14C	51/51	DD
24Nov03	2D06-mannitol	3H/14C	51/51	DD

Liquid (Sink) Radioactivity Disposal Form

Date	Material or Chemical	Isotope	Activity (μCi)	User Initials
10/23/02	¹²⁵ I-CCK	¹²⁵ I	0.9	ML
10/31/02	"	"	0.9	ML
2/3/03	4 ¹⁴ C acet-116A	¹⁴ C	7	DD/DS
4/28/03	¹²⁵ I PIII NP	¹²⁵ I	1.6	DG
4/29/03	¹²⁵ I PIII NP	"	.552	DG
4/30/03	¹²⁵ I PIII NP	"	1.48	DG
5/5/03	¹²⁵ I PIII NP	"	1.14	DG
5/6/03	¹²⁵ I PIII NP	"	1.18	DG
5/19/03	" "	"	1.5	DG
5/20/03	" "	"	1.6	DG
5/28/03	" "	"	1.6	DG
5/29/03	" "	"	1.4	DG
6/2/03	³² P ATP	³² P	50	SW
6/8/03	³² P ATP	³² P	5	SW
7/3/03	¹²⁵ I PIII NP	¹²⁵ I	1.0	DG
7/27/03	³² P	³² P	10	SW
8/7/03	3 ³ H-2DOG	³ H	<83 μCi	TJ
9-10-03	¹²⁵ I	¹²⁵ I	53 μCi	DG
10-27-03	¹²⁵ I	¹²⁵ I	7.6 μCi	DG
10-27-03	¹²⁵ I	¹²⁵ I	82 μCi	DG
10-28-03	¹²⁵ I	¹²⁵ I	81 μCi	DG
12-09-03	¹²⁵ I	¹²⁵ I	4 μCi	WD
12/12/03	¹²⁵ I	¹²⁵ I	1.5 μCi	WD
12/17/03	¹²⁵ I	¹²⁵ I	1.3 μCi	WD
1-27-04	¹²⁵ I	¹²⁵ I	1.5 μCi	DG
1-29-04	¹²⁵ I	¹²⁵ I	0.79 μCi	DG
1-30-04	¹²⁵ I	¹²⁵ I	0.6 μCi	DG
1-29-04	¹²⁵ I	¹²⁵ I	80 μCi	DG
1-30-04	¹²⁵ I	¹²⁵ I	70 μCi	DG
3-5-04	¹²⁵ I	¹²⁵ I	79 μCi	DG
3-8-04	¹²⁵ I	¹²⁵ I	89 μCi	DG
3-8-04	¹²⁵ I	¹²⁵ I	1.53 μCi	DG
3-20-04	¹²⁵ I	¹²⁵ I	2.5 μCi	DG
3-25-04	¹²⁵ I	¹²⁵ I	1.1 μCi	DG
4-29-04	Niacin	³ H	<1 μCi	JACK
4/05	³ H Niacin	³ H	<1 μCi	JP
4/07	³ H Niacin	³ H	<1 μCi	JP
4/14	³ H Niacin	³ H	<1 μCi	JP
6/22	³ H Niacin	³ H	~4 μCi	JACK
6/23	Niacin	³ H	~5 μCi	JACK

7/08 Niacin ³H ~6 μCi Jack

7/14/04 ³H glucose ³H ≤1 μCi DD
8/2 Niacin ³H ~6 μCi Jack over

8/11/04	Niacin	3H	~7.5mCi	Qack
8/19/04	Niacin	3H	~6mCi	Qack
9/23	Niacin	3H	~7.5mCi	Qack
6/23/05	Niacin	3H	~20mCi	Kejvan
6/30/05	Niacin	3H	~18mCi	Kejvan
8/20/05	Niacin	3H	~20mCi	Kejvan

[REDACTED]

RADIOISOTOPE DISPOSAL - SINK

[illegible]

RADIOISOTOPE DISPOSAL - SINK

Date	User	Isotope	Amount
			µCi
2/13/07	LSO	³ H Glucose	31.75
2/21/07	LSO	³ H Glucose	22.15
2/27/07	WU	³ H	13.83
3/1/07	WU	³ H	11.76
3/7/07	WU	³ H	11.17
3/8/07	WU	³ H	15.68
3/14/07	WU	³ H	39.2
3/15/07	WU	³ H	24.30
3/27/07	WU	³ H	32.14
3/27/07	WU	³ H	25.68
3/28/07	WU	³ H	32.54
4/3/07	WU	³ H	20.38
4/4/07	WU	³ H	19.6
4/10/07	WU	³ H	29.60
4/11/07	LSO	³ H	17.25
4/17/07	WU	³ H	28.62
4/25/07	WU	³ H	30.58
4/27/07	WU	³ H	10.88
5/1/07	WU	³ H	19.6
5/2/07	WU	³ H	9.8
5/15/07	WU	³ H	29.2
5/16/07	WU	³ H	29.4
5/18/07	WU	³ H	18.82
5/22/07	WU	³ H	18.82
5/30/07	WU	³ H	29.79
5/31/07	WU	³ H	31.36
6/5/07	WU	³ H	20.38
6/7/07	WU	³ H	13.13

RADIOISOTOPE DISPOSAL - SINK

Date	User	Isotope	Amount µCi
6/11/06	W	3H	19.6
6/12/07	W	3H	20.97
6/13/07	W	3H	29.7
6/14/07	W	3H	29.6
6/20/07	W	3H	19.31
6/21/07	W	3H	19.0
6/27/07	LSM	3H	12.54
7/3	W	3H	19.21
7/3	W	3H	9.8
7/7	W	3H	22.7
7/10	W	3H	38.2 mci
7/13	W	3H	26.8 m
7/17/07	W	3H	10.98 mci
7/18/07	W	3H	15.7
7/24/07	W	3H	30.58
7/24/07	W	3H	29.4
8/2/07	W	3H	17.64
8/3/07	W	3H	29.8
8/8/07	W	3H	28.22
8/9/07	W	3H	29.4
8/14/07	W	3H	9.8
8/22/07	W	3H	29.6
8/28/07	W	3H	31.24
8/29/07	LSO	3H	19.60
8/30/07	W	3H	28.6
8/30/07	W	3H	14.7
9/5/07	W	3H	39.4
9/6/07	W	3H	29.99

estimate

estimate

9/7/07 JF 3H 29.40
9/11/07 JF 3H 21.85
9/12/07 LLO 3H 19.99

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		Energy Solutions/Bear Creek 3. SHIPPER - NAME AND FACILITY Philadelphia T. Industrial of Pennsylvania Oilco., Inc., LLC 23 Business Park Drive Branford, CT 06406		SHIPMENT NUMBER 0374-112612EN X-COLLECTOR PROCESSOR GENERATOR TYPE (Specify) TELEPHONE NUMBER (Include Area Code) (807) 807-2461		7. FORM 540 AND 540A FORM 541 AND 542 FORM 542 AND 542A ADDITIONAL INFORMATION NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-112612EN	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 500-424-6740		USER PERMIT NUMBER T-TN024-L12		SHIPMENT NUMBER 0374-112612EN		9. CONSIGNEE - Name and Facility Address Energy Solutions/Bear Creek Operation/Energy Solutions 1650 Bear Creek Rd Oak Ridge, TN 37830		CONTACT Dennis Brickett TELEPHONE NUMBER (Include Area Code) (615) 220-1629	
ORGANIZATION CHEMTREC		CONTACT June Tarkenton-Pace		TRUCK #: TRAILER #: 201 Ramonville Blvd. Oak Ridge, TN 37830		SIGNATURE - Authorized carrier acknowledging waste receipt DATE 11/26/12		DATE 12/21/12	
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 8		4. DOES EPA REGULATED WASTE REQUIRE A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes", provide Manifest Number same as		5. EPA MANIFEST NUMBER NA		6. CERTIFICATION I, _____, certify that the manifest and materials are properly classified, described, packaged, marked, and labeled, and are in accordance with the requirements of the Department of Energy, pursuant to Title 49, Chapter 1, Subchapter C, and Title 49, Chapter 2, Subchapter C, of the Code of Federal Regulations, and that the manifest and materials are in accordance with the requirements of 10 CFR Parts 20 and 41, and applicable state regulations.	
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 RADIOISOTOPES	
NON-DOT REGULATED MATERIALS (BIOLOGICAL WASTE (NON-CARC))		NA		NA		SOLID/METAL OXIDES		H-3	
1 - 41 GAL FIBER		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA		NA		LIQUID/OXIDES		H-3	
NON-DOT REGULATED MATERIALS (NON-HAZ LSV)		NA		NA		LIQUID/OXIDES		H-3	
1 - 55 GAL FIBER DRUM		NA							

[illegible]

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0166), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541		Energy Solutions/Bear Creek		1. MANIFEST TOTALS										2. MANIFEST NUMBER		
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (grams)				3. PAGE 1 OF 2 PAGE(S)		
CONTAINER AND WASTE DESCRIPTION				8		m ³ 1.26038 n ³ 49.10000		kg 128.81956 lb 284.00000		U-233		U-235		Pu		
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				ALL NUCLIDES		TRITIUM		C-14		Tc-99		I-129		SOURCE		
				MBq 1045.8790000000		1043.2705000000		2.5085000000		NP		NP		NP		
				mCi 28.2670000000		28.1965000000		0.0705000000		NP		NP		NP		
														SHIPMENT ID NUMBER		
														0374-112612EN		
WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER																
15. RADIOLOGICAL DESCRIPTION																
INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT																
RADIONUCLIDES MBq mCi																
12-001653 (IPD 1) 374		19 Other-Fiber Box O - INCINERATION O	0.14725 5.20000	11.33975 25.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	42	0.14725 5.20000	100	SOLID METAL OXIDES / NP	NP	H-3	60.7170000000	1.6410000000	AU
Sub Total														60.7170000000	1.6410000000	
Package Total														60.7170000000	1.6410000000	
12-001654 (LSV 1) 374		19 Other-Fiber Drum O - INCINERATION O	0.21238 7.50000	18.14360 40.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.21238 7.50000	100	LIQUID OXIDES / NP	NP	H-3	74.0000000000	2.0000000000	AU
Sub Total														74.0000000000	2.0000000000	
Package Total														74.0000000000	2.0000000000	
12-001655 (DAW 2) 374		19 Other-Fiber Drum O - INCINERATION O	0.21238 7.50000	18.14360 40.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.21238 7.50000	100	LIQUID OXIDES / NP	NP	H-3	2.5530000000	0.0690000000	AU
Sub Total														2.5530000000	0.0690000000	
Package Total														2.5530000000	0.0690000000	
12-001656 (DAW 3) 374		19 Other-Fiber Drum O - INCINERATION O	0.21238 7.50000	18.14360 40.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.21238 7.50000	100	LIQUID OXIDES / NP	NP	H-3	0.0370000000	0.0010000000	AU
Sub Total														0.0370000000	0.0010000000	
Package Total														0.0370000000	0.0010000000	

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 Pail
4. Metal Drum or Pail
5. Metal Tank or Uner
6. Concrete Tank or Uner
7. Polyethylene Tank or Uner
8. Fiberglass Tank or Uner
9. Demineralizer
10. Gas Cylinder
11. Bulk Unpackaged Waste
12. Unpackaged Components
13. High Integrity Container
14. Other. Describe in item 15, or additional page

NOTE 1A: Process Requested

- A. Comminution
- B. Steam Reforming
- C. Direct Incineration
- D. Sort & Incinerate
- E. Decon
- F. Green Is Clean
- G. Metal Melt
- H. Trans-Ship
- I. Liquid for Incineration
- J. Oil for Incineration
- K. Other (describe)

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

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

NOTE 2A: Burial/Disposition Site

- A. Summit Waste Management Facility
- E. Envirocare
- R. Richmond, VA
- PR. Process and Return
- O. Other

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in item 12. Code 100=None Required

50. Cement
51. Concrete (encapsulation)
52. Bitumen
53. Vinyl Chloride
54. Vinyl Ester Styrene
55. Other. Describe in item 13, or additional page
100. None Required

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-6 F32), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE09-10202, (3160-0165), 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.

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST											Energy Solutions/Bear Creek		2. MANIFEST NUMBER 0374-112612EN		
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 NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm² dpm/100 cm²		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ ft³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT WEIGHT % IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
					ALPHA	BETA-GAMMA					RADIONUCLIDES	MBq	mCi		
# - Innerpack Container															
12-001657 (DAW 4) 374	19 Other-Fiber Drum O - INCINERATION O	0.21238 7.50000	18.14360 40.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.21238 7.50000	100	LIQUID OXIDES / NP	NP	H-3	0.03700000000	0.00100000000	AU
												Sub Total	0.03700000000	0.00100000000	
												Package Total	0.03700000000	0.00100000000	
12-001658 (DAW 1) 374	19 Other-Fiber Drum O - INCINERATION O	0.21238 7.50000	22.67360 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.21238 7.50000	100	SOLID METAL OXIDES / NP	NP	H-3	37.0000000000	1.0000000000	AU
												Sub Total	37.0000000000	1.0000000000	
												Package Total	37.0000000000	1.0000000000	
12-001659 (AQUEOUS 1) 374	4 O - INCINERATION O	0.03398 1.20000	31.75100 70.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	25	0.03398 1.20000	100	LIQUID OXIDES / NP	NP	H-3	41.0330000000	1.1000000000	AU
												Sub Total	41.0330000000	1.1000000000	
												Package Total	41.0330000000	1.1000000000	
12-001660 (STOCK VIALS) 374	15 Other-Fiber Box O - INCINERATION O	0.14725 5.20000	45.35900 100.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.14725 5.20000	100	LIQUID OXIDES / NP	NP	C-14 H-3	2.6085000000 827.8935000000	0.0705000000 22.3755000000	AU
												Sub Total	830.5020000000	22.4460000000	
												Package Total	830.5020000000	22.4460000000	
Shipment Total		1.39058 49.10000	153.70355 405.00000										1045.8790000000	28.2670000000	

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (3150-0165), 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.

NRC FORM 542 (7-2001)		Energy Solutions/Bear Creek		1. WASTE COLLECTOR/PROCESSOR				2. MANIFEST NUMBER		
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NAME Philetechnics @ Institute of Pharmaceutical Discovery, LLC		SHIPPER USE ONLY		0374-112612EN		
MANIFEST INDEX AND REGIONAL COMPACT TABULATION				IDENTIFICATION NUMBER 374				3. PAGE 1 OF 1 PAGE(S)		
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators				SHIPPING DATE 11/26/2012						
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P=PROCESSED C=COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY MBq	D. VOLUME m ³
374	Institute of Pharmaceutical Discovery, LLC EPA #: (203) 507-3451	23 Business Park Drive Branford, CT 06405	1.39038	Onsite Generation 11/21/2012	C	CT	NP	NP	1045.879	1.39038
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							NP	NP	1045.8790000000	1.39038

UNIFORM HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
	CTR000003996	1	800-424-9300	000906047 JJK

5. Generator's Name and Mailing Address	Generator's Site Address (if different than mailing address)
INSTITUTE OF PHARMACEUTICAL DISCOVERY, LLC 23 BUSINESS PARK DRIVE BRANFORD, CT. 06405 Generator's Phone: (203) 315-5432	

6. Transporter 1 Company Name	U.S. EPA ID Number
R & R TRUCKING	MOR000501973

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

8. Designated Facility Name and Site Address	U.S. EPA ID Number
NSSI Recovery Services 5709 ETHERIDGE STREET HOUSTON TX, 77087 Facility's Phone: (713) 641-0391	TXD982560294

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. UN1993, WASTE, FLAMMABLE LIQUID, N.O.S. (METHANOL), 3: PG11	1	DM	15	K	2001	F003
	2.						
	3.						
	4.						

14. Special Handling Instructions and Additional Information
9b, 1 = MV BULK LIQUID - (ID# MW-5) - ERG#128 REF. NRC. MANIFEST 0374-060109NSSI

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/Officer's Printed/Typed Name	Signature	Month	Day	Year
A. Thomas DiCicco	[Signature]	6	01	09

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
Robert McIntosh	[Signature]	06	01	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:

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. H12a	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
Jesse Alvarez	[Signature]	6	12	09

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-4001, or by Internet e-mail to infolists@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, HEOB-10102, (202) 456-6164, 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.

NRC FORM 540 (7-2007) U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		5. SHIPPER - NAME AND FACILITY Pharmaceutical Discovery, LLC 23 Business Park Drive Branford, CT 06405		SHIPMENT ID NUMBER 0374-060109NSSI COLLECTOR PROCESSOR GENERATOR TYPE (Specify) TELEPHONE NUMBER (Include Area Code) (203) 315-6602		7. FORM 510 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION PAGE 1 OF 1 PAGE(S) 1 PAGE(S) 1 PAGE(S) NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-06010911551	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300 ORGANIZATION CHEMTREC		USER PERMIT NUMBER 0374-060109NSSI CONTACT A. Thomas DiCioccio		9. CONSIGNEE - Name and Facility Address NSSI Recovery Services Operated By NSSI Recovery Services 5709 Edison Way Street Houston, TX 77067 CONTACT Bob Golligorsky TELEPHONE NUMBER (Include Area Code) (713) 511-0395		SIGNATURE - Authorized consignee acknowledging waste receipt [Signature] DATE 6-1-09		10. CERTIFICATION This is to certify that the herein named materials are properly classified, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		6. CARRIER - Name and Address R & R Trucking 302 Thunder Road Overwood, MO 64641 Truck #: Trailer #:		EPA ID NUMBER MOR000091073 SHIPPING DATE 06/01/2009 TELEPHONE NUMBER (Include Area Code) 800-625-6805		11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information) UN1993, WASTE FLAMMABLE LIQUIDS, N.O.S., (METHANOL), 3; POH MIXED WASTE BULK LIQUID 1 - 30 GAL DRUM	
4. DOES EPA REGULATED WASTE REQUIRE A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "Yes", provide Manifest Number:		EPA MANIFEST NUMBER 000906047JJK 000906047JJK		CONTACT Ju Vance SIGNATURE - Authorized carrier acknowledging waste receipt [Signature] DATE 6-1-09		15. INDIVIDUAL RADIONUCLIDES 8.4175000000 (0.2275000000) NA 4.10 lb 38.00000 lb		16. TOTAL PACKAGE ACTIVITY MBq (mCi) 0.2275000000 (0.2275000000) NA 4.10 lb 38.00000 lb	
12. DOT LABEL "RADIOACTIVE" NA		13. TRANSPORT INDEX NA		14. PHYSICAL AND CHEMICAL FORM LIQUID/OXIDES		17. LSA/SCO CLASS NA		19. IDENTIFICATION NUMBER OF PACKAGE 09-009768 (MW-5)	
FOR CONSIGNEE USE ONLY				20. Generator Certification Statement A) Radioactive Materials. Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission in Agreement with regulatory agency and with the current revision of the site related Agreement Order. B) Hazardous Materials. Certification is hereby made that this material does not contain a hazardous waste as defined in 40 CFR 261. C) Data. Generator hereby certifies and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE) (NSRI-101) are true and correct in all respects and in accordance with applicable governmental laws, rules, regulations and state rules and orders. D) INSTRUCTIONS. Generator hereby certifies that this material does not contain an infectious substance as defined in 42 CFR 173.124. A. Thomas DiCioccio [Signature] DATE 6/01/09					

NRC Form 540 (7-2007)

Modified Date: 06/01/2009 12:00

ORIGINAL

Estimated burden per response to comply with this information collection request, 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (TF-52F), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to info@nrc.gov, or to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (3150-016), 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.

NRC FORM 541 (7-2007)			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		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (grams)				0374-060109NSSI				
									U-233		U-235		Pu		TOTAL		
									NP		NP		NP		NP		
									ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)				SOURCE				
									C-14		Tc-99		I-129		NP		
									NP		NP		NP		NP		
									NP		NP		NP		NP		
									NP		NP		NP		NP		
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									NP		NP		NP		NP		
									NP		NP		NP				

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-S F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE00-10202, (3150-0165), 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.

NRC FORM 542 (7-2007)		U.S. NUCLEAR REGULATORY COMMISSION		1. WASTE COLLECTOR/PROCESSOR		2. MANIFEST NUMBER								
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST		NAME Pharmatechnics @ Institute of Pharmaceutical Discovery, LLC		SHIPPER USE ONLY		0374-090109NSSL								
MANIFEST INDEX AND REGIONAL COMPACT TABULATION		IDENTIFICATION NUMBER				3. PAGE 1 OF 1 PAGE(S)								
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators		SHIPPING DATE 05/01/2009												
4.	5.	6.	6A.	7.	8.	9.	10.	11.	AS PROCESSED/COLLECTED TOTAL					
S.C. TRANSPORT PERMIT NUMBER	GENERATOR NAME AND TELEPHONE NUMBER	GENERATOR FACILITY ADDRESS	WASTE DESCRIPTION (NOMENCLATURE)	PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³ ft ³	MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	WASTE CODE P=PROCESSED C=COLLECTED	ORIGINATING COMPACT REGION OR STATE	A. SOURCE MATERIAL (kg) (lb)	B. SNM (g)	C. ACTIVITY MBq mCi	D. VOLUME m ³ ft ³	E. WEIGHT (lb)	F. MAXIMUM PACKAGE RADIATION LEVEL (mrem/hr)	
	Institute of Pharmaceutical Discovery, LLC (203) 315-5932	23 Business Park Drive Branford, CT 06405	EPA or State Hazardous	0.11610 4.10000	Onsite Generation 06/01/2009	C	CT	NP NP	NP	8.4175 2275	0.11610 4.10000	3.00000	<0.5	
TOTALS OF ALL PAGES (FORMS 542 AND 542A)														
								NP NP	NP	8.4175000000 0.2275000000	0.11610 4.10000	3.00000	N/A	

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09R-ETTP-08.

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Read comments regarding burden estimate at the Records and Privacy Service Branch (FD-702), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to records@nrc.gov, and to the Chief, Office of Information and Regulatory Affairs, (EEOB-1020), (DFO) or (EO), Office of Management and Budget, Washington, DC 20503. If a burden estimate is 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, this information collection.

NRC FORM 540 (7-2007)		U.S. NUCLEAR REGULATORY COMMISSION		SHIPMENT ID NUMBER		PAGE 1 OF 1 PAGE(S)		MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		SHIPPER - NAME AND FACILITY		FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		2 PAGE(S) 1 PAGE(S) NONE PAGE(S)		(Use this number on all continuation pages) 0374-00310024	
1. EMERGENCY TELEPHONE NUMBER (include Area Code) 800-424-6300 ORGANIZATION CHEMTREC		USER PERMIT NUMBER SHIPMENT NUMBER 0374-00010001		PROCESSOR GENERATOR TYPE (Specify)		3. CONSIGNEE - Name and Facility Address Impact Services Operated By Impact Services, Inc. Highway 58-ETTP-0209 8 1310MP Clark Ridge, TN 37030		CONTACT Carmy Jones TELEPHONE NUMBER (include Area Code) (665) 576-0724	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? () YES (X) NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 4		4. CARRIER - Name and Address R & R Trucking 302 Truett Road Dorsey, MD 21041		5. EPA ID NUMBER MORC00001973 SHIPPING DATE 06/01/09		6. SIGNATURE - Authorized consignee acknowledging waste receipt DATE 6-1-09	
7. DOES EPA REGULATED WASTE REQUIRE A MANIFEST ACCOMPANY THIS SHIPMENT? () Yes, provide Manifest Number (X) No		8. EPA MANIFEST NUMBER N/A		9. CONTACT Jo Vance SIGNATURE DATE 6-1-09		10. CERTIFICATION This is to certify that the named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, as applicable to this regulation AUTHORISED SIGNATURE DATE 6-1-09		11. IDENTIFICATION NUMBER OF PACKAGE	
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 RADIOISOTOPES	
Non-Radioactive per DOT DANGEROUS 1-41 GAL FIBER		NA		NA		SOLID/METAL OXIDES C-14 ; H-3		0.7710000000 (0.1030000000) NA 5.20 11 25 000000 09-006761 (DAW-1)	
Non-Radioactive per DOT DANGEROUS 1-41 GAL FIBER		NA		NA		SOLID/METAL OXIDES C-14 ; H-125		0.1221000000 (0.0093300000) NA 5.20 11 25 000000 09-006765 (DAW-2)	
Non-Radioactive per DOT R20-HAZ LSV 1-41 GAL FIBER		NA		NA		LIQUID/OXIDES C-14 ; H-3 ; H-125		11.2110000000 (0.3050000000) NA 5.20 11 50.000000 09-006760 (LHV-3)	
Non-Radioactive per DOT AQUEOUS LIQUID 1-30 GAL DRUM		NA		NA		LIQUID/OXIDES C-14 ; H-125 ; P-32		37.8103000000 (1.0219000000) NA 4.10 11 60.000000 09-006761 (LIQ-4)	
FOR CONSIGNEE USE ONLY		20. Generator Certification Statement a. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. b. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. c. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. d. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. e. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. f. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. g. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. h. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. i. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. j. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. k. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. l. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. m. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. n. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. o. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. p. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. q. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. r. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. s. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. t. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. u. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. v. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. w. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. x. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. y. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. z. Read and Retain: Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with applicable regulations and is being transported in compliance with the NRC's Regulatory Commission's 10 CFR Part 20 and 61, as applicable to this regulation. A. Thomas DiCiccio DATE 6-1-09		Modified Date: 06/01/2009 11:44					

JAN 10

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollections@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (2150-0160), 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.

NRC FORM 541 (7-2007)					U.S. NUCLEAR REGULATORY COMMISSION					1. MANIFEST TOTALS										2. MANIFEST NUMBER											
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST					CONTAINER AND WASTE DESCRIPTION					SPECIAL NUCLEAR MATERIAL (grams)										0374-000109IM											
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste					NUMBER OF PACKAGES/ DISPOSAL CONTAINERS					NET WASTE VOLUME					NET WASTE WEIGHT					PAGE 1 OF 2 PAGE(S)											
					4					m ³ 0.55785 kg 48.08054					NP NP NP NP																
					19.70000 lb 106.00000																										
					ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/g)										SOURCE																
					ALL NUCLEIDES					TRITIUM					C-14					Tc-99					I-129						
					MBq 65.9144000000					8.3020000000					45.6422000000					NP NP NP NP											
					mCi 1.5112000000					0.2260000000					1.2606000000					NP NP NP NP					SHIPMENT ID NUMBER 0374-060109IM						
DISPOSAL CONTAINER DESCRIPTION																	WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION				
5. CONTAINER IDENTIFICATION NUMBER/ TRANSPORT PERMIT NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m ³ R ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²			11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ R ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION	15. RADIOLOGICAL DESCRIPTION	16. WASTE CLASSIFICATION																		
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT																			
												RADIONUCLIDES	MBq	mCi																	
09-009764 (DAW-1)	41 GAL FIBER	0.14725	11.33975	< 0.005	< 0.000003674	< 0.00003674	40	0.14725	100	SOLID METAL OXIDES / NP	C-14 H-3	0.2590000000	0.0070000000	AU																	
		5.20000	25.00000	< 0.5	< 220	< 2200		5.20000					5.5120000000	0.1760000000																	
												Sub Total	6.7710000000	0.1830000000																	
													6.7710000000	0.1830000000																	
09-009765 (DAW-2)	41 GAL FIBER	0.14725	11.33975	< 0.005	< 0.000003674	< 0.00003674	40	0.14725	100	SOLID METAL OXIDES / NP	C-14 I-125	0.0370000000	0.0010000000	AU																	
		5.20000	25.00000	< 0.5	< 220	< 2200		5.20000					0.0851000000	0.0023000000																	
												Sub Total	0.1221000000	0.0033000000																	
													0.1221000000	0.0033000000																	
09-009766 (LSV-3)	41 GAL FIBER	0.14725	22.67950	< 0.005	< 0.000003674	< 0.00003674	40	0.14725	100	LIQUID OXIDES / NP	C-14 H-3 I-125	0.3240000000	0.2520000000	AU																	
		5.20000	50.00000	< 0.5	< 220	< 2200		5.20000					1.6500000000	0.0500000000																	
												Sub Total	11.2110000000	0.3030000000																	
													11.2110000000	0.3030000000																	

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

1. Wooden Box or Crate	5. Demineralizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk, Unpacked Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	14. Other. Describe in item 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/Sediment
21. Incinerator Ash	30. Cotton Ion-exchange Media	39. Concentrates
22. Soil	31. Anion Ion-exchange Media	40. Compressible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Noncompressible Trash
24. Oil	33. Contaminated Equipment	42. Biological Material (except animal carcasses)
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Adhesives
26. Filter Media	35. Glassware or Labware	44. Other. Describe in item 11, or additional page
27. Electrochemical Filter	36. Sealed Source/Device	
28. EPA or State Hazardous	37. Paint or Plating	

NOTE 3: Sorption, Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume). For media meeting disposal site structural stability requirements, the numerical code must be followed by "S". For all solidification media, the vendor and brand name must also be identified in item 13. Code 100=None Required

60. Spent Oil	64. Salt T Sorb	68. Chemical 26	74. Petroset	80. Cement
61. Gelsol	65. Salt N Dri	69. Chemical 58	75. Petroset II	81. Concrete (encapsulation)
62. Floor Dry	66. Flocc	70. Chemical 3030	76. Anaset	82. Blumex
63. Hi Dri	67. Flocc X	71. Chemical 1000	77. Anaset II	83. Vinyl Chloride
	68. Solid A Sorb	72. Dicaport HP 208	78. Other. Describe in item 13 or additional page	
		73. Dicaport HP 500		

Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (7-5 F27), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocoll@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NECB-16202, (3150-0166), 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.

NRC FORM 541A (7-2007)		UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION (CONTINUATION)										U.S. NUCLEAR REGULATORY COMMISSION		2. MANIFEST NUMBER 0374-000 109IM							
DISPOSAL CONTAINER DESCRIPTION												WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
5. CONTAINER IDENTIFICATION NUMBER/ TRANSPORT PERMIT NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	13. SOLIDIFICATION OR 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 AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			16. WASTE CLASSIFI- CATION AS - Class Stable AU - Class Unstable B - Class C - Class						
					ALPHA	BETA- GAMMA						RADIONUCLIDES	MBq	mCi							
09-009767 (LIQ-4) Origin: CT Institute of Pharmaceutical Discovery, LLC 23 Business Park Drive Branford, CT 06405	4	0.11610 4.10000	27.21540 60.00000	< 0.005 < 0.5	< 0.000003674 < 220	< 0.00003674 < 2200	40	0.11610 4.10000	100	LIQUID OXIDES / NP	NP	C-14 I-125 P-32 Sub Total	37.0222000000 0.1221000000 0.6660000000 37.8103000000	1.0096000000 0.0033000000 0.0180000000 1.0219000000	AU						
Package Total													37.8103000000	1.0219000000							
Shipment Total		0.55785 19.70000	72.57440 160.00000										55.9144000000	1.5112000000							

Estimated burden per response to comply with this information collection request: 45 minutes. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to infocollect@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0165), 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.

NRC FORM 542 (7-2007)		U.S. NUCLEAR REGULATORY COMMISSION		1. WASTE COLLECTOR/PROCESSOR				2. MANIFEST NUMBER									
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NAME Pharmaceuticals @ Institute of Pharmaceutical Discovery, LLC		SHIPPER USE ONLY		03/4-0001051M									
MANIFEST INDEX AND REGIONAL COMPACT TABULATION				IDENTIFICATION NUMBER				3. PAGE 1 OF 1 PAGE(S)									
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators				SHIPPING DATE 06/01/2009													
4.	5.	6.	6A.	7.	8.	9.	10.	11. AS PROCESSED/COLLECTED TOTAL									
S.C. TRANSPORT PERMIT NUMBER	GENERATOR NAME AND TELEPHONE NUMBER	GENERATOR FACILITY ADDRESS	WASTE DESCRIPTION (NOMENCLATURE)	PREPROCESSED WASTE (OR MATERIAL) VOLUME	MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	WASTE CODE P=PROCESSED C=COLLECTED	ORIGINATING COMPACT REGION OR STATE	A. SOURCE MATERIAL	B. SNM	C. ACTIVITY	D. VOLUME	E. WEIGHT	F. MAXIMUM PACKAGE RADIATION LEVEL				
				m ³	ft ³			(kg)	(lb)	(g)	MBq	mCi	m ³	ft ³	(lb)	(mrem/hr)	
	Institute of Pharmaceutical Discovery, LLC (203) 315-5932	23 Business Park Drive Branford, CT 06405	AQUEOUS LIQUID DAN/THERMAL NON-HAZ LSV	0.55785	19.70000	Onsite Generation 06/01/2009	C	CT	NP	NP	NP	55.9144	1.5112	0.55785	19.70000	106.00000	<0.5
TOTALS OF ALL PAGES (FORMS 542 AND 542A)																	
								NP	NP	NP	55.914400000	1.511200000	0.55785	19.70000	106.00000	N/A	

FORM 540		EnergySolutions, Inc.		5. SHIPPER - NAME AND FACILITY		SHIPMENT ID NUMBER		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		PAGE 1 OF 2 PAGE(S) 3 PAGE(S) 1 PAGE(S) NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages)							
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER				Philotechnics, Ltd @ Institute of Pharmaceutical Discovery 23 Business Park Drive Branford, CT 06405		0374-040108EN						0374-040108EN							
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300				USER PERMIT NUMBER		SHIPMENT NUMBER 0374-040108EN		PROCESSOR		9. CONSIGNEE - Name and Facility Address		CONTACT							
ORGANIZATION CHEMTREC				CONTACT David Deak Bank Balkon		TELEPHONE NUMBER (Include Area Code) (203) 315-5974		GENERATOR TYPE (Specify)		EnergySolutions, Inc. Operated By EnergySolutions 1500 Bear Creek Road Oak Ridge, TN 37830		Ed Kofak TELEPHONE NUMBER (Include Area Code) (885) 220-1629							
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? [] YES [X] NO				3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST ***** 9		6. CARRIER - Name and Address		Truck #:		SIGNATURE - Authorized consignee acknowledging waste receipt Brad Melt		DATE 5-2-08							
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes", provide Manifest Number *****				EPA MANIFEST NUMBER N/A		R & R Trucking 302 Thunder Road Duenweg, MO 64841		Trailer #:		EPA I.D. NUMBER MOR000501973		19. CERTIFICATION							
						CONTACT Marion Singletary		TELEPHONE NUMBER (Include Area Code) 866-252-2784		SHIPPING DATE 4-2-08		This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.							
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)				12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY MBq : mCi		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
Non-Radioactive per DOT DAW/THERMAL 1 - 41 GAL FIBER				NA		NA		SOLID/METAL OXIDES H-3				5.4760000000 (0.1480000000)		NA		5.20 ft ³ 50.00000 lb 46		08-005564 (DAW-1)	
Non-Radioactive per DOT DAW/THERMAL 1 - 41 GAL FIBER				NA		NA		SOLID/METAL OXIDES H-3				6.0680000000 (0.1840000000)		NA		5.20 ft ³ 50.00000 lb 48		08-005565 (DAW-2)	
Non-Radioactive per DOT DAW/THERMAL 1 - 41 GAL FIBER				NA		NA		SOLID/METAL OXIDES C-14 : H-3				4.6250000000 (0.1250000000)		NA		5.20 ft ³ 50.00000 lb 48		08-005566 (DAW-3)	
Non-Radioactive per DOT DAW/THERMAL 1 - 41 GAL FIBER				NA		NA		SOLID/METAL OXIDES H-3				5.3280000000 (0.1440000000)		NA		5.20 ft ³ 50.00000 lb 36		08-005567 (DAW-4)	
Non-Radioactive per DOT NON-HAZ LSV 1 - 41 GAL FIBER				NA		NA		LIQUID/OXIDES C-14				0.1850000000 (0.0050000000)		NA		5.20 ft ³ 75.00000 lb 24		08-005568 (LSV-1)	
FOR CONSIGNEE USE ONLY																			
Tennessee "License For Delivery" No. _____				South Carolina Transport Permit No. _____		US Ecology Generator No. _____		US Ecology Permit No. _____		20. Generator Certification Statement									
										A) Radioactive Materials. Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission or an Agreement State regulatory agency and with the current revision of the 234 Material Acceptance Criteria. B) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261. C) Date. Generator hereby represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and state Radioactive Material Licenses. D) INFECTIOUS SUBSTANCE. Generator hereby certifies that this material does not contain an infectious substance as defined in 40 CFR 173.154									
										Balkon Print Name Balkon Signature 4/2/2008 Date									

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER (CONTINUATION)						EnergySolutions, Inc.		8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-040108EN PAGE 2 OF 2 PAGE(S)	
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES	16. TOTAL PACKAGE ACTIVITY MBq mCi	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME (Use appropriate units)	19. IDENTIFICATION NUMBER OF PACKAGE	
Non-Radioactive per DOT ANIMAL CARCASSES 1 - 41 GAL FIBER	NA	NA	SOLID/METAL OXIDES H-3		1729.38000000 (46.7400000000)	NA	5.20 ft ³ 60.00000 lb	08-005569 (BIO-1)	
Non-Radioactive per DOT ANIMAL CARCASSES 1 - 41 GAL FIBER	NA	NA	SOLID/METAL OXIDES H-3		1729.38000000 (46.7400000000)	NA	5.20 ft ³ 60.00000 lb	08-005570 (BIO-2)	
Non-Radioactive per DOT ANIMAL CARCASSES 1 - 41 GAL FIBER	NA	NA	SOLID/METAL OXIDES H-3		1729.38000000 (46.7400000000)	NA	5.20 ft ³ 60.00000 lb	08-005571 (BIO-3)	

FORM 541		EnergySolutions, Inc.		1. MANIFEST TOTALS								2. MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST				NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR MATERIAL (grams)				0374-040108EN		
CONTAINER AND WASTE DESCRIPTION				8	m ³ ft ³	kg lb	U-233	U-235	Pu	TOTAL	3. PAGE 1 OF 2 PAGE(S)		
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				MBq mCi	ALL NUCLIDES	ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)	TRITIUM	C-14	Tc-99	I-129	SOURCE	4. SHIPPER NAME	
				5209.8220000000	5209.8220000000	0.2590000000	NP	NP	NP	NP	NP	Philotechnics, Ltd @ Institute of Pharmaceutical	
				140.8080000000	140.7990000000	0.0070000000	NP	NP	NP	NP	NP	SHIPMENT ID NUMBER	
												0374-040108EN	
DISPOSAL CONTAINER DESCRIPTION				WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURNAL/DISPOSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIOISOTOPES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIOISOTOPE PERCENT	16. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C		
08-005564 (DAW-1) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	22.67950 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	H-3 Sub Total Package Total	AU		
08-005565 (DAW-2) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	22.67950 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	H-3 Sub Total Package Total	AU		
08-005566 (DAW-3) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	22.67950 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	C-14 H-3 Sub Total Package Total	AU		
08-005567 (DAW-4) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	22.67950 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	H-3 Sub Total Package Total	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	3. Drum/Drumliner
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk, Unpacked Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	14. Other, Describe in item 15, or additional page
7. Polyethylene Tank or Liner	
8. Fiberglass Tank or Liner	

NOTE 1A: Process Requested

C. Compaction	SL. Steam Refining
DL. Direct Incineration	SL. Sort & Incinerate
D. Deco	G. Green to Clean
M. Metal Melt	T. Trans-Ship
LI. Liquid for Incineration	OL. Oil for Incineration
O. Other (describe)	

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

20. Charcoal	29. Demolition Rubble
21. Incinerator Ash	30. Cation Ion-exchange Media
22. Soil	31. Anion Ion-exchange Media
23. Gas	32. Mixed Bed Ion-exchange Media
24. Oil	33. Contaminated Equipment
25. Aqueous Liquid	34. Organic Liquid (except oil)
26. Filter Media	35. Glassware or Labware
27. Mechanical Filter	36. Sealed Source/Device
28. EPA or State Hazardous	37. Paint or Plating

NOTE 2A: Burial/Disposition Site

B. Barnwell Waste Management Facility
E. Envirocare
R. Richland, WA
PR. Process and Return
O. Other

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in item 13. Code 100=None Required

Solidification	34. Vinyl Ester Styrene
30. Cement	39. Other, Describe in item 13, or additional page
31. Concrete (encapsulation)	100. None Required
32. Silica	
33. Vinyl Chloride	

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST											EnergySolutions, Inc.		2. MANIFEST NUMBER 0374-040108EN				
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		
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm² dpm/100 cm²		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ ft³		13. SOLIDIFICATION OR 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 AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			AS - Class A Stable AU - Class A Unstable B - Class B C - Class C	
											RADIONUCLIDES		MBq	mCi			
08-005568 (LSV-1) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	34.01925 75.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40	0.14725 5.20000	100		LIQUID OXIDES / NP	NP	C-14	0.1850000000 0.0050000000	0.0050000000 0.0050000000	AU	
														Sub Total	0.1850000000	0.0050000000	
														Package Total	0.1850000000	0.0050000000	
08-005569 (BIO-1) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	27.21540 60.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	41	0.14725 5.20000	100		SOLID METAL OXIDES / NP	NP	H-3	1729.3800000000 46.7400000000	46.7400000000 46.7400000000	AU	
														Sub Total	1729.3800000000	46.7400000000	
														Package Total	1729.3800000000	46.7400000000	
08-005570 (BIO-2) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	27.21540 60.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	41	0.14725 5.20000	100		SOLID METAL OXIDES / NP	NP	H-3	1729.3800000000 46.7400000000	46.7400000000 46.7400000000	AU	
														Sub Total	1729.3800000000	46.7400000000	
														Package Total	1729.3800000000	46.7400000000	
08-005571 (BIO-3) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	27.21540 60.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	41	0.14725 5.20000	100		SOLID METAL OXIDES / NP	NP	H-3	1729.3800000000 46.7400000000	46.7400000000 46.7400000000	AU	
														Sub Total	1729.3800000000	46.7400000000	
														Package Total	1729.3800000000	46.7400000000	
Shipment Total		1.17800 41.00000	206.38345 455.00000											5209.8220000000 140.8060000000			

NRC FORM 542 (7-2001) UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST MANIFEST INDEX AND REGIONAL COMPACT TABULATION List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators			EnergySolutions, Inc. 1. WASTE COLLECTOR/PROCESSOR NAME: Philotechnics, Ltd @ Institute of Pharmaceutical Discovery IDENTIFICATION NUMBER: 374 SHIPPING DATE: 04/01/2008				2. MANIFEST NUMBER 0374-040108EN 3. PAGE 1 OF 1 PAGE(S)			
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P=PROCESSED C=COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY MBq	D. VOLUME m ³
374	Institute of Pharmaceutical Discovery EPA #: (203) 315-5932	23 Business Park Drive Branford, CT 06405	1.17800	Onsite Generation 03/28/2008	C	CT	NP	NP	5209.822	1.17800
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							NP	NP	5209.8220000000	1.17800

USE OF THIS FORM IS VOLUNTARY. THE USE OF THIS FORM DOES NOT CONSTITUTE AN ENDORSEMENT BY THE NRC. THE NRC MAY NOT CONDUCT OR SPONSOR, AND A PERSON IS NOT REQUIRED TO RESPOND TO, THE INFORMATION COLLECTION.

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		EnergySolutions, Inc.		5. SHIPPER - NAME AND FACILITY PhiloTechnics, Ltd @ Institute of Pharmaceutical Discovery 23 Business Park Drive Branford, CT 06405		SHIPMENT ID NUMBER 0374-080607EN		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		PAGE 1 OF 1 PAGE(S) NONE PAGE(S) NONE PAGE(S) NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-080607EN							
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300				USER PERMIT NUMBER		SHIPMENT NUMBER 0374-080607EN		9. CONSIGNEE - Name and Facility Address EnergySolutions, Inc. Operated By EnergySolutions 1580 Bear Creek Road Oak Ridge, TN 37830		CONTACT Ed Kolski		TELEPHONE NUMBER (Include Area Code) (888) 226-1629							
ORGANIZATION CHEMTREC				CONTACT David Dean		TELEPHONE NUMBER (Include Area Code) (203) 315-5974		SIGNATURE - Authorized consignee acknowledging waste receipt <i>[Signature]</i>		DATE 8/17/07		18. CERTIFICATION This is to certify that the hazardous materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or an equivalent state regulation.							
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 6		6. CARRIER - Name and Address R & R Trucking 302 Thunder Road Duenweg, MO 64841		EPA I.D. NUMBER MOR000501973		SHIPPING DATE 08/06/2007		19. IDENTIFICATION NUMBER OF PACKAGE							
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes", provide Manifest Number				EPA MANIFEST NUMBER N/A		CONTACT Mick Lunsford		TELEPHONE NUMBER (Include Area Code) 866-262-2784		DATE 8-6-07		AUTHORISED SIGNATURE <i>[Signature]</i>							
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (including proper shipping name, hazard class, UN ID number, and any additional information)				12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY MBq : mCi		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
Non-Radioactive per DOT CAW/THERMAL				NA		NA		SOLIDMETAL OXIDES		H-3		9.994000 (0.262000)		NA		5.20 ft ³ 46.00000 lb		07-003084 (070806-A) ✓	
Non-Radioactive per DOT CAW/THERMAL				NA		NA		SOLIDMETAL OXIDES		C-14		0.999900 (0.027000)		NA		5.20 ft ³ 28.00000 lb		07-003085 (070806-B) ✓	
Non-Radioactive per DOT CAW/THERMAL				NA		NA		SOLIDMETAL OXIDES		H-3		9.994000 (0.262000)		NA		5.20 ft ³ 50.00000 lb		07-003086 (070806-C) ✓	
Non-Radioactive per DOT NON-HAZ LSV				NA		NA		LIQUIDOXIDES		C-14 ; H-3		19.943000 (0.538000)		NA		7.40 ft ³ 76.00000 lb		07-003087 (070806-D) ✓	
Non-Radioactive per DOT ANIMAL CARCASSES				NA		NA		SOLIDMETAL OXIDES		H-3		155.030000 (4.190000)		NA		5.20 ft ³ 58.00000 lb		07-003088 (070806-E) ✓	
Non-Radioactive per DOT ANIMAL CARCASSES				NA		NA		SOLIDMETAL OXIDES		H-3		155.030000 (4.190000)		NA		5.20 ft ³ 58.00000 lb		07-003089 (070806-F) ✓	
FOR CONSIGNEE USE ONLY																			
Tennessee "License For Delivery" No. _____																			
South Carolina Transport Permit No. _____																			
US Ecology Generator No. _____																			
US Ecology Permit No. _____																			
20. Generator Certification Statement A. Radioactive Materials. Certification is hereby made that this shipment of low-level radioactive waste has been prepared in accordance with a radioactive waste management program which has been approved by the Nuclear Regulatory Commission or an Agreement State regulatory agency and with the current revision of the 40 CFR Part 261. B. Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261. C. Date. Generator hereby represents and warrants that all data set forth in this (UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST) are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and the Radioactive Material License. D. UNKNOWN SUBSTANCE. Generator hereby certifies that this material does not contain a substance as defined in 40 CFR 173.134. <i>[Signature]</i> <i>[Signature]</i> <i>[Signature]</i> Print Name Signature Date 8-6-07																			

FORM 541

EnergySolutions, Inc.

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	
SPECIAL NUCLEAR MATERIAL (grams)										0374-080607EN	
NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	U-233	U-235	Pu	TOTAL	3. PAGE 1 OF 2 PAGE(S)		4. SHIPPER NAME		
6	m ³ ft ³	0.94580 kg 33.40000 lb	101.60416 224.00000	NP	NP	NP	Institute of Pharmaceutical Discovery		SHIPMENT ID NUMBER		
ALL NUCLIDES			ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)	C-14	Tc-99	I-129	SOURCE		0374-080607EN		
MBq mCi	350.390000 9.470000	348.836000 9.428000	1.554000 0.042000	NP	NP	NP	NP				
DISPOSAL CONTAINER DESCRIPTION											
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²	11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT	16. WASTE CLASSIFI- CATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C
07-003064 (070806-A) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	20.86514 46.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	H-3 9.694000 0.262000 Sub Total 9.694000 0.262000 Package Total 9.694000 0.262000	AU
07-003065 (070806-B) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	12.70052 28.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	C-14 0.999000 0.027000 Sub Total 0.999000 0.027000 Package Total 0.999000 0.027000	AU
07-003066 (070806-C) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	22.67950 50.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 5.20000	100	SOLID METAL OXIDES / NP	H-3 9.694000 0.262000 Sub Total 9.694000 0.262000 Package Total 9.694000 0.262000	AU
07-003067 (070806-D) 374	4 O - O	0.20955 7.40000	34.47284 76.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	40 7.40000	100	LIQUID OXIDES / NP	C-14 0.555000 0.015000 H-3 19.388000 0.524000 Sub Total 19.943000 0.539000 Package Total 19.943000 0.539000	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
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. Demineralizer
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 Requested

- A. Compaction
- SR. Steam Reforming
- DI. Direct Incineration
- SI. Sort & Incinerate
- D. Decon
- G. Green Is Clean
- M. Metal Melt
- T. Trans-Ship
- LI. Liquid for Incineration
- OI. Oil for Incineration
- O. Other (describe)

NOTE 2: Waste Descriptor Codes. (Choose up to three which 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 (except oil)
35. Glassware or Labware
36. Sealed Source/Device
37. Paint or Plating
38. Evaporator Bottoms/Sludges/
Concentrates
39. Compactible Trash
40. Noncompactible Trash
41. Animal Carcass
42. Biological Material (except
animal carcasses)
43. Activated Material
59. Other. Describe in Item 11,
or additional page

NOTE 2A: Burial/Disposition Site

- A. Barnwell Waste Management Facility
- E. Envirocare
- R. Richland, WA
- PR. Process and Return
- O. Other

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which
predominate by volume.) For media meeting disposal site structural stability
requirements, the numerical code must be followed by "-S" and the media vendor and
brand name must also be identified in Item 13. Code 100=None Required

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

FORM 541A

EnergySolutions, Inc.

2. MANIFEST NUMBER

0374-080607EN

3.

PAGE 2 OF 2 PAGE(S)

**UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST**
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)

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 NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m ³ ft ³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ ft ³		13. SOLIDIFICATION OR 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 AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
					ALPHA	BETA-GAMMA		RADIONUCLIDES	MBq				mCi			
# - Innerpack Container																
07-003068 (070806-E) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	26.30822 58.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	41	0.14725 5.20000	100		SOLID METAL OXIDES / NP	NP	H-3	155.030000	4.190000	AU
													Sub Total	155.030000	4.190000	
													Package Total	155.030000	4.190000	
07-003069 (070806-F) 374	19 Other-Fiber Drum O - O	0.14725 5.20000	26.30822 58.00000	< 5.0000E-03 < 5.0000E-01	< 3.6740E-06 < 2.2000E+02	< 3.6740E-05 < 2.2000E+03	41	0.14725 5.20000	100		SOLID METAL OXIDES / NP	NP	H-3	155.030000	4.190000	AU
													Sub Total	155.030000	4.190000	
													Package Total	155.030000	4.190000	
Shipment Total		0.94580 33.40000	143.33444 316.00000											350.390000	9.470000	

NRC FORM 542 (7-2001)			EnergySolutions, Inc.		1. WASTE COLLECTOR/PROCESSOR				2. MANIFEST NUMBER			
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST			NAME Institute of Pharmaceutical Discovery		SHIPPER USE ONLY				0374-080607EN			
MANIFEST INDEX AND REGIONAL COMPACT TABULATION			IDENTIFICATION NUMBER 374						3. PAGE 1 OF 1 PAGE(S)			
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators			SHIPPING DATE 08/08/2007									
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE), AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME m ³	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P=PROCESSED C=COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. A. SOURCE MATERIAL (kg)	AS PROCESSED/COLLECTED TOTAL				
								B. SNM (g)	C. ACTIVITY MBq	D. VOLUME m ³		
374	Institute of Pharmaceutical Discovery EPA #: (203) 315-5974	23 Business Park Drive Branford, CT 06405	0.94580	Onsite Generation 08/01/2007	C	CT	NP	NP	350.39	0.94580		
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							NP	NP	350.390000	0.94580		

FORM 540
(8-98/ISIP)

Philotechnics, Ltd.

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

1. EMERGENCY TELEPHONE NUMBER (Include Area Code)

800-424-9300

ORGANIZATION
CHEMTREC

2. IS THIS AN EXCLUSIVE USE SHIPMENT?

☐ YES
☒ NO

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

3

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

☐ YES
☒ NO

EPA MANIFEST NUMBER

Not Applicable

5. SHIPPER - NAME AND FACILITY

Philotechnics @ Institute of Pharmaceutical Discovery
23 Business Park Drive
Branford, CT 06405

USER PERMIT NUMBER

NA

SHIPMENT NUMBER

0374-042605Pe

CONTACT

David Dean

CARRIER - Name and Address

R & R Trucking
302 Thunder Road
Duenweg, MO, 64841

CONTACT

Mitch Lunsford

SIGNATURE - Authorized carrier acknowledging receipt

Jason Chigere

SHIPPER ID NUMBER

0374-042605Pe

☒ COLLECTOR

☐ PROCESSOR

GENERATOR TYPE
Specify

TELEPHONE NUMBER
(Include Area Code)

203-316-5974

EPA I.D. NUMBER

NA

SHIPPING DATE
04/12/2005

TELEPHONE NUMBER
(Include Area Code)

866-252-2784

DATE

4-26-05

7. FORM 540 AND 540A
FORM 541 AND 541A
FORM 542 AND 542A
ADDITIONAL INFORMATION

PAGE 1 OF 1 PAGES
1 PAGES
1 PAGES
PAGES

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

0374-042605Pe

9. CONSIGNEE - Name and Facility Address

PeCos, LLC
2025 Battelle Blvd.
Richland, WA 99352

CONTACT
Larry Morin

TELEPHONE NUMBER
(Include Area Code)

509-375-5160

DATE

5-28-05

SIGNATURE - Authorized consignee acknowledging receipt

Jason Chigere

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 with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.

AUTHORIZED SIGNATURE

Jason Chigere

TITLE

Broker

DATE

4-26-05

11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION
(Include proper shipping name, hazard class, UN ID number,
and any other information)

Exempt Material -DOT Exempt Package, NA, NA - Animal Carcass

12. DOT LABEL
RADIOACTIVE

NA

13. TRANSPORT
INDEX

NA

14. PHYSICAL AND
CHEMICAL FORM

Solid/Metal Oxides

H-3

15. INDIVIDUAL
RADIONUCLIDES

16. TOTAL PACKAGE
MBq ACTIVITY mCi

1.44E+01 (3.90E-01)

17. LSA/SCO
CLASS

NA

18. TOTAL WEIGHT
OR VOLUME
(Use appropriate units)

1.18E+01 kg
26.0 lbs

19. IDENTIFICATION
NUMBER OF
PACKAGE

050425-A

Exempt Material -DOT Exempt Package, NA, NA - Animal Carcass

NA

NA

Solid/Metal Oxides

H-3

1.44E+01 (3.90E-01)

NA

1.18E+01 kg
26.0 lbs

050425-B

Exempt Material -DOT Exempt Package, NA, NA - Animal Carcass

NA

NA

Solid/Metal Oxides

H-3

3.22E+01 (8.70E-01)

NA

2.59E+01 kg
57.0 lbs

050425-C

20. GENERATOR CERTIFICATION STATEMENT

- A) Radioactive Materials. Certification is hereby made to Philotechnics, Ltd. that this shipment of low-level radioactive material/waste has been prepared in accordance with a radioactive waste management program which has been approved by the NRC or an Agreement State regulatory agency and furthermore meets the criteria set forth in 49 CFR 173.443 concerning contamination controls on the external surfaces of the packages.
- B) Data. Generator hereby represents and warrants that all data set forth in this UNIFORM RADIOACTIVE WASTE MANIFEST are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and the above mentioned processors Radioactive Material Licenses.
- C) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261. () N/A
- D) INFECTIOUS SUBSTANCE: Generator hereby certifies that this material does not contain an infectious substance as defined in 49 CFR 173.134.

Print Name

David Dean

Signature

David Dean

Date

26Apr05

(Consolidate into 1-55 gal)

UNIFORM LOW-LEVEL RADIOACTIVE
WASTE MANIFEST
CONTAINER AND WASTE DESCRIPTION

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	1. MANIFEST TOTALS				TOTAL	SOURCE	2. MANIFEST NUMBER
			U-233	U-235	Pu	SPECIAL NUCLEAR MATERIAL (grams)			
3	m ³ 0.14 # 4.800E+00	kg 49.44 # 1.090E+02	NP	NP	NP	NP	NP	NP	0374-M2605Pe
	ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129				
MBq	6.100E+01	6.100E+01	NP	NP	NP	kg	NP		
mCi	1.650E+00	1.650E+00	NP	NP	NP	lb	NP		

3. PAGE 1 OF 1 PAGE(S)

4. SHIPPER NAME
Philotechnics, Ltd.

SHIPPER ID NUMBER
0374042605Pe

DISPOSAL CONTAINER DESCRIPTION				WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER				RADIOLOGICAL DESCRIPTION				16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C
5. CONTAINER IDENTIFICATION NUMBER/ TRANSPORT PERMIT NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME m ³ #	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²	11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m ³ #	13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION	15. INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
050425-A 0374	19 FIBER DRUM	0.21 7.50	11.79 26.0 #	<1.00E-03 <0.10	<3.33E-07 <20.00	41 Process Animal Carcass	2.83E-02 1.00E+00	100	Metal Oxides NP	H-3 SubTotal Pkg Total 1.44E+01 1.44E+01 1.44E+01	3.90E-01 3.90E-01 3.90E-01	AU
050425-B 0374	19 FIBER DRUM	0.21 7.50	11.79 26.0 #	<1.00E-03 <0.10	<3.33E-07 <20.00	41 Process Animal Carcass	5.10E-02 1.80E+00	100	Metal Oxides NP	H-3 SubTotal Pkg Total 1.44E+01 1.44E+01 1.44E+01	3.90E-01 3.90E-01 3.90E-01	AU
050425-C 0374	19 FIBER DRUM	0.21 7.50	25.55 57.0 #	<1.00E-03 <0.10	<3.33E-07 <20.00	41 Process Animal Carcass	5.66E-02 2.00E+00	100	Metal Oxides NP	H-3 SubTotal Pkg Total 3.22E+01 3.22E+01 3.22E+01	8.70E-01 8.70E-01 8.70E-01	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 Drum | 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. Non-compactible 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: Sorption, Solidification, Stabilization Media Codes (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in item 13. Code 100 = NONE REQUIRED

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

FORM 540 (10-96)

FORM 541		Philotechnics		1. MANIFEST TOTALS								2. MANIFEST NUMBER 0374-020304NSSI											
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR MATERIAL (grams)				3. PAGE 1 OF 1 PAGE(S)												
							U-233	U-235	Pu	TOTAL													
				1	m3 7.5000	kg 40.8233 lb 90.0000	NP	NP	NP	NP													
				ACTIVITY				SOURCE															
				ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129				4. SHIPPER NAME Philotechnics @ Institute of Ph											
				MBq	2.5671E+00	2.1682E+00	3.9886E-01	NP	NP	(kgs)	NA												
				mCi	6.9380E-02	5.8600E-02	1.0780E-02	NP	NP	(lbs)	NA	SHIPMENT ID NUMBER 0374-020304NSSI											
DISPOSAL CONTAINER DESCRIPTION												WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER											
5. CONTAINER IDENTIFICATION NUMBER / GENERATOR ID NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME (m3) (ft3)	8. WASTE AND CONTAINER WEIGHT (kg) (lb)	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm2 dpm/100 cm2		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m3) (FT3)	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION			16. WASTE CLASSIFICATION AS-Class A Stable AU-Class A Unstable B-Class B C-Class C								
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR TOTAL ACTIVITY AND RADIONUCLIDE PERCENT											
040109-G/0374	4	0.2124	40.8233	<5.000E-03	<3.6740E-06	<3.6740E-05	59-LIQUID SCINTILLATION VIALS	0.2124	NA	Non-Haz Liquid Scint. Vials/NP	NP	C-14	3.9886E-01	1.0780E-02	AU								
		7.5000	90.0000	<5.000E-01	<2.200E+02	<2.200E+03		7.5000				H-3	2.1682E+00	5.8600E-02									
												Subtotal	2.5671E+00	6.9380E-02									
												Total	2.5671E+00	6.9380E-02									
Shipment Totals		0.2124	40.8233										2.5671E+00	6.9380E-02									
		7.5000	90.0000																				

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 1A: Process Descriptors
- | | |
|--------|---------------------------------|
| NT/VR | Non Thermal / Volume Reduction |
| NT/SC | Non Thermal / Super Compaction |
| NT/DC | Non Thermal / Decontamination |
| NT/DCY | Non Thermal / Decay |
| NT/T | Non Thermal / Pass thru |
| NT/SR | Non Thermal / Survey & Release |
| NT/STB | Non Thermal / Stabilize |
| NT/FL | Non Thermal / Fill |
| NT/SAB | Non Thermal / Shield & Bail |
| T/SFG | Thermal / Saf-Glass |
| T/BPU | Thermal / Batch Processing Unit |
| T/VIT | Thermal / Vitrification Process |

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 2A: End Disposition Descriptors

- | | |
|-----|----------------------------------|
| BSC | Barnwell, SC |
| ECU | Envirocare, UT |
| USE | US Ecology, Richland WA |
| DOE | DOE, Hanford WA |
| RTG | Return to Generator |
| O | Other |
| NDV | No Disposal Volume |
| TBD | To be Determined |
| WCS | Waste Control Specialists, Texas |
| FR | Free Release |

NOTE 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume. For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in item 13. Code 100=NONE REQUIRED.)

- | | |
|--------------------|--|
| Solidification | 94. Vinyl Ester Styrene |
| 90. Cement | 99. Other. Describe (encapsulation) in item 13, or additional page |
| 91. Concrete | |
| 92. Bitumen | |
| 93. Vinyl Chloride | 100. None Required. |

FORM 542			Philotechnics		1. WASTE COLLECTOR/PROCESSOR				2. MANIFEST NUMBER			
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST					NAME		SHIPPER USE ONLY		0374-020304NSSI			
MANIFEST INDEX AND REGIONAL COMPACT TABULATION					IDENTIFICATION NUMBER							
List all original "PROCESSED WASTE" generators (if any) before "COLLECTED WASTE" generators.					SHIPPING DATE				3. PAGE 1 OF 1 PAGE(S)			
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE) AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3) (ft3)	8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL					
							A. SOURCE MATERIAL (kg) (lb)	B. SNM (g)	C. ACTIVITY (MBq) (mCi)	D. VOLUME (m3) (ft3)		
0374 XXX	Philotechnics @ Institute of Pharmaceutical Discovery 203-315-5974	23 Business Park Drive Branford, CT 06405	0.2124 7.5008	0374-020304NSSI (02/03/2004)	C	CT	0.0000E+00 0.0000E+00	0.0000E+00	2.5671E+00 6.9380E-02	0.2124	7.5000	
TOTALS OF ALL PAGES (FORMS 542 AND 542A)							0.0000E+00 0.0000E+00	0.0000E+00	2.5671E+00 6.9380E-02	0.2124	7.5000	

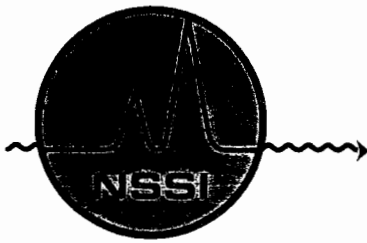
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

ISOTOPES REPORT

For Manifest # 0374-020304NSSI

Philotechnics

<u>Isotope</u>	Total Activity	
	(MBq)	(mCi)
C-14	3.9886E-01	1.0780E-02
H-3	2.1682E+00	5.8600E-02



NSSI/SOURCES & SERVICES, INC.

P.O. BOX 34042 HOUSTON, TEXAS 77234
PH: (713) 641-0391 www.nssihouston.com FAX: (713) 641-6153

March 03, 2004

**Attn: David Dean
The Institute of Pharmaceutical Discovery, LLC
23 Business Park Drive
Branford, CT 06405**

Dear Mr. Dean:

I am returning the original copy of the manifest used for shipping hazardous wastes to our facility for treatment.

In compliance with 40 CFR 264.12(b), NSSI is permitted to receive your waste, has received your waste and will continue to receive future shipment of this waste.

Please retain the manifest in your files for possible review by Regulatory Agencies to show proper disposal.

Your use of NSSI/Recovery Services, Inc. for treatment is appreciated.

Sincerely,

**Robert D. Gallagher
President**

**RDG/vla
Ref. #manifest.frm**

**Cc : Andy Armbrust
 Philotechnics
 P.O. Box 4516
 Oak Ridge, TN 37831-4516**

EPA COMMISSION ON
ENVIRONMENTAL QUALITY
P.O. Box 13087
Austin, Texas 78711-3087

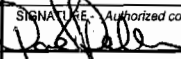
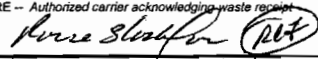

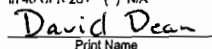
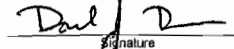
This is to inform the generator of the waste shipped on
this manifest that the transporter has the appropriate permits for,
and will receive the waste the generator is shipping.



Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address The Institute for Pharmaceutical Discovery, LLC 23 Business Park Drive Branford, CT 06405 4. Generator's Phone (203) 315-5974				A. State Manifest Document Number 3038423		
5. Transporter 1 Company Name Hitman Transport		6. US EPA ID Number TXD987783065		B. State Generator's ID		
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID		
9. Designated Facility Name and Site Address NSSI 5709 Etchegoyen Street Houston, TX 77087		10. US EPA ID Number TXD982560294		D. Transporter's Phone 865-481-0222		
				E. State Transporter's ID		
				F. Transporter's Phone		
				G. State Facility's ID 38669		
				H. Facility's Phone 713-641-0391		
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.	
X	a. Radioactive Material, excepted package - Limited quantity of material, 7, UN2910	001	DM	00090	P	NRV OUTS
	b.					
	c.					
	d.					
J. Additional Descriptions for Materials Listed Above H.S. = NON-HAZ LSV Reference NRC manifest # 0774-020304 NSSI Reference ERG # 161				K. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Emergency Response telephone # 800-424-9300 (Chemtrec)						
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.						
Printed/Typed Name David Dean		Signature David Dean		Month Day Year 02/03/04		
17. Transporter 1 Acknowledgement of Receipt of Materials				Date		
Printed/Typed Name KONNIE STOCKTON		Signature Konnie Stockton		Month Day Year 02/03/04		
18. Transporter 2 Acknowledgement of Receipt of Materials				Date		
Printed/Typed Name Robert C Fitzgibbon		Signature Robert C Fitzgibbon		Month Day Year 02/16/04		
19. Discrepancy Indication Space						
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.						
Printed/Typed Name K. Fosco		Signature K. Fosco		Date 02/18/04		

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER			Philotechnics 5. SHIPPER -- NAME AND FACILITY Philotechnics @ Institute of Pharmaceutical Discovery 23 Business Park Drive Branford, CT 06405			SHIPMENT I.D. NUMBER 0374-020304Pec			7. FORM 540 AND 540A PAGE 1 OF 1 FORM 541 AND 541A 2 PAGE(S) FORM 542 AND 542A 1 PAGE(S) ADDITIONAL INFORMATION None PAGE(S)			8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-020304Pec																	
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300			S.C. PERMIT # NA			SHIPMENT NUMBER 0374-020304Pec			GENERATOR TYPE (Specify) COLLECTOR PROCESSOR			9. CONSIGNEE - Name and Facility Address PeCos, LLC 2025 Battelle Blvd. Richland, WA 99352			CONTACT Larry Morin TELEPHONE NUMBER (Include Area Code) 509-375-5160														
ORGANIZATION CHEMTREC			CONTACT David Dean			TELEPHONE NUMBER (Include Area Code) 203-315-5974			EPA I.D. NUMBER TND987783065			SIGNATURE -- Authorized consignee acknowledging waste receipt 			DATE 2/3/04														
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 6			6. CARRIER -- Name and Address Hittman Transport 628 Gallaher Road Kingston, TN 37763			EPA I.D. NUMBER TND987783065			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.																	
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number			EPA MANIFEST NUMBER NA			CONTACT Stacy Brackett SIGNATURE -- Authorized carrier acknowledging waste receipt 			TELEPHONE NUMBER (Include Area Code) 865-481-0222			AUTHORIZED SIGNATURE 			DATE 2-3-04														
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)			12. DOT LABEL "RADIOACTIVE"			13. TRANSPORT INDEX			14. PHYSICAL AND CHEMICAL FORM			15. INDIVIDUAL RADIONUCLIDES			16. TOTAL PACKAGE ACTIVITY MBq mCi			17. LSA/SCO CLASS			18. TOTAL WEIGHT OR VOLUME (Use appropriate units)			19. IDENTIFICATION NUMBER OF PACKAGE					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Pa,PI,GI-Incln.			C-14 H-3			1.3331E+01 3.6030E-01			NA			80. LBS; 7.5 FT3			040109-A					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Pa,PI,GI-Incln.			C-14 H-3			3.7770E+00 1.0208E-01			NA			80. LBS; 7.5 FT3			040109-B					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Animal Carc.I-Inc			H-3			2.4642E+01 6.6600E-01			NA			35. LBS; 2. FT3			040109-C					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Animal Carc.I-Inc			H-3			2.4642E+01 6.6600E-01			NA			35. LBS; 2. FT3			040109-D					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Animal Carc.I-Inc			H-3			2.4642E+01 6.6600E-01			NA			35. LBS; 2. FT3			040109-E					
Radioactive material, excepted package-limited quantity of material, 7, UN2910			NA			NA			Solid Metal Oxides/Animal Carc.I-Inc			C-14 H-3			1.7463E+02 4.7198E+00			NA			12. LBS; 2. FT3			040109-F					
FOR CONSIGNEE USE ONLY <div style="font-size: 1.2em; margin-top: 20px;">LLR04-013</div>															20. GENERATOR CERTIFICATION STATEMENT A) Radioactive Materials Certification is hereby made to Philotechnics, Ltd. that this shipment of low-level radioactive material/waste has been prepared in accordance with a radioactive waste management program which has been approved by the NRC or an Agreement State regulatory agency and furthermore meets the criteria set forth in 49 contamination controls on the external surfaces of the packages. B) Data. Generator hereby represents and warrants that all data set forth in this UNIFORM RADIOACTIVE WASTE MANIFEST are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and the above mentioned processors Radioactive Material Licenses. C) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261 () N/A <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>  Print Name </div> <div>  Signature </div> <div> 3 Feb 04 Date </div> </div>														

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

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

Philotechnics

1	NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	1. MANIFEST TOTALS			
				SPECIAL NUCLEAR MATERIAL (grams)			
				U-233	U-235	Pu	TOTAL
	m3	0.2124	kg 45.3592				
	ft3	7.5000	lb 100.0000	NP	NP	NP	NP
ACTIVITY							
ALL NUCLIDES			TRITIUM	C-14	Tc-99	I-129	SOURCE
MBq	1.2950E+01	2.8490E+00	1.0101E+01	NP	NP	(kgs)	NA
mCi	3.5000E-01	7.7000E-02	2.7300E-01	NP	NP	(lbs)	NA

2. MANIFEST NUMBER 0374-102802NSSI
3. PAGE 1 OF 1 PAGE(S)
4. SHIPPER NAME Philotechnics @ Institute of Ph
SHIPMENT ID NUMBER 0374-102802NSSI

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER								16 WASTE CLASSIFI- CATION AS Class A Stable AU-Class A Unstable B-Class B C-Class C	
5. CONTAINER IDENTIFICATION NUMBER / GENERATOR ID NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME <div><div>(m3)</div><div>(ft3)</div></div>	8. WASTE AND CONTAINER WEIGHT <div><div>(kg)</div><div>(lb)</div></div>	9. SURFACE RADIATION LEVEL <div><div>mSv/hr</div><div>mrem/hr</div></div>	10. SURFACE CONTAMINATION <div><div>MBq/100 cm2</div><div>dpm/100 cm2</div></div>		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER <div><div>(m3)</div><div>(FT3)</div></div>		13. SOLIDIFICATION OF STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
					ALPHA	BETA- GAMMA		CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF>0.1%							
											RADIONUCLIDES			MBq		mCi
02-1104B/0374	4	0.2124	45.3592	<5.000E-03	<3.6740E-06	<3.6740E-05	59-LIQUID SCINTILLATION VIALS (NON-RCRA)	0.2124	NA	Metal Oxides/Non- Haz LSV/NP	NP	C-14 H-3 ----- Subtotal =====	1.0101E+01 2.8490E+00	2.7300E-01 7.7000E-02	AU	
		7.5000	100.0000	<5.000E-01	<2.200E+02	<2.200E+03		7.5000					1.2950E+01 =====	3.5000E-01 =====		
Shipment Totals		0.2124	45.3592											1.2950E+01	3.5000E-01	
		7.5000	100.0000													

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 1A: Process Descriptors

- | | |
|--------|---------------------------------|
| NT/VR | Non Thermal / Volume Reduction |
| NT/SC | Non Thermal / Super Compaction |
| NT/DC | Non Thermal / Decontamination |
| NT/DCY | Non Thermal / Decay |
| NT/PT | Non Thermal / Pass THRU |
| NT/SR | Non Thermal / Survey & Release |
| NT/STB | Non Thermal / Stabilize |
| NT/FL | Non Thermal / Fill |
| NT/SAB | Non Thermal / Shred & Bail |
| T/SFG | Thermal / Saf-Glas |
| T/BPU | Thermal / Batch Processing Unit |
| T/VIT | Thermal / Vitrification Process |

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 2A: End Disposition Descriptors

- | | |
|-----|----------------------------------|
| BSC | Barnwell, SC |
| ECU | Envirocare, UT |
| USE | US Ecology, Richland WA |
| DOE | DOE, Hanford WA |
| RTG | Return to Generator |
| O | Other |
| NDV | No Disposal Volume |
| TBD | To be Determined |
| WCS | Waste Control Specialists, Texas |
| FR | Free Release |

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume. For media meeting disposal site structural stability requirements, the numerical code must be followed by "-S" and the media vendor and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

- | | |
|--------------------|--|
| Solidification | |
| 90. Cement | 94. Vinyl Ester Styrene |
| 91. Concrete | 99. Other. Describe in Item 13, or additional page |
| 92. Bitumen | |
| 93. Vinyl Chloride | 100. None Required. |

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

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

Philotechnics

1. MANIFEST TOTALS

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME	NET WASTE WEIGHT	SPECIAL NUCLEAR MATERIAL (grams)				TOTAL
			U-233	U-235	Pu		
1	m3	0.2124	kg	45.3592			
	lit	7.5000	lb	100.0000			
ACTIVITY							
ALL NUCLIDES			TRITIUM	C-14	Tc-99	I-129	SOURCE
MBq	1.2950E+01		2.8490E+00	1.0101E+01	NP	NP	(kgs) NA
mCi	3.5000E-01		7.7000E-02	2.7300E-01	NP	NP	(lbs) NA

2. MANIFEST NUMBER

0374-102802NSSI

3. PAGE 1 OF 1 PAGE(S)

4. SHIPPER NAME

Philotechnics @ Institute of Ph

SHIPMENT ID NUMBER

0374-102802NSSI

DISPOSAL CONTAINER DESCRIPTION

WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER

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	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME <div><div>(m3)</div><div>(ft3)</div></div>	8. WASTE AND CONTAINER WEIGHT <div><div>(kg)</div><div>(lb)</div></div>	9. SURFACE RADIATION LEVEL <div><div>mSv/hr</div><div>mrem/hr</div></div>	10. SURFACE CONTAMINATION <div><div>MBq/100 cm2</div><div>dpm/100 cm2</div></div>		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER <div><div>(m3)</div><div>(FT3)</div></div>		13. SOLIDIFICATION OR 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 AND CONTAINER TOTAL, OR TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		
					ALPHA	BETA- GAMMA		RADIONUCLIDES	MBq		mCi						
02-1104B/0374	4	0.2124	45.3592	<5.0000E-03	<3.6740E-06	<3.6740E-05	59-LIQUID SCINTILLATION VIALS (NON-RCRA)	0.2124	NA	Metal Oxides/Non-Haz LSV/NP	NP	C-14 H-3	1.0101E+01	2.7300E-01	2.8490E+00	AU	
		7.5000	100.0000	<5.000E-01	<2.200E+02	<2.200E+03		7.5000					Subtotal	1.2950E+01	3.5000E-01		
													Total	1.2950E+01	3.5000E-01		
Shipment Totals		0.2124	45.3592										1.2950E+01	3.5000E-01			
		7.5000	100.0000														

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

- Wooden Box or Crate
- Metal Box
- Plastic Drum or Pail
- Metal Drum or Pail
- Metal Tank or Liner
- Concrete Tank or Liner
- Polyethylene Tank or Liner
- Fiberglass Tank or Liner
- Demineralizer
- Gas Cylinder
- Bulk, Unpackaged Waste
- Unpackaged Components
- High Integrity Container
- Other. Describe in Item 6, or additional page.

Note 1A: Process Descriptors

NT/VR Non Thermal / Volume Reduction
NT/SC Non Thermal / Super Compaction
NT/DC Non Thermal / Decontamination
NT/DCY Non Thermal / Decay
NT/PT Non Thermal / Pass THRU
NT/SR Non Thermal / Survey & Release
NT/STB Non Thermal / Stabilize
NT/FL Non Thermal / Fill
NT/SAB Non Thermal / Shred & Bail
T/SFG Thermal / Saf-Glas
T/BU Thermal / Batch Processing Unit
T/VIT Thermal / Vitrification Process

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

- Charcoal
- Incinerator Ash
- Soil
- Gas
- Oil
- Aqueous Liquid
- Filter Media
- Mechanical Filter
- EPA or State Hazardous
- Demolition Rubble
- Caition Ion-exchange Media Concentrates
- Anion Ion-exchange Media
- Mixed Bed Ion-exchange Media
- Contaminated Equipment
- Organic Liquid (except oil)
- Glassware or Labware
- Sealed Source/Device
- Paint or Plating
- Evaporator Bottoms/Sludges/Concentrates
- Compactable Trash
- Noncompactible Trash
- Animal Carcass
- Biological Material (except animal carcass)
- Activated Material
- Other. Describe in Item 11, or additional page

Note 2A: End Disposition Descriptors

- BSC Barnwell, SC
ECU Envirocare, UT
USE US Ecology, Richland WA
DOE DOE, Hanford WA
RTG Return to Generator
O Other
NDV No Disposal Volume
TBD To be Determined
WCS Waste Control Specialists, Texas
FR Free Release

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume. For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media vendor and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

- Solidification
90. Cement
91. Concrete (encapsulation)
92. Bitumen
93. Vinyl Chloride
94. Vinyl Ester Styrene
99. Other. Describe in item 13, or additional page
100. None Required.

542

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any)
before "COLLECTED WASTE" generators.

Philotechnics

1. WASTE COLLECTOR/PROCESSOR

NAME

Philotechnics @ Institute of Pharmaceutical Discovery

IDENTIFICATION NUMBER

0374

SHIPPING DATE

10/28/02

SHIPPER USE ONLY

2. MANIFEST NUMBER

0374-102802NSSI

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE) AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME		8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL						
			(m3)	(l3)				A. SOURCE MATERIAL		B. SNM	C. ACTIVITY		D. VOLUME	
								(kg)	(lb)	(g)	(MBq)	(mCi)	(m3)	(l3)
0374 101	Philotechnics @ Institute of Pharmaceutical Discovery 203-315-5974	23 Business Park Drive Branford, CT 06405	0.2124	7.5000	0374-102802NSSI (10/28/2002)	C	CT	0.0000E+00	0.0000E+00	0.0000E+00	1.2950E+01	3.5000E-01	0.2124	7.5000
TOTALS OF ALL PAGES (FORMS 542 AND 542A)								0.0000E+00	0.0000E+00	0.0000E+00	1.2950E+01	3.5000E-01	0.2124	7.5000



UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No. 11-042		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address Institute of Pharmaceutical Research 23 Business Park Drive Bristol, CT 06035						A. State Manifest Document Number 02849259				
4. Generator's Phone (203) 315-5974						B. State Generator's ID 99929				
5. Transporter 1 Company Name U. TEXAS TRANSPORT			6. US EPA ID Number 7-N-D-9-2-7-7-2-3-0-6-5			C. State Transporter's ID				
7. Transporter 2 Company Name			8. US EPA ID Number			D. Transporter's Phone 865-376-8107				
9. Designated Facility Name and Site Address 1535 5709 Edinburgh Street Houston, TX 77037						E. State Transporter's ID				
10. US EPA ID Number 7-X-D-9-8-2-5-6-0-2-9-4						F. Transporter's Phone				
						G. State Facility's ID 37669				
						H. Facility's Phone 713-641-0391				
11A. HM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)					12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
X	a. Radioactive Material, excepted package - limited quantity of material, 7, UN 2910					001	DM	001000	P	NRA OUTSIDE
	b.									
	c.									
	d.									
J. Additional Descriptions for Materials Listed Above 2-NON-HAZARDOUS LSV Reference NRC manifest # 0374-102502 N551 Reference ERG # 162						K. Handling Codes for Wastes Listed Above				
15. Special Handling Instructions and Additional Information Emergency Response # 015-581-7991										
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name David Dean						Signature [Signature]			Month Day Year 11 04 02	
17. Transporter 1 Acknowledgement of Receipt of Materials										
Printed/Typed Name RANNE STOCKTON						Signature [Signature]			Month Day Year 11 04 02	
18. Transporter 2 Acknowledgement of Receipt of Materials										
Printed/Typed Name						Signature			Month Day Year	
19. Discrepancy Indication Space										
20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.										
Printed/Typed Name						Signature			Month Day Year	

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER				Philotechnics		5. SHIPPER -- NAME AND FACILITY Philotechnics @ Institute of Pharmaceutical Discovery 23 Business Park Drive Branford, CT 06405		SHIPMENT I.D. NUMBER 0374-102802DTK		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION		8. MANIFEST NUMBER (Use this number on all continuation pages) 0374-102802DTK					
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 865-806-7991				S.C. PERMIT # NA		SHIPMENT NUMBER 0374-102802DTK		<input checked="" type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR		PAGE 1 OF 1 PAGE(S) 1 PAGE(S) 1 PAGE(S) None PAGE(S)		CONTACT Transportation Mgr.					
ORGANIZATION Philotechnics				CONTACT David Dean		TELEPHONE NUMBER (Include Area Code) 203-315-5974		9. CONSIGNEE - Name and Facility Address Duratek, Inc. 1560 Bear Creek Rd. Oak Ridge, TN 37831		TELEPHONE NUMBER (Include Area Code) 865-525-5091		DATE					
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 =====> 2		6. CARRIER -- Name and Address Hittman Transport 628 Gallaher Road Kingston, TN 37763 Truck #: _____ Trailer #: _____		EPA I.D. NUMBER TND987783065		SIGNATURE - Authorized consignee acknowledging waste receipt		10. CERTIFICATION							
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number =====>		EPA MANIFEST NUMBER NA		CONTACT Stacy Brackett		TELEPHONE NUMBER (Include Area Code) 865-481-0222		DATE 11-4-02		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.							
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)		12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY MBq mCi		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
Radioactive material, excepted package-limited quantity of material, 7, UN2910		NA		NA		Solid Metal Oxides/Pa,Pi,Gi-Incin.		C-14 H-3		7.2520E+00 1.9600E-01		NA		70. LBS; 7.5 FT3		02-1104A	
Radioactive material, excepted package-limited quantity of material, 7, UN2910		NA		NA		Solid Metal Oxides/Animal Car.-Incin		H-3		2.5678E+01 6.9400E-01		NA		37. LBS; 1.5 FT3		02-1104C	
FOR CONSIGNEE USE ONLY								20. GENERATOR CERTIFICATION STATEMENT A) Radioactive Materials. Certification is hereby made to Philotechnics, Ltd. that this shipment of low-level radioactive material/waste has been prepared in accordance with a radioactive waste management program which has been approved by the NRC or an Agreement State regulatory agency and with the current revision of the Philotechnics, Ltd. Waste Acceptance Criteria. B) Data. Generator hereby represents and warrants that all data set forth in this UNIFORM RADIOACTIVE WASTE MANIFEST are true and correct in all respects and in accordance with all applicable governmental laws, rules, regulations and the above mentioned processors Radioactive Material Licenses. C) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 261.11(a)(1) N/A <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div>David Dean Print Name</div> <div>David Dean Signature</div> <div>4 Nov 02 Date</div> </div>									

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

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

Philotechnics

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME		NET WASTE WEIGHT		1. MANIFEST TOTALS				2. MANIFEST NUMBER 0374-102802DTK	
						SPECIAL NUCLEAR MATERIAL (grams)					
						U-233	U-235	Pu	TOTAL		3. PAGE 1 OF 1 PAGE(S)
2		0.2549 m3 9.0000 lb		48.5344 kg 107.0000 lb		NP	NP	NP	NP		
						ACTIVITY				4. SHIPPER NAME Philotechnics @ Institute of Ph	
						SOURCE					
		ALL NUCLIDES		TRITIUM		C-14	Tc-99	I-129			SHIPMENT ID NUMBER 0374-102802DTK
MBq		3.2930E+01		3.1008E+01		1.9240E+00	NP	NP	(kgs)	NA	
mCi		8.9000E-01		8.3800E-01		5.2000E-02	NP	NP	(lbs)	NA	

DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16 WASTE CLASSIFI- CATION AS-Class Stable AU-Class Unstable B-Class C-Class
5. CONTAINER IDENTIFICATION NUMBER / GENERATOR ID NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME <u>(m3)</u> <u>(l3)</u>	8. WASTE AND CONTAINER WEIGHT <u>(kg)</u> <u>(lb)</u>	9. SURFACE RADIATION LEVEL <u>mSv/hr</u> <u>mrem/hr</u>	10. SURFACE CONTAMINATION <u>MBq/100 cm2</u> <u>dpm/100 cm2</u>		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER <u>(m3)</u> <u>(FT3)</u>	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION		WEIGHT % CHELATING AGENT IF>0.1%	15. RADIOLOGICAL DESCRIPTION				
					ALPHA	BETA- GAMMA				CHEMICAL FORM/ CHELATING AGENT	INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL: OR TOTAL ACTIVITY AND RADIONUCLIDE PERCENT						
											RADIONUCLIDES						
													MBq	mCi			
02-1104A/0374	19 FIBER CONTAINER	0.2124	31.7515	<5.0000E-03	<3.6740E-06	<3.6740E-05	59-PAPER, PLASTIC, GLASS	0.2124	NA	Metal Oxides/Pa, Pi, G- Incin/NP	NP	C-14 H-3	1.9240E+00	5.2000E-02	5.3280E+00	1.4400E-01	AU
		7.5000	70.0000	<5.000E-01	<2.200E+02	<2.200E+03		7.5000					7.2520E+00	1.9600E-01			
													Total	7.2520E+00	1.9600E-01		
02-1104C/0374	19 FIBER CONTAINER	0.0425	16.7829	<5.0000E-03	<3.6740E-06	<3.6740E-05	41	0.0425	NA	Metal Oxides/Animal Car- Incin/NP	NP	H-3	2.5678E+01	6.9400E-01	2.5678E+01	6.9400E-01	AU
		1.5000	37.0000	<5.000E-01	<2.200E+02	<2.200E+03		1.5000					2.5678E+01	6.9400E-01			
Shipment Totals		0.2549	48.5344											3.2930E+01	8.9000E-01		
		9.0000	107.0000														

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 1A: Process Descriptors

NT/V/R	Non Thermal / Volume Reduction
NT/SC	Non Thermal / Super Compaction
NT/DC	Non Thermal / Decontamination
NT/DCY	Non Thermal / Decay
NT/PT	Non Thermal / Pass THRU
NT/SR	Non Thermal / Survey & Release
NT/STB	Non Thermal / Stabilize
NT/FL	Non Thermal / Fill
NT/SAB	Non Thermal / Shred & Bail
T/SFG	Thermal / Saf-Glas
T/BU	Thermal / Batch Processing Unit
T/VIT	Thermal / Vitrification Process

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 2A: End Disposition Descriptors

- | | |
|-----|----------------------------------|
| BSC | Barnwell, SC |
| ECU | Envirocare, UT |
| USE | US Ecology, Richland WA |
| DOE | DOE, Hanford WA |
| RTG | Return to Generator |
| O | Other |
| NDV | No Disposal Volume |
| TBD | To be Determined |
| WCS | Waste Control Specialists, Texas |
| FR | Free Release |

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume. For media meeting disposal site structural stability requirements, the numerical code must be followed by "S" and the media-vendor and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

- | | |
|--------------------|--|
| Solidification | 94. Vinyl Ester Styrene |
| 90. Cement | 99. Other. Describe in item 13, or additional page |
| 91. Concrete | |
| (encapsulation) | |
| 92. Bitumen | |
| 93. Vinyl Chloride | 100. None Required. |

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

MANIFEST INDEX AND REGIONAL COMPACT TABULATION

List all original "PROCESSED WASTE" generators (if any)
before "COLLECTED WASTE" generators.

Philotechnics

1.

WASTE COLLECTOR/PROCESSOR

NAME

Philotechnics @ Institute of Pharmaceutical Discovery

IDENTIFICATION NUMBER

0374

SHIPPING DATE
10/28/02

SHIPPER USE ONLY

2. MANIFEST NUMBER

0374-102802DTK

3. PAGE 1 OF 1 PAGE(S)

4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER (IF APPLICABLE) AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME		8. MANIFEST NUMBER(S) UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE P = PROCESSED C = COLLECTED	10. ORIGINATING COMPACT REGION OR STATE	11. AS PROCESSED/COLLECTED TOTAL						
			(m3)	(l3)				A. SOURCE MATERIAL (kg) (lb)		B. SNM (g)	C. ACTIVITY (MBq) (mCi)		D. VOLUME (m3) (l3)	
0374 41	Philotechnics @ Institute of Pharmaceutical Discovery 203-315-5974	23 Business Park Drive Branford, CT 06405	0.2549	9.0000	0374-102802DTK (10/28/2002)	C	CT	0.0000E+00	0.0000E+00	0.0000E+00	3.2930E+01	8.9000E-01	0.2549	9.0000
60														
TOTALS OF ALL PAGES (FORMS 542 AND 542A)								0.0000E+00	0.0000E+00	0.0000E+00	3.2930E+01	8.9000E-01	0.2549	9.0000