



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL HEALTH AND ENVIRONMENTAL EFFECTS
RESEARCH LABORATORY
ATLANTIC ECOLOGY DIVISION
27 TARZWELL DRIVE • NARRAGANSETT, RI 02882

OFFICE OF
RESEARCH AND DEVELOPMENT

July 17th, 2018

Licensing Assistance Team
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

03006356

REC RG 10719 18PM1024

Re: Renewal of License # 38-11957-01, Request for Additional Information Responses

In response to the NRC Request for Additional information dated May 1, 2018, please see answers below.

As we move forward with the decommissioning to achieve "unrestricted use" status we request the following:

1. Extension of our current NRC license.
2. Change of Radiation Safety Officer from Dr. Burgess to CDR Begluitti.
3. Removal of item E. Nickel 63 from the license 38-11957-01. This is an Electron Capture Detector which will be managed through the manufactures General License, as the state of Rhode Island is an agreement state. (supporting documentation enclosed).

Sincerely,

Wayne R. Munns, Jr.
AED Director

Enclosures: Corrected NRC Form 313
Attachment A, Line item answers to questions
Attachment B, Waste Manifest
Attachment C, LSC Disposal Records
Attachment D, ECD Inventory & Leak Test

602461
NMSS/IGNI MATERIALS-002

Attachment A

Re: License Renewal 38-11957-01, Request for Additional Information

Item 1, part A – Significant delays in the decommissioning efforts at AED have been mainly a result of lack of funding. AED did pursue a Decommissioning effort through a Blanket Purchase Agreement that the EPA has with a contractor, however that total cost was over a \$250,000 for a MARRSAM in a historical clean area of ~3,000 ft². EPA officials deemed the project too costly and determined to paying the permit fees was preferable, at that time our license had been extended until 2026. AED continued to look of cheaper options and take steps to prepare for requesting Unrestricted Use, such as moving ECDs to state general use license and decommissioning and disposal of the Liquid Scintillation Counter.

Question 1, part B – Pending review of Historical Site Assessment.

Question 2 – Items have been corrected in an attached NRC form 313.

Question 3 – The tense in the Feb. 12th letter's item #6 is incorrect and should read.... items 5 A,B,C and D have been used in laboratory.. There are no laboratory studies being conducted nor will there in the future.

Question 4 – Item # 10 from the Feb. 12th letter is correct, please see answer to Question 3 above.

Question 5 – See Attachment B

Question 6 – See Attachment B

Question 7 – AED to-date has 3 ECD's on-site, two of which are being transferred back to aliment soon, see attachment D. Over the years there have been more but since I have managed the program and back to 2012. AED has only had 3. I have records of transfer of earlier ECDs if required. The one liquid scintillation counter has been decommissioned, please see attached C LSC disposal records.

(10-2017)
10 CFR 30, 32,
33, 34, 35, 36,
37, 39, and 40



APPLICATION FOR MATERIALS LICENSE

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), 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.

INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1656 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1656/>. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

MATERIALS SAFETY LICENSING BRANCH
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

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

SEND APPLICATIONS TO:

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PA 19406-2713

IF YOU ARE LOCATED IN:

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

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

IF YOU ARE LOCATED IN:

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

SEND APPLICATIONS TO:

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
1800 E. LAMAR BOULEVARD
ARLINGTON, TX 76011-4511

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

1. THIS IS AN APPLICATION FOR (Check appropriate item)

- ☐ A. NEW LICENSE
- ☐ B. AMENDMENT TO LICENSE NUMBER
- ☒ C. RENEWAL OF LICENSE NUMBER

38-11957-01

2. NAME AND MAILING ADDRESS OF APPLICANT (Include zip code)

Wayne Munns, Director
27 Tarzwell Drive
Narragansett, RI 02882

3. ADDRESS WHERE LICENSED MATERIALS WILL BE USED OR POSSESSED

27 Tarzwell Drive
Narragansett, RI 02882

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Gino k Begliutti

BUSINESS TELEPHONE NUMBER
401-782-3009

BUSINESS CELLULAR TELEPHONE NUMBER
401-649-0307

BUSINESS E-MAIL ADDRESS
begliutti.gino@epa.gov

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL

- a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES (Fees required only for new applications, with few exceptions*)

(See 10 CFR 170 and Section 170.31)

*Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.

FEE
CATEGORY

AMOUNT
ENCLOSED \$

PER THE DEBT COLLECTION IMPROVEMENT ACT OF 1996 (PUBLIC LAW 104-134), YOU ARE REQUIRED TO PROVIDE YOUR TAXPAYER IDENTIFICATION NUMBER. PROVIDE THIS INFORMATION BY COMPLETING NRC FORM 531: <https://www.nrc.gov/reading-rm/doc-collections/forms/nrc531info.html>.

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

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 38, 37, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

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

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE

Wayne Munns

SIGNATURE

Wayne R. Munns

DATE

6/7/18

Attachment A

Re: License Renewal 38-11957-01, Request for Additional Information

Item 1, part A – Significant delays in the decommissioning efforts at AED have been mainly a result of lack of funding. AED did pursue a Decommissioning effort through a Blanket Purchase Agreement that the EPA has with a contractor, however that total cost was over a \$250,000 for a MARRSAM in a historical clean area of ~3,000 ft². EPA officials deemed the project too costly and determined to paying the permit fees was preferable, at that time our license had been extended until 2026. AED continued to look of cheaper options and take steps to prepare for requesting Unrestricted Use, such as moving ECDs to state general use license and decommissioning and disposal of the Liquid Scintillation Counter.

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Attachment B

NRC FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		5. SHIPPER- NAME AND FACILITY Chase Environmental Group, Inc. 11450 Watterson Court Louisville, KY 40299		SHIPPER ID # N/A	7. NRC FORM 540 AND 540A PAGE 1 <u>1</u> PAGE(S) NRC FORM 541 AND 541A OF <u>1</u> PAGE(S) NRC FORM 542 AND 542A <u>1</u> PAGE(S) ADDITIONAL INFORMATION <u>None</u> PAGE(S)		8. Manifest Number (Use this number on all continuation pages) DS-2014-065		
		USER PERMIT NUMBER T-KY003-L14	SHIPMENT # N/A	9. CONSIGNEE-NAME AND FACILITY ADDRESS Diversified Scientific Services, Inc. 657 Gallaher Road Kingston, TN 37764		Contact Gloria Bates Telephone Number (Include area code) 865-376-0084x133			
1. EMERGENCY TELEPHONE NUMB (INCLUDE AREA CODE) 800-424-9300		CONTACT Janet Baker		TELEPHONE # 865-250-4593		DATE 3-24-14		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 10CFR parts 20 and 31, or equivalent state regulations.	
ORGANIZATION Chemtrec		WSDS #: CHEN01RAD		6. CARRIER NAME AND ADDRESS SJ Transportation Co., Inc. PO Box 169 Woodstown, NJ 08098		EPA ID # NJD071629976		SHIPPING DATE 3/19/2014	
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 3		CONTACT Kevin Elder		TELEPHONE # 856-769-2741		DATE 3/14/14	
4. DOES EPA REGULATE WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		EPA MANIFEST NUMBER 005054176FLE		SIGNATURE <i>Joseph G. Adams</i>		AUTHORIZED SIGNATURE <i>Joseph G. Adams</i>		TITLE Tech	
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)		12. DOT LABEL "RADIOACTIVE"	13. TRANSPORT INDEX	14. PHYSICAL AND CHEMICAL FORM	15. INDIVIDUAL RADIONUCLIDES	16. TOTAL PACKAGE ACTIVITY IN MBq	17. LSA/SCO CLASS	18. TOTAL WEIGHT OR VOLUME m³	19. ID NUMBER OF PACKAGE
RQ, UN1993, Waste Flammable liquids, n.o.s., 3, PG II (Contains PCBs, floranthene) One drum with PCB waste for disposal		N/A	N/A	Liquid/PCB	C-14; H-3	1.40E+01	N/A	0.038 0.019	DS-LP-E-14-106
UN1993, Waste Flammable liquids, n.o.s., 3 (7), PG II (Contains floranthene, toluene) Limited quantity radioactive material One drum with flammable liquid waste for disposal		N/A	N/A	Liquid/Solvent	C-14; H-3	1.30E+02	N/A	0.414 0.038	DS-LP-E-14-107
UN1992, Waste Flammable liquids, toxic, n.o.s., 3 (6.1), PG II (Contains lindane, methanol) One drum with lab waste for disposal		N/A	N/A	Liquid/Solvent Solid/Oxide	C-14; Th-232	1.63E+00	N/A	0.242 0.114	DS-LP-E-14-108

11a) ERG # 128

11b) ERG # 128

11c) ERG # 131

Generator Certification Statement:
 The constituents of the waste manifested herein are known to the generator. There are no EPA RCRA, pathogenic or other hazards present other than those specifically listed on the Form 541.

DANIEL D. ADAMS *[Signature]* 03/19/14
 Print name Signature Date

CONSIGNEE ORIGINAL (MUST ACCOMPANY WASTE IN TRANSIT)

NRC FORM 541		US NUCLEAR REGULATORY COMMISSION		1. MANIFEST TOTALS							2. MANIFEST NUMBER						
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST CONTAINER AND WASTE DESCRIPTION				NUMBER OF PACKAGES	NET WASTE VOL. m3	NET WASTE WGHT kg	SPECIAL NUCLEAR MATERIAL (grams)				DS-2014-065						
				3	0.364 0.171	34	U-233	U-235	Pu	TOTAL							
							NP	NP	NP	NP							
							ACTIVITY (MBq/mCi)					SOURCE (kg)					
ALL NUCLIDES		TRITIUM	C-14	Tc-99	I-129	1.03E-05	SHIPPER ID NUMBER N/A										
1.46E+02 MBq		8.27E+01	6.29E+01	NP	NP												
3.93E+00 mCi		2.23E+00	1.70E+00														
DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL X_uSv/hr mSv/hr	10. SURFACE CONTAMINATION MBq/100 cm2		11. WASTE DESCRIPTOR (See Note 2)		12. Approximate WASTE VOLUME/ IN CONTAINER (m3)		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL DESCRIPTION CHEMICAL FORM / CHELATING AGENT		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		16. WASTE CLASS AS-A STABLE AU-A UNSTABLE B-CLASS B C-CLASS C
					ALPHA	BETA- GAMMA											
DS-LP-E-14-106 0323	4	0.038 0.019	5	<5.00	<3.67E-6	<3.67E-5	28, 59 PCB liquids	0.038 0.019	89 Absorbent pads	PCB/NP	NP	C-14 H-3	3.85E-01 1.36E+01	1.04E-02 3.69E-01	NA		
DS-LP-E-14-107 0323	4	0.114 0.033	9	<5.00	<3.67E-6	<3.67E-5	28, 59 PCB liquids	0.114 0.033	89 Absorbent pads	Solvent/NP	NP	C-14 H-3	6.09E+01 6.90E+01	1.65E+00 1.87E+00	NA		
DS-LP-E-14-108 0323	4	0.212 0.114	20	<5.00	<3.67E-6	<3.67E-5	28, 34, 35	0.212 0.114	89 Absorbent pads	Solvent/NP Oxide/NP	NP	C-14 Th-232 [1.03E-05 kg]	1.63E+00 4.18E-05	4.40E-02 1.13E-06	NA		

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

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

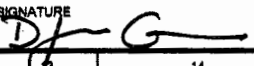
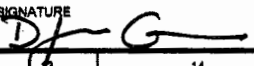

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

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

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

Sorption	66. Florco	73. Diaper HPS00	89. Other, Describe in Item 13, or additional page	90. Cement	100. None Required
60. Speedi Dri	67. Florco X	74. Petrocast		91. Concrete (Encapsulation)	
61. Caletom	68. Solid-A-Sorb	75. Petrocast II		92. Bitumen	
62. Floor Dry/ Superfine	69. Chemall 30	76. Aquasol		93. Vinyl Chloride	
63. Hi Dri	70. Chemall 50	77. Aquasol II		94. Vinyl Ester Styrene	
64. Safe-T-Sorb	71. Chemall 3030			99. Other, Describe in Item 13, or Additional Page	
65. Safe-N-Dri	72. Diaper HP200				

NRC FORM 542 (5-1993)		U.S. NUCLEAR REGULATORY COMMISSION		1. WASTE COLLECTOR/PROCESSOR				SHIPPER USE ONLY		2. MANIFEST NUMBER	
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST MANIFEST INDEX AND REGIONAL COMPACT TABULATION List all original "PROCESSED WASTE" before "COLLECTED WASTE".				NAME Chase Environmental Group, Inc.		SHIPPING DATE 3/19/2014				DS-2014-065	
				IDENTIFICATION NUMBER T-KY003-L14						3. PAGE_1_OF_1_PAGE(S)	
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE A. PROCESSED B. COLLECTED	10. ORIGINATING COMPACT OR STATE	11. AS PROCESSED/COLLECTED TOTAL				
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)	
0323	US Environmental Protection Agency Atlantic Ecology Division 401-782-3009	27 Tarzwell Drive Narragansett, RI 02882	0.364 0.171	NA	C	RI	1.03E-05	NP	1.46E+02	0.364 0.171	
TOTALS OF ALL PAGES (NRC FORMS 542 AND 542A)							0.000	0.000	1.46E+02	0.364	

NRC FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER			5. SHIPPER- NAME AND FACILITY Chase Environmental Group, Inc. 11450 Watterson Court Louisville, KY 40299		SHIPPER ID # N/A		7. NRC FORM 540 AND 540A PAGE 1 <u>1</u> PAGE(S) NRC FORM 541 AND 541A OF <u>1</u> PAGE(S) NRC FORM 542 AND 542A <u>1</u> PAGE(S) ADDITIONAL INFORMATION <u>None</u> PAGE(S)		8. Manifest Number (Use this number on all continuation pages) TO-2010-253		
					<input checked="" type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR						
					GENERATOR TYPE (SPECIFY) TELEPHONE # 885-481-8801						
1. EMERGENCY TELEPHONE NUMBE (INCLUDE AREA CODE) 800-424-9300			USER PERMIT NUMBER T-KY003-L10		SHIPMENT # N/A		9. CONSIGNEE-NAME AND FACILITY ADDRESS TOXCO, Inc. 109 Flint Road Oak Ridge, TN 37830		Contact Rick Low		
ORGANIZATION Chemtrec			CONTACT Janet Baker		TELEPHONE # 885-481-8801				Telephone Number (include area code) (865) 482-5532		
WSDS #: CHEN01RAD			6. CARRIER NAME AND ADDRESS R & R Trucking PO Box 545 Duenweg, MO 64841		EPA ID # MOR000501973		SIGNATURE-Authorized consignee acknowledging waste receipt 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 10CFR parts 20 and 61, or equivalent state regulations.		Date		
3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 2					SHIPPING DATE 10/22/2010				DATE		
4. DOES EPA REGULATE THIS WASTE REQUIRING A MANIFEST? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			EPA MANIFEST NUMBER NA		CONTACT Don Ritchie		TELEPHONE # 417-623-6885		SIGNATURE 		
ACCOMPANY THIS SHIPMENT?			SIGNATURE 		DATE 10-22-10		AUTHORIZED SIGNATURE 		TITLE Technician		
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		
None DOT regulated material One box of LLRW for EnergySolutions			NA		NA		Solid Oxide		C-14		
None DOT regulated material One drum of LLRW for EnergySolutions			NA		NA		Solid Oxide		C-14; H-3		
						Generator Certification Statement: The constituents of the waste manifested herein are known to the generator. There are no EPA RCRA, pathogenic or other hazards present other than those specifically listed on the Form 541.					
						WILLIAM OVERMAN MOORE Print name					

CONSIGNEE ORIGINAL (MUST ACCOMPANY WASTE IN TRANSIT)

NRC FORM 541		US NUCLEAR REGULATORY COMMISSION		1. MANIFEST TOTALS							2. MANIFEST NUMBER							
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				2	0.414	150	U-233	U-235	Pu	TOTAL								
							NP	NP	NP	NP								
							ACTIVITY (MBq)				SOURCE (kg)							
							ALL NUCLIDES	TRITIUM	C-14	Tc-99		I-129						
3.63E-01 MBq	1.11E-04	3.63E-01	NP	NP	NP	NP												
9.81E-03 mCi										4. SHIPPER NAME Chase Env. Group								
											SHIPPER ID NUMBER N/A							
DISPOSAL CONTAINER DESCRIPTION							WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER											
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m3)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL X_uSv/hr mSv/hr	10. SURFACE CONTAMINATION MBq/100 cm2 ALPHA BETA- GAMMA		11. WASTE DESCRIPTOR (See Note 2)			12. Approximate WASTE VOLUME(S) IN CONTAINER (m3)		13. SORBENT SOLIDIFICATION STABILIZATION MEDIA (See Note 3)		14. CHEMICAL DESCRIPTION CHEMICAL FORM / CHELATING AGENT		15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT Nuclide MBq mCi		16. WASTE CLASS AS-A STABLE AU-A UNSTABLE B-CLASS B C-CLASS C
TO-CT-E-10-577/ 0323	1	0.202	127.5	<5.0	<3.67E-6	<3.67E-5	40	0.202	100	Solid/NP	NP	C-14	3.63E-01	9.80E-03	NA			
													Package Total	3.63E-01	9.80E-03			
TO-CT-E-10-578/ 0323	4	0.212	22.5	<5.0	<3.67E-6	<3.67E-5	40	0.212	100	Solid/NP	NP	C-14 H-3	2.00E-04 1.11E-04	5.40E-06 3.00E-06	NA			
													Package Total	3.11E-04	8.40E-06			
Shipment Totals:		0.414												3.63E-01	9.81E-03			

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

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

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

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

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

Sorption		Solidification	
60. Speedi Dri	66. Florco	73. Diapert HP500	89. Other. Describe in Item 13, or Additional Page
61. Celatom	67. Florco X	74. Petroset	
62. Floor Dry/ Superfine	68. Solid-A-Sorb	75. Petroset II	
63. Hi Dri	69. Chemal 30	76. Aquesat	
64. Safe-T-Sorb	70. Chemal 50	77. Aquesat II	
65. Safe-N-Dri	71. Chemal 3030		
	72. Diapert HP200		

NRC FORM 542 (5-1998) UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST MANIFEST INDEX AND REGIONAL COMPACT TABULATION List all original "PROCESSED WASTE" before "COLLECTED WASTE".			U.S. NUCLEAR REGULATORY COMMISSION 1. WASTE COLLECTOR/PROCESSOR NAME Chase Environmental Group, Inc. IDENTIFICATION NUMBER T-KY003-L10 SHIPPING DATE 10/22/2010				2. MANIFEST NUMBER TO-2010-253 3. PAGE_1_OF_1_PAGE(S)			
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. MANIFEST NUMBER UNDER WHICH WASTE (OR MATERIAL) RECEIVED AND DATE OF RECEIPT	9. WASTE CODE UNPROCESSED COLLECTED	10. ORIGINATING COMPACT OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)							
0323	U.S. Environmental Protection Agency 401-782-3000	27 Tarzwell Dr. Narragansett, RI 02882	0.414	NA	C	RI	NP	NP	3.63E-01	0.414
TOTALS OF ALL PAGES (NRC FORMS 542 AND 542A)							0.00E+00	0.000	3.63E-01	0.414

Attachment C

[illegible]

CONSIGNEE ORIGINAL (MUST ACCOMPANY WASTE IN TRANSIT)

NRC FORM 542 (5-1996) UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST U.S. NUCLEAR REGULATORY COMMISSION MANIFEST INDEX AND REGIONAL COMPACT TABULATION List all original "PROCESSED WASTE" before "COLLECTED WASTE".			1. WASTE COLLECTOR/PROCESSOR NAME Chase Environmental Group, Inc. IDENTIFICATION NUMBER T-KY003-L18 SHIPPING DATE 3/28/2018				2. MANIFEST NUMBER AL-2018-105 PAGE_1_OF_1_PAGE(S)			
4. GENERATOR IDENTIFICATION NUMBER	5. GENERATOR NAME PERMIT NUMBER AND TELEPHONE NUMBER	6. GENERATOR FACILITY ADDRESS	7. PREPROCESSED WASTE (OR MATERIAL) VOLUME (m3)	8. WASTE NUMBER UNDER WHICH WASTE FOR MATERIAL RECEIVED AND DATE OF RECEIPT	9. WASTE CODE	10. ORIGINATING COMPACT OR STATE	11. AS PROCESSED/COLLECTED TOTAL			
							A. SOURCE MATERIAL (kg)	B. SNM (g)	C. ACTIVITY (MBq)	D. VOLUME (m3)
0323	US EPA - Atlantic Ecology Division 401-782-3009	27 Tarzwell Dr. Narragansett, RI 02882	0.019	NA	C	RI	0.00E+00	NP	2.00E-01	0.019
TOTALS OF ALL PAGES (NRC FORMS 542 AND 542A)							0.00E+00	0.00E+00	2.00E-01	1.90E-02



GENERATOR AUTHORIZATION

DATE: 3/28/18

NAME OF ORIGINAL GENERATOR: US EPA Atlantic Ecology Division
Authorizes

NAME OF BROKER/PROCESSOR: Alaron Nuclear Services

to be our Broker and/or Processor for disposal of our radioactive material and/or sealed sources into the State of Texas Compact Disposal Facility in Andrews, Texas, operated by Waste Control Specialists, LLC. By signing this Generator Authorization, the Generator is also verifying that there is no waste of international origin contained in this shipment.

NAME OF AUTHORIZED
ORIGINAL GENERATOR

REPRESENTATIVE: Adam Kopacsi

TITLE: Operations & Maintenance Project Manager

MAILING ADDRESS: 27 Tarzwell Dr.

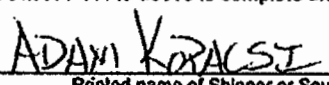
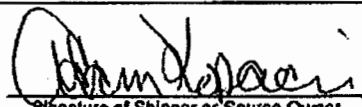
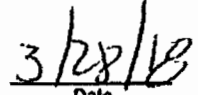
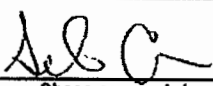
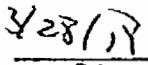
Narragansett, RI 02882

SIGNATURE: _____

A handwritten signature in black ink, appearing to read 'Adam Kopacsi', written over a horizontal line.

Request For Shipment of Sealed Sources to Alaron

WI-VE-1109-051.1

Source Details	Source 1	Source 2	Source 3	Source 4
1. Radionuclide	Ba133			
2. Total activity Specify Units (TBq or Ci) to right	1.880E-05 Ci			
3. Reference date for activity (date manufactured) mm/dd/yyyy	5/1/99			
4. Decay corrected activity on shipment date	5.400E-06 Ci			
5. Source manufacturer (if known)				
6. Source Serial No. / Model No. / Device License No.				
7. Physical Dimensions of Source Specify Units (cm or in) to right	BB size			
8. Source mounted in equipment? If yes, attach drawings / photograph or manufacturer & model no.	No			
9. Date of most recent leak test (attach copy of results) mm/dd/yyyy				
10. Source damaged, discolored, leaking, or contaminated? If yes, attach detail	No			
11. Does source have special form approval? If yes, supply copy of certificate	No			
12. Shipper name & address Chase Environmental Group 200 Sam Rayburn Lenoir City, TN 37771	13. Shipper contact person Seb Cannata Telephone 880-505-8109	14. Delivering carrier SJ Transportation Co., Inc.	15. Shipment Date mm/dd/yyyy 03/28/2018	16. Estimated delivery date mm/dd/yyyy
17. Source owner company name and address (at source location) US EPA Atlantic Ecology Div 26 Trarzwel Dr Narragansett, RI 02882	18. Contact person (at source location) Adam Kopacsi Telephone 401-782-3127 Comments	19. Number of packages 1 Total weight lbs		
20. I attest that the above is complete and accurate				
 Printed name of Shipper or Source Owner		 Signature of Shipper or Source Owner		 Date
 Chase approval signature		 Date	Alaron approval signature _____ Date _____	

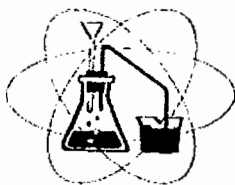
Attachment D

Sealed Source Inventory – Electron Capture Detector (ECD) Gas Chromatographs
USEPA - AED, 27 Tarzwell Drive, Narragansett RI 02882-1154
Rob Burgess, Radiation Safety Officer

Name	Model	Type	Serial Number	Source No.	Manufactured	Installed	Removed	Items Currently Onsite
Louise	HP 5890-II	ECD	3336A53947	F7898	5/1994	New	Returned to Agilent	
Lois	HP5890-II	ECD	3336A53948	F7899	5/1994	New	Shipped to URI 11/18/01	
Ginger	HP 5890	FID/ECD	2643A9771	L6475	11/89	New	Returned to Agilent	
Harry	HP 5890	NPD/ECD	2443A03616	M2256	10/89	New	Shipped to URI 3/20/2007	
Judith	HP 5890	ECD/FID	2750A16387	L5256	10/89	New	Returned to Agilent	
Pepper	HP6890	ECD/ECD	US00031053	U1651	10/99	11/5/99	-----	Onsite/Intact
				U1658	10/99	11/5/99	-----	Onsite/Intact
Phred	HP5890	ECD/ECD	2643A9770	K3439	10/96	10/15/96	Returned to Agilent	
				E3344	12/90	10/25/96	Returned to Agilent	
Duke	Agilent 6890N	ECD/FID	US54615583	U10025	3/06	1/07	8/6/2008- Returned to Vendor; Received by vendor 8/11/08	
Duke	Agilent 6890N	ECD/FID	US54615583	U13971	6/08	7/2008	9/30/08- returned to vendor; received by vendor 10/2/08. Disposed of 11/11/08	
Duke	Agilent 6890N	ECD/FID	US54615583	U14338	9/2008	10/28/2008	-----	Onsite/Intact

INVENTORIED BY: *Rob Burgess*

INVENTORIED ON: *June 1 2018*



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: beglul@ti.gino@epa.gov	
Contact Person: Gino Beglulitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Cantwell	Source Serial #: U14338 - Duke Source Inlet
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μ Ci of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μ Ci)
8.77	25.1	35.19	<24.92	<2.56E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.56E-05
--	---

Signature:

RSA ID# 38633



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: begluttigino@epa.gov	
Contact Person: Gino Begluttigino	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Cantwell	Source Serial #: U14338 - Duke Exit
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μ Ci of total removable radioactivity.

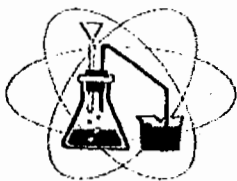
SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μ Ci)
0.8	25.1	34.93	<2.29	<2.58E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.58E-05
--	--

Signature: _____

RSA ID# 38634



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: begluittl.gino@epa.gov	
Contact Person: Gino Begluitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Cantwell	Source Serial #: U14338 - Duke Source Body
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of $< .005 \mu\text{Ci}$ of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μCi)
4.34	25.1	35.31	<12.29	<2.55E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.55E-05
--	--

Signature:

RSA ID# 38635



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: begluttit.gino@epa.gov	
Contact Person: Gino Begluttiti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1658 - Detector Housing
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μCi of total removable radioactivity.

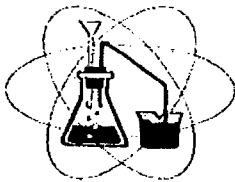
SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μCi)
14.98	25.1	34.65	<43.23	<2.605E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.60E-05
--	--

Signature: _____

RSA ID# 38636



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: begluitti.gino@epa.gov	
Contact Person: Gino Begluitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1651 - Detector Exit
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: NI-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μCi of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μCi)
16.75	25.1	35.51	<47.17	<2.545E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.54E-05
--	--

Signature: _____

RSA ID# 38637



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: bcgluitti.gino@epa.gov	
Contact Person: Gino Begluitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1658 - Detector Exit
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: NI-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μ Ci of total removable radioactivity.

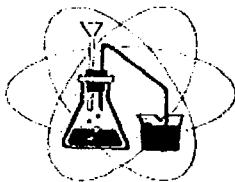
SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μ Ci)
14.09	25.1	35.42	<39.78	<2.545E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.54E-05
--	--

Signature:

RSA ID# 38638



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: begluitti.gino@epa.gov	
Contact Person: Gino Begluitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1651 - Detector Housing
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: NI-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μ Ci of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μ Ci)
20.3	25.1	34.17	<59.41	<2.645E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.64E-05
--	--

Signature:

RSA ID# 38639



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: beglul@tll.gln@epa.gov	
Contact Person: Gino Beglul	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1651 - Detector Entrance
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of < .005 μ Ci of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μ Ci)
14.09	25.1	34.78	<40.51	<2.595E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.59E-05
--	--

Signature: _____

RSA ID# 38640



RSA Laboratories
A Division of Radiation Safety Associates, Inc.

W-100 Leak Test Kit Sample Documentation and Report of Results

Company Name: USEPA-ORD-AED	Radioactive Materials License #: 31-11957-01	
Company Address: 27 Tarzwell Drive Narragansett, RI 02882	e-mail address: beglulitti.gino@epa.gov	
Contact Person: Gino Beglulitti	Phone: (401) 782-3009	Fax:

For the source being leak tested:

Source Manufacturer: Agilent	Source Model #: G2397A
Person performing wipe test: Saro Jayarawan	Source Serial #: U1658 - Detector Entrance
How often must this Leak Test be performed? 6 months	Date Leak Test Performed: 6/13/2018
Source Isotope: Ni-63	Source Quantity: 15 mCi

Analysis performed by:

RSA Laboratories
19 Pendleton Drive, P.O. Box 61
Hebron, CT 06248
NRC License #06-30007-01

If you have any questions about these results, call RSA Laboratories at (860) 228-0721.

SEALED SOURCE LEAK TEST CERTIFICATION

PASS

This is to certify that a leak test performed on the above-named source indicates the presence of $< .005 \mu\text{Ci}$ of total removable radioactivity.

SAMPLE ANALYSIS RESULTS

Total cpm	Background cpm	Efficiency (%)	dpm	Total Activity (μCi)
5.23	25.1	34.94	<14.97	<2.58E-05

Person Performing the Analysis: Kurt D. Newton	Date of Analysis: 6/14/2018 MDA: 2.58E-05
--	--

Signature: _____

RSA ID# 38641