

Charlie A. Dooley
County Executive



Dolores J. Gunn, MD
Director

June 27, 2012

Bryan Parker
Materials Licensing Branch
U. S. Nuclear Regulatory Commission, Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352

RE: Revision to Application to Amend License No. 24-11263-01

Dear Mr. Parker:

St. Louis County Department of Health (SLCDH) wishes to revise Provisions 6, 7, and 8 of our application dated May 1, 2012.

Change in Authorized Inventory

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form¹	8. Maximum amount that licensee may possess at any one time under this license
A. Americium-241	Any	0.5 microcuries
B. Radium-226	Any	0.5 microcuries
C. Radium-228	Any	0.5 microcuries

¹ Purchased as standard reference materials used for instrument calibration and measurement quality control

Documentation on the disposal of License Amendment 20, Item D: Radium-226, sealed source (Nucleus Inc. Model Ra-226-SC; NMC Gold Standard Series Ra 226 disc) is included in Appendix 1. The final disposal records are still pending.

ENVIRONMENTAL HEALTH LABORATORIES

111 South Meramec Avenue, • Saint Louis, MO 63105 • PH 314/615-8324 • FAX 314/615-1648
TTY 314/615-8428 or 800/735-2966 • web <http://www.stlouisco.com>
An Equal Opportunity Employer - Services Provided on a Non-Discriminatory Basis

Mr. Bryan Parker
Page 2
June 27, 2012

If you have any questions, or if we can provide you with additional information, please do not hesitate to contact me at (314) 615-6830. Thank you for your timely attention to our NRC license amendment request

Sincerely,



Digitally signed by Robert A. Nicolotti, PhD
DN: cn=Robert A. Nicolotti, PhD, o=Saint Louis County
Department of Health, ou=Environmental Health
Laboratories, email=micolotti@stlouisco.com, c=US
Date: 2012.06.27 16:43:02 -05'00'

Robert A. Nicolotti, Ph.D.
Radiation Safety Officer

cc: Jennifer Western, Radiology Supervisor

Attachments: 2

Appendix 1: Radionuclide Disposal Inventory and Manifest

APPROVED BY OMB: NO. 3160-0164
EXPIRES: 07/31/2010

Estimated burden per response to comply with this information collection request: 46 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-8 P&S), U.S. Nuclear Regulatory Commission, Washington, DC 20545-0004, or by internet e-mail to infocoll@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, HEOB-16205, (3160-0164), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

NRC FORM 540 (7-2007)		U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER			6. SHIPPER - NAME AND FACILITY Saint Louis County Department of Health 111 South Meramec, 9th Floor Clayton, MO 63105		SHIPPER I.D. NUMBER HEM-2014001.02		7. NRC FORM 540 AND 540A NRC FORM 541 AND 541A NRC FORM 542 AND 542A ADDITIONAL INFORMATION		8. MANIFEST NUMBER (Use this number on all continuation pages) 2011001.02						
1. EMERGENCY TELEPHONE NUMBER 1-800-424-9300		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		5. CARRIER - Name and Address R&R Trucking PO Box 648 Dumfries, MO 64841		SHIPMENT NUMBER Tocco # A11188		9. CONSIGNEE - Name and Facility Address Tocco MMC 108 Flint Road Oak Ridge, TN 37830		CONTACT Rick Low TELEPHONE NUMBER (include Area Code) 888-462-6832							
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number		CONTACT Sarah Haged		TELEPHONE NUMBER (include Area Code) 800.829.9986 Ext 2188		EPA I.D. NUMBER		SIGNATURE - Authorized consignee acknowledging waste receipt DATE							
ORGANIZATION CHEMTREC		EPA MANIFEST NUMBER		CONTACT Keith Reeves		DATE 8/3/11		SHIPPING DATE 08/03/2011		DATE 8/3/11							
10. CERTIFICATION This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the applicable requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.		AUTHORIZED SIGNATURE Rick Low		TITLE Shipper		DATE 8/3/11											
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 (mSv)		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, UN 2910		NA		NA		Solid/liq Oxides		Am-241 Sr-90 Th-230		3.3448E-01		NA		60 LBS; 2.7 FT3		SLC-001	
Radioactive material, excepted package-limited quantity of material, 7, UN 2910		NA		NA		Solid Oxides		Am-241 Sr-133 C-14 Co-60 Cs-137 Pb-210 Ra-226 Th-230 U-238		4.4286E-02		NA		60 LBS; 2.7 FT3		SLC-002	
FOR CONSIGNEE USE ONLY																	

NRC FORM 540 (7-2007)

APPROVED BY DMB: NO. 3160-0100
EXPIRES: 07/31/2010

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 Privacy Service Branch (T-6 P&S), U.S. Nuclear Regulatory Commission, Washington, DC 20548-0001, or by Internet e-mail to infocoll@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NRC-10202, (3160-0100), 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.

U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										1. MANIFEST TOTALS				2. MANIFEST NUMBER		
CONTAINER AND WASTE DESCRIPTION										SPECIAL NUCLEAR MATERIAL (grams)				2011001.02		
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste										U-233	U-235	Pu	Total	3. PAGE 1 OF 2 PAGE(S)		
										2	0.1630	64.4310	NP	NP	NP	NP
										ACTIVITY (MBq)				4. SHIPPER NAME		
										ALL NUCLIDES	TRITIUM	C-14	To-99	I-129	Saint Louis County Department of Health	
										3.7877E-01	NP	3.7000E-04	NP	NP	SHIPPER I.D. NUMBER	
														1.0000E-02	HEM-2011001.02	
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER					16. WASTE CLASSIFICATION AS-Class A State AU-Class A Unstable B-Class B C-Class C	
5. CONTAINER IDENTIFICATION NUMBER/GENERATOR ID NUMBER(S)	6. CONTAINER DESCRIPTION (See Note 1)	7. VOLUME (m ³)	8. WASTE AND CONTAINER WEIGHT (kg)	9. SURFACE RADIATION LEVEL (µBq/100 cm ²) (mBq/100 cm ²)	10. SURFACE CONTAMINATION (MBq/100 cm ²) ALPHA BETA-GAMMA		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER (m ³)	13. SOLIDIFICATION, STABILIZATION, MEDIA (See Note 3)	14. CHEMICAL FORM/CHELATING AGENT	15. WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT				
8LC-001/2011001.02	4	0.0768	27.2166	0.0000E+00	<3.6740E-06	<3.6740E-06										AU
2011001.02							38,59-SOL ID	0.0568	NA	Oxides/NP	NP	8r-90 Th-230	4.4400E-03 4.4400E-03 [1.0000E-02 kg]			
2011001.02							25	0.0168	NA	NONE/NP	NP	Am-241	3.2680E-01			
												Total	3.3448E-01 MBq			
8LC-002/2011001.02	4	0.0768	27.2166	0.0000E+00	<3.6740E-06	<3.6740E-06	38,59-SOL ID	0.0768	100 100	Oxides/None	NP	Am-241 Ba-133 C-14 Co-60 Cs-137 Pb-210 Ra-226 Th-230 U-238	1.8500E-04 4.8100E-04 3.7000E-04 1.0730E-04 3.9590E-02 3.7000E-04 7.4000E-04 5.9200E-04 1.8500E-03			AU

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

1. Wooden Box or Crate	9. Demineralizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk Unpackaged Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	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/Sludges/Concentrates
21. Incinerator Ash	30. Cation Ion-exchange Media	39. Compatible Trash
22. Soil	31. Anion Ion-exchange Media	40. Noncompatible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Animal Carcass
24. Oil	33. Contaminated Equipment	42. Biological Material (except animal carcasses)
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Activated Material
26. Filter Media	35. Glassware or Labware	44. Sealed Source/Device
27. Mechanical Filter	36. Sealed Source/Device	45. 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. Speed Ori	64. Safe T Sorb	69. Chemfil 30
61. Celeton	65. Safe N Dri	70. Chemfil 50
62. Floor Dry/ Superfine	66. Floroc	71. Chemfil 3030
63. Hi Dri	67. Floroc X	72. Diaperi HP200
	68. Solid A Sorb	73. Diaperi HP600
		74. Petroset
		75. Petroset II
		76. Aquaset
		77. Aquaset II
		78. Other. Describe in Item 13, or additional page
		79. Cement
		80. Concrete (encapsulation)
		81. Bitumen
		82. Vinyl Chloride
		83. Other. Describe in Item 13, or additional page
		84. Vinyl Ester Styrene
		85. Other. Describe in Item 13, or additional page
		86. None Required

Inventory of Disposed Radionuclide Sources

NRC License #: 24-11263-01

Saint Louis County Department of Health
Environmental Health Laboratories

111 South Meramec

Clayton, MO 63105

RSO: Dr. Robert Nicolotti

314-615-6830 (Office)

Calibration Check Sources

	Reference Date	microCi	Serial #	Manufacturer	Description
Ra226	12/7/1990	0.0144	408	The Nucleus	Charcoal Radon Standard
Ra226	11/1/1979	0.0075		NMC	Gold Standard Series
Ra226	3/10/1977	0.0075		NMC	Gold Standard Series
C-14	10/22/1973	0.0100		Amersham/Searle	
Sr-90	8/1/1993	0.0508	X-795	Isotope Products Laboratories	Planchet
Sr-90	1/1/1995	0.0485	CC-176	Isotope Products Laboratories	Planchet
Sr-90	1/1/1995	0.0565	CC-175	Isotope Products Laboratories	Planchet
Th-230	10/1/1999	0.0151	QQ-767	Isotope Products Laboratories	Planchet
Th-230	10/1/1999	0.0131	QQ-768	Isotope Products Laboratories	Planchet
Ba-133	12/15/1975	0.1140	405	American Nuclear Products	Gamma Disc
Cs-137	12/15/1975	0.1470	406	American Nuclear Products	Gamma Disc
Co-60	12/1/1975	0.0850	407	American Nuclear Products	Gamma Disc
Ba-133			GP-1A	Picker Nuclear	Gamma Disc
Cs-137			GP-3A	Picker Nuclear	Gamma Disc
Co-60			GP-5A	Picker Nuclear	Gamma Disc
Sr-90/Y-90	12/1/1975	0.0850	404	American Nuclear Products	Planchet
U-238	11/1/1954			Tracerlab	R-6 Uranium X Uncalibrated beta source.
Ur 238/235/234	5/11/1959		412	Tracerlab	R-16 Uncalibrated Uranium Alpha Source. Approximate disintegration rate 4150 (no units provided).
Uranium Oxide					Alpha Source # 434 Uncalibrated (3 inch metal disc)
Uranium Oxide					Beta Source #435 Uncalibrated (3 inch metal disc)
Pb-210	11/21/1984	0.0099	8487		
Am-241		0.0050	NES-300		
Cs-137		1.0000			Clear Rod

Americium-241 Liquid Source - pH 1.5

Standard	Reference Date	Activity (pCi/ml)	vol. (mls)	microCi
Am241				
74-1	Sep-73	1,087	50	0.054
77-2A	12/1/1977	8,874	990	8.79
77-2B	12/1/1977	8.9	750	0.0067
Total			1,790	8.85

30 gallon drum of planchets

Stainless steel planchets spiked with less than 100 picoCuries each of either Am-241, Th-230, Natural U, or Sr90-Y90.