

National Aeronautics and  
Space Administration

John H. Glenn Research Center  
Lewis Field  
Cleveland, OH 44135-3191



March 13, 2019

Reply to Attn of: QSH

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

Subject: Amendment Request for Removal of Licensed Materials from Authorized Possession

Ref: License #34-00507-16, Docket #030-05626

The NASA John H. Glenn Research Center (GRC) has received final documentation regarding an August 2016 waste shipment of various radioactive materials/sources. A few items within the subject shipment were considered specifically-licensed and are identified on our current (Amendment 59) license as:

C.	Am-241	IPL, AFR 241	100 microcuries
F.	Cs-137	IPL, LB-137; NBS, 4200-128; NBS, 4207-162	30 microcuries total
G.	Pm-145	NEN, X-2	1 microcurie

The NASA requests that the above-listed items be removed from the Center's list of byproduct materials authorized for possession. Enclosed find copies of the applicable Certificate of Disposal as well as the Nuclear Regulatory Commission Forms 540 and 541.

Should additional information be required, please contact Mr. Christopher J. Blasio, Radiation Safety Officer, at (216) 433-6520.

*Steven L. Herron*  
Steven L. Herron  
Chief, Safety and Health Division

3 Enclosures:

1. Certificate of Disposal
2. Uniform Low-Level Radioactive Waste Manifest NRC Form 540
3. Uniform Low-Level Radioactive Waste Manifest NRC Form 541

RECEIVED MAR 19 2019

bcc:

Q/A. D. Liang

QSH/A. D. Windau *AW*

QSH/C. J. Blasio

QS/Official File

QSH/CJBlasio:psu:3/12/2019:NRC Letter\_Pm145 Am241 Cs137 Disposal\_Mar2019

QSH *AW* *QJDL*



February 19, 2019

**ALARON NUCLEAR SERVICES**

2138 State Route 18  
Wampum, PA 16157

**CERTIFICATE OF DISPOSAL**

Alaron Nuclear Services received radioactive material on November 14, 2016 via Radioactive Waste Manifest # 1788-083116PH from:

NASA-John Glenn

The material is described as (1) 5 gallon bucket and (1) B-25 containing sealed sources and DAW. The total activity was 14.505 mCi.

This document certifies that the materials on the above-listed manifest were accepted for disposal at Waste Control Specialists disposal facility located in Andrews Texas.

Michael Otlowski /   
Authorized Alaron Representative

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 Service Branch (T-4 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [infocollection@nrc.gov](mailto:infocollection@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NRCB-16232, (2150-0166), Office of Management and Budget, Washington, DC 20803. 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 (8-2010)		U.S. NUCLEAR REGULATORY COMMISSION UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		5. SHIPPER - NAME AND FACILITY Philotechnics @ NASA John H. Glenn Research Center 21000 Brookpark Road Cleveland, OH 44136		SHIPMENT ID NUMBER 1768-083116PH <input checked="" type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR		7. FORM 540 AND 540A FORM 541 AND 541A FORM 542 AND 542A ADDITIONAL INFORMATION PAGE 1 OF 1 PAGE(S) 2 PAGE(S) 1 PAGE(S) NONE PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 1768-083116PH			
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 800-424-9300				USER PERMIT NUMBER T-TN024-D16		SHIPMENT NUMBER 1768-083116PH		9. CONSIGNEE - Name and Facility Address Philotechnics, Ltd. Operated by Philotechnics, Ltd 201 Renovare Blvd. Oak Ridge, TN 37830				CONTACT Justin Button TELEPHONE NUMBER (Include Area Code) (865) 285-3027	
ORGANIZATION CHEMTREC #17253				CONTACT Christopher Blasio		TELEPHONE NUMBER (Include Area Code) (216) 433-6620		SIGNATURE - Authorized consignee acknowledging waste receipt				DATE	
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 2		6. CARRIER - Name and Address Philotechnics, Ltd 201 Renovare Blvd. Oak Ridge, TN 37830 Truck #: 632 Trailer #: 965 57		EPA I.D. NUMBER TNR000030544		SHIPPING DATE 08/31/2016		10. CERTIFICATION This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and in proper condition for transportation and disposal in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulation.		11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)	
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes", provide Manifest Number		EPA MANIFEST NUMBER N/A		CONTACT Justin Button		TELEPHONE NUMBER (Include Area Code) (865) 466-4812		DATE 8-31-16		AUTHORIZED SIGNATURE Christopher Blasio		TITLE Waste Logistics Mgr	
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 NBq mCi		17. LSA/SCO CLASS	
UN2915, RADIOACTIVE MATERIAL, TYPE A PACKAGE, 7 DAW; DAW-SOURCES 1 - 5 GALLON DRUM EB 8/31/16		Yellow II		NA 0.3 8/31/16		SOLID/OXIDES		AM-241; BI-207; CO-60; FE-55; KR-85; NA-22; PM-146; PU-239; RA-226; TH-232; U-238 C.B. 8/31/16		380.513724122(10.294104708; 5.58.11.047		NA	
UN2912, Radioactive material, low specific activity (LSA-I), 7 DAW; DAW-SOURCES; EQUIPMENT TO PROCESS & DISPOSE OF; METAL; SEALED SOURCES 1 - B-25 BOX		NA		NA		SOLID/OXIDES		AG-146M; CD-108; CO-60; CS-137; NI-63; PO-210; SB-125; SR-90; TC-98; TH-232 C.B. 8/31/16		156.169158000(4.2207880000; C.B. 8/31/16		LSA I	
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 or an Agreement State regulatory agency and with the current revision of the site Material Acceptance Criteria. B) Hazardous Materials. Generator hereby certifies that this material does not contain a hazardous waste as defined in 40 CFR 301.106. 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 site Radioactive Material License. D) INFECTIOUS SUBSTANCE: Generator hereby certifies that this material does not contain an infectious substance as defined in 40 CFR 173.134. Christopher J Blasio Print Name Signature 8-31-2016 Date													

NRC Form 540 (8-2010)

Modified Date: 08/23/2016 14:10

Enclosure 2

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 F32), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to info@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (2150-0106), 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 (8-2010)		U.S. NUCLEAR REGULATORY COMMISSION		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)				1786-083116PH	
CONTAINER AND WASTE DESCRIPTION				2		m <sup>3</sup> 96.88000		kg 3510.78884 7740.00000		U-233		U-235		Pu	
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste				2		m <sup>3</sup> 96.88000		kg 3510.78884 7740.00000		NP		NP		0.0000073802 g (1 pkg.)	
				2		m <sup>3</sup> 96.88000		kg 3510.78884 7740.00000		NP		NP		0.0000073802 g (1 pkg.)	
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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 Service Branch (T-6 FE3), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [infocollect@nrc.gov](mailto:infocollect@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NRCB-16202, (3150-0104), 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										U.S. NUCLEAR REGULATORY COMMISSION		2. MANIFEST NUMBER 1788-083116PH			
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)										3. PAGE 2 OF 2 PAGE(S)					
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 <sup>3</sup> /ft <sup>3</sup>	8. WASTE AND CONTAINER WEIGHT kg/lb	9. SURFACE RADIATION LEVEL mSv/hr/mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm <sup>2</sup> /dpm/100 cm <sup>2</sup>		11. WASTE DESCRIPTION (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m <sup>3</sup> /ft <sup>3</sup>	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 5.1%	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 CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
RADIONUCLIDES															
mBq															
mCi															
16-000852 (16-005)	2	2.71847	3810.15824	= 0.012	< 0.00004008	< 0.00004008	SR(DAW) 40 38 36 33	2.71848	100	SOLID OXIDES / NP	NP	AD-118M / 0.21	0.8033480000	0.0163040000	AU
Origin: OH NASA John H. Glenn Research Center 21000 Brookpark Road Cleveland, OH 44135		96.00000	8400.00000	= 1.2	< 240	< 2400		96.00800				CD-108	0.6253000000	0.0169000000	
												CO-60	137.3628190000	3.7122387000	
												CR-137	0.5175500000	0.0138600000	
												NI-63	0.4831300000	0.0133200000	
												PQ-210	0.0002775000	0.0000075000	
												SR-125	0.6728970000	0.0181810000	
												SR-90	4.3227470000	0.1168310000	
												SR-90	0.6000000000	0.0000000000	
												TH-232	11.5810000000	0.3130000000	
												Sub Total	156.1691580000 (2.6568520737 kg)	4.2207880000	
Package Total													156.1691580000 (2.6568520737 kg)	4.2207880000	
Shipment Total													536.8829801220 (0.0000073802 g) (3.3623113886 kg)	-14.6048427089 9.8018521 EM A 1/9/16	

NRC Form 541A (8-2010) \* - Indicates Cross Contamination

National Aeronautics and  
Space Administration  
John H. Glenn Research Center  
Lewis Field  
C. Blasio 16-4  
21000 Brookpark Road  
Cleveland, OH 44135-3191



U.S. POSTAGE >> PITNEY BOWES  
ZIP 44135 \$ 000.50<sup>0</sup>  
02 4W  
0000354779 MAR 14 2019

US NUCLEAR REGULATORY COMMISSION  
REGION III  
CHIEF MATERIALS LICENSING BRANCH  
2443 WARRENVILLE ROAD SUITE 210  
161E IL 60532 4352

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