

June 7, 2019

Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission

DEWATERING SYSTEM NUCLEAR DENSITY GAUGE SOURCE DISPOSAL – TVA SHAWNEE FOSSIL PLANT –GENERAL LICENSED NUCLEAR GAUGES

On May 21, 2019; (2) nuclear density gauge sources, contained in source holders, located at TVA Shawnee Fossil Plant were sent to Alaron Nuclear Services for processing. The sources were delivered and accepted by Alaron Nuclear Services on May 28, 2019 under Pennsylvania License PA – 0678.

The nuclear density gauge source information is indicated below:

Nuclear Gauge Serial Number	Radioisotope/ Quantity/ Assay Date	Gauge Manufacturer / Model Number	Shutter On/Off Mechanism Status
AC008/16	Cs-137 / 500 mCi / 3-30-2016	Berthold Technologies/ LB 7440-F-CR	Locked by manufacturer
AC007/16	Cs-137 / 500 mCi / 3-30-2016	Berthold Technologies/ LB 7440-F-CR	Locked by manufacturer

The contact information for Alaron Nuclear Services is:

Alaron Nuclear Services
2138 State Route 18
Wampum, PA 16157
Attn: Julian Owoc, RSO
(724) 535-5777

License No. PA – 0678

Respectfully,



W. Lee Cain
Tennessee Valley Authority
1010 Reservation Road
Complex H
Muscle Shoals, AL 35662
(256) 386-2304

NMSS10

**TENNESSEE VALLEY AUTHORITY
 RADIOACTIVE MATERIAL SHIPMENT RECORD**

Consignee License No. PA-0678 License on file and verified? Yes

TO: Alaron Nuclear Services
 2138 State Route 18
 Wampum, PA 16157
 Attention: Jimmy Leese (724) 535-5777 ext. 233
 Alaron Proposal No. 19230

From: Tennessee Valley Authority
 TVA Shawnee Fossil Plant
 7900 Metropolis Lake Road
 West Paducah, KY 42086
 Contact: W. Lee Cain (256) 386-2304

*** 24-HOUR EMERGENCY PHONE NUMBER: 1-800-237-2322 ***

SHIPMENT TOTALS:

No. of Packages	Total Weight or Volume	Total Activity
2	79.8 Kg (176 Lbs)	3.70E+04 MBq (1.00E+03 mCi)

CONTAINER INFORMATION:

Item No.	U.S. Department of Transportation Description	Radionuclide(s)	Total Package Activity MBq	Weight or Volume	Physical and Chemical Form	Type Package	DOT Label	TI	DOT or NRC Package Approval No.
Drum 1 AC008/16	UN3332, Radioactive material, Type A package, special form, 7 (1) Metal Drum Nuclear Density Gauges	Cs-137	1.85E+04	38.6 Kg (88 Lbs)	Solid/ Silicate Material	Type A	YELLOW-II	0.8	NA
Drum 2 AC007/16	UN3332, Radioactive material, Type A package, special form, 7 (1) Metal Drum Nuclear Density Gauges	Cs-137	1.85E+04	38.6 Kg (88 Lbs)	Solid/ Silicate Material	Type A	YELLOW-II	0.8	NA

Remarks: Smearable outside containers:

Beta/Gamma: <16.67 Bq/100 cm² or <1000 dpm/100 cm²; Alpha: < 0.33 Bq/100 cm² or <20 dpm/100 cm²

Dose Rates outside shipping containers:

Drum 1 = 0.2 mSv/hr or 20 mrem/hr

Drum 2 = 0.2 mSv/hr or 20 mrem/hr

"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."

Is this an "Exclusive Use" shipment? No

Shipment prepared by: Will Cain W. Lee Cain (Rad Shipper) 05/21/2019



Eckert & Ziegler

Isotope Products

24937 Avenue Tibbitts
Valencia, California 91355

Tel 661-309-1010

Fax 661-257-8303

NOMINAL SOURCE CERTIFICATE

Customer: Berthold Technologies USA LLC

Purchase Order No.: PCP000785

Model No.: Cs7.P04

Catalog No.: HEG-0305

Capsule Type: P04-A

Active Diameter: 6.0 mm (0.24")

Cover: Stainless Steel

Backing: Stainless Steel

Certificate Date: 2016-05-13

Quantity: 1

SS&DR No.: CA0406S228S

ISO/ANSI Classification: ISO/99/C66646

Special Form No.: CZ/1012/S-96 Rev 2

Nuclide Half Life: 30.17 ± 0.16 years

Recommended Working Life: 15 years

Nuclide	Source No.	Activity	Radiation Output	Reference Date
Cs-137	AC008/16	500 mCi (18.5 GBq)	Not Applicable	2016-03-30

Impurities: None detected.

Leak Test Information is on Reverse Side:

- Remarks:
- This document uses the numerical convention where 1.000 = 1 and 1,000 = 10³.
 - This document uses the date convention YYYY-MM-DD in accordance with ISO 8601.
 - Nuclear data were taken from IAEA-TECDOC-619, 1991.
 - BERTHOLD Part # 26617AE.

Scott Mah

Name

Signature

2016-05-13

Date

Notebook Page: 1851-51

ISO 9001 CERTIFIED

Medical Imaging Laboratory

24937 Avenue Tibbitts Valencia, California 91355

Industrial Gauging Laboratory

1800 North Keystone Street Burbank, California 91504



Eckert & Ziegler

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Valencia, California 91355

Tel 661-309-1010
Fax 661-257-8303

NOMINAL SOURCE CERTIFICATE

Customer: Berthold Technologies USA LLC
Purchase Order No.: PCP000785
Model No.: Cs7.P04
Catalog No.: HEG-0305
Capsule Type: P04-A
Active Diameter: 6.0 mm (0.24")
Cover: Stainless Steel
Backing: Stainless Steel

Certificate Date: 2016-05-13
Quantity: 1
SS&DR No.: CA0406S228S
ISO/ANSI Classification: ISO/99/C66646
Special Form No.: CZ/1012/S-96 Rev 2
Nuclide Half Life: 30.17 ± 0.16 years
Recommended Working Life: 15 years

Nuclide	Source No.	Activity	Radiation Output	Reference Date
Cs-137	AC007/16	500 mCi (18.5 GBq)	Not Applicable	2016-03-30

Impurities: None detected.

Leak Test Information is on Reverse Side:

- Remarks:
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ISO 9001 CERTIFIED

Medical Imaging Laboratory

24937 Avenue Tibbitts Valencia California 91355

Industrial Gauging Laboratory

1800 North Keystone Street Burbank, California 91504

YRC Freight
10990 Rog Ave Overland Park, KS 66211-1213
(817 34-0492670) (RDWY)

Customer Service Center:
1.800.610.6500

PICK UP DATE: 05-22-19
DESTINATION: 213-S
RATE CODE: /02
ITEM/TENDER NO: 480 981
PAGE: 01 OF 02

706-879020-1

ORG 348

YRC TARIFFS LIMIT CARRIER'S LIABILITY. ALL FREIGHT RECEIVED IN GOOD ORDER AND SHRINKWRAP/BANDING INTACT UNLESS NOTED

251873
SHAWNEE FOSSIL PLANT
7900 METROPOLIS LAKE RD
W PADUCAH KY 42086

SHIPPER CODE: 0036
4800

ALARON CORPORATION
JIMMY LEESE
2138 SR 18
WAMPUM PA 16157

CONSIGNEE CODE: CAG4 BOC

RECEIVED

Alaron Nuclear Serv.

RECEIVED BY - PRINTED NAME: FRANK OWEN

DATE: 5-28-19

SIGNED: [Signature]

ASSIGN # 19-0318

Alaron Nuclear Services

L OR GBL NO. A231912714

PHONE 724-535-5777
CLOSED FRIDAYS

NO. HAU	PKG.	HM	DESCRIPTION OF ARTICLES	CODE	WEIGHT (LB.)	RATE	CHARGES
2	DRM	X	UN3332, RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, 7, SHIPMENT DESCRIBED PER DOT (RAM) NMFC=99999805 CL125 PERCENT DISCOUNT (OUTBOUND) SINGLE SHIPMENT PICKUP CHARGE INSPECTION CHARGE	E70	176		

DELIVERY SERVICES PROVIDED NOT LISTED ABOVE - ADDITIONAL FEES MAY APPLY

LIFTGATE SORT/SEGREGATION LIMITED ACCESS
 INSIDE DELIVERY RESIDENTIAL DELIVERY OTHER

CONSIGNEE'S COPY

YRC Freight
10990 Rog Ave Overland Park, KS 66211-1213
(817 34-0492670) (RDWY)

Customer Service Center:
1.800.610.6500

PICK UP DATE: 05-22-19
DESTINATION: 213-S
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SHIPPER CODE: 0036
4800

ALARON CORPORATION
JIMMY LEESE
2138 SR 18
WAMPUM PA 16157

CONSIGNEE CODE: CAG4 BOC

RECEIVED BY - PRINTED NAME: _____ DATE: _____

SIGNED: _____ TIME: _____

L OR GBL NO. A231912714

PHONE 724-535-5777
CLOSED FRIDAYS

NO. HAU	PKG.	HM	DESCRIPTION OF ARTICLES	CODE	WEIGHT (LB.)	RATE	CHARGES
2	TTL	/111	HAZ MATERIAL SERVICE CHARGE GENERAL SURCHARGE (FUEL/FRT) C: 724-535-5777 PAYER FOR SHIPPER: TENNESSEE VALLEY AUTHORITY LANDSTAR GLOBAL LOG 13410 SUTTON PARK DR S	FTL	176		PRD

DELIVERY SERVICES PROVIDED NOT LISTED ABOVE - ADDITIONAL FEES MAY APPLY

LIFTGATE SORT/SEGREGATION LIMITED ACCESS
 INSIDE DELIVERY RESIDENTIAL DELIVERY OTHER

YRC Freight
 10200 Ron Ave Overland Park, KS 66211-1213
 (EIN 34-0402670) (RDWY)

Customer Service Center:
 1.800.610.6500

706-879020-1

PICK UP DATE 15-22-19	DESTINATION 213-3	RATE CODE 702	ITEM/TENDER NO. 480 991	PAGE 03 OF 03
RO. NO. / DEPT. NO. 251373			ADV CA/CL CODE	
SHAWNEE FOSSIL PLANT 7900 METROPOLIS LAKE RD W PADUCAH KY 42086		SHIPPER CODE 0036 4800	BEY CA/CL CODE	
ALARON CORPORATION JIMMY LEESE 2198 SR 18 HAMPSHIRE PA 16157		SERVICE TUE	EXCEP.	
		CONS. CODE		
		0.031		
		CA04 800		

PRO NO



ORG 348
 YRC TARIFFS LIMIT CARRIER'S LIABILITY.
 ALL FREIGHT RECEIVED IN GOOD ORDER AND
 SHRINKWRAP/BANDING INTACT UNLESS NOTED

RECEIVED BY - PRINTED NAME _____ DATE _____
 SIGNED: _____ TIME _____

OR GBL NO. A231913714	PHONE 724-535-5777 CLOSED FRIDAYS	CHARGES
HAZARDOUS MATTER RO 706-879020-1		

NO. H/U	PKG.	HM	DESCRIPTION OF ARTICLES	CODE	WEIGHT (LB.)	RATE	CHARGES
			JACKSONVILLE FL 32224 PO=251373 FOR EMERGENCY CONTACT 800-262-8200	PODP			

DELIVERY SERVICES PROVIDED NOT LISTED ABOVE - ADDITIONAL FEES MAY APPLY

<input type="checkbox"/> LIFTGATE	<input type="checkbox"/> SORT/SEGREGATION	<input type="checkbox"/> LIMITED ACCESS
<input type="checkbox"/> INSIDE DELIVERY	<input type="checkbox"/> RESIDENTIAL DELIVERY	<input type="checkbox"/> OTHER _____



CONSIGNEE'S COPY