PEABODY Midwest Mining, LLC
566 Dickeyville Road
Lynnville, IN 47619

April 28, 2021

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

RE: Materials License Amendment – License # 13-26785-01
Peabody Midwest Mining, LLC – Somerville & Francisco Prep Plant

Dear Mr. Kelly:

Peabody Midwest Mining, LLC ceased operations at the Somerville Mine in 2020. Coal is no longer being mined or processed at the facility. The SABIA, Inc. Model XC-Series-25 Material Analyzer is no longer in use. The sealed sources from the material analyzer were shipped offsite 2/6/2020.

Peabody Midwest Mining, LLC requests that Somerville Mine be removed as an authorized location of use and storage of radioactive material. Peabody Midwest Mining, LLC also requests that the authorization for possession and use of the SABIA, Inc. Model XC-Series-25 Material Analyzer be removed from Materials License No. 13-26785-01.

There have been no incidents involving radioactive materials at the licensed location.

The following paperwork is being provided to document that there are no radioactive sources or contamination on site.

1. Shipping Paperwork dated 2/6/2020
2. Source Acknowledgement from SABIA, Inc dated 2/26/2020.
3. Manufacturer documentation of no radioactive contamination of the material analyzer.
4. Previous Leak Test Certifications from the SABIA, Inc. Model XC-Series-25 Material Analyzer

If you have any questions, please contact Karen Risner at krisner@peabodyenergy.com or 812-922-1048.

Sincerely,

Karen Risner

Karen Risner
RSO

Enclosure

cc: Somerville/Francisco NRC File

XPOLogistics STRAIGHT BILL OF LADING

DRIVER PLEASE NOTE
IF SINGLE SHIPMENT
CHECK BOX BELOW ☒

SHIPPER PLEASE NOTE FREIGHT CHARGES ARE PREPAID UNLESS MARKED COLLECT

☒ COLLECT

ORIGINAL - NOT NEGOTIABLE

Driver's signature acknowledges receipt of freight only. Received shipment is subject to terms of a written contract, if any, otherwise subject to the terms, conditions and limitations of liability set forth in XPO Logistics Freight, Inc. rules tariff. (see www.xpo.com)

936-773434 XPOLogistics

PLACE PRO LABEL HERE

DATE	P.O. NO.	SHIPPER NO.
2/06/20		SN: 2381

CUSTOMER'S SPECIAL REFERENCE NUMBER

SHIPPER (FROM)	CONSIGNEE (TO)
Somerville Central Preparation Plant	SABIA, Inc
STREET: 6280 S. County Road 1025 East	STREET: 10919 Technology Place Suite A
CITY, STATE/PROVINCE, ZIP/POSTAL CODE (TELEPHONE): Oakland City, IN 47660	CITY, STATE/PROVINCE, ZIP/POSTAL CODE (TELEPHONE): San Diego, CA 92127 (858) 217-2200
BILL TO: SABIA, Inc	CUSTOMS BROKER
STREET: 10919 Technology Place Suite A	STREET
CITY, STATE/PROVINCE, ZIP/POSTAL CODE (TELEPHONE): San Diego, CA 92127 (858) 217-2200	CITY, STATE/PROVINCE, ZIP/POSTAL CODE (TELEPHONE)
ACCOUNT CODE	☐ Guaranteed

NUMBER SHIPPING UNITS	HM	KIND OF PACKAGING, DESCRIPTION OF ARTICLES, SPECIAL MARKS AND EXCEPTIONS Hazardous material sequence (ISHP) must read: UN/NA ID#, proper Shipping name, Hazard class and Packing group (SUBJECT TO INSPECTION AND CORRECTION)	NMFC NO.	CLASS OR DENSITY OF ARTICLES	WEIGHT (Subject to Correction) ✓ lb kg
1	X	UN3332, Radioactive Material, Type A Package, Special Form, Non Fissile, Class 7, Californium-252	164900-2	100	275
drum		solid CfPd alloy, 1 Type A Package x 0.31 Gbq...TI: @ 3.5			
		LABELED "RADIOACTIVE YELLOW III" PLACARDS REQUIRED			
		Emergency Contact: Chemtrec 800-424-9300 CCN: 19389			

COD AMOUNT: $ _____ ☐ U.S. ☐ Canadian

COD Fee: ☐ Prepaid ☐ Collect

NOTE: Consignee's company check made payable to the Shipper will be accepted by XPO Logistics Freight and forwarded to shipper unless otherwise directed to do so by the shipper.

REMIT COD TO

ADDRESS

CITY STATE/PROVINCE ZIP/POSTAL CODE

Notice: Unless the Shipper completes the requirements as provided below, Carrier's liability shall be limited as stated herein and in Tariff CNWY-199 in effect on date of shipment, which is available on line at www.xpo.com or may be obtained upon request to Carrier. Shipment is subject to the release value provisions of the NMFC as set forth in paragraph 2 on the reverse side of this Bill of Lading. **In no event shall Carrier be liable for loss of profit, income, interest, attorney fees, or any special, incidental or consequential damages.**

Carrier liability with shipment originating within the United States: Carrier's liability shall be based on actual NMFC class of the shipment and is limited between $1.00 and $25.00 per pound as set forth in Tariff CNWY-199. Carrier's liability for all household goods, personal effects, and articles other than new, including but not limited to used, remanufactured or refurbished articles shall not exceed $1.00 per pound per individual lost or damaged piece within the shipment. Carrier's highest level of liability is $25.00 per pound per individual lost or damaged piece within the shipment, subject to $150,000.00 maximum total liability per shipment. Shipper may increase Carrier's limits on liability if the Shipper declares excess value on the Bill of Lading below, requests excess liability coverage from the Carrier and pays an additional charge. For this purpose the declared value of the property is hereby specifically stated by the Shipper to be $_____, and Shipper agrees to pay an additional charge for excess liability coverage. Total declared value may not exceed $650,000.00 per shipment.

Carrier liability with shipment originating within Canada: Unless the Shipper completes the Special Agreement below, declares the value in the box below and agrees to pay the excess liability charge by initialing where indicated, Carrier's maximum liability is CAN$2.00 per pound (CAN$4.41 per kilogram) per individual lost or damaged piece within the shipment, subject to a maximum total liability per shipment of CAN$20,000.00, and provided further that Carrier's liability on household goods, personal effects articles other than new articles, including but not limited to used, remanufactured or refurbished articles, shall not exceed one dollar ($1.00) (CAN) per pound per individual lost or damaged piece within the shipment.

SPECIAL AGREEMENT: Declared Value: CAN $_____ per pound. (Declared value may not exceed CAN $100,000.00 per shipment.)
Shipper agrees to pay excess liability charge: _____ (Shipper's Initials)

Where the NMFC classification is dependent on value, shippers are required to state specifically below in writing the declared value of the property as follows: The declared value of the property is specifically stated by the shipper to be not exceeding $_____.

Shipper'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.

Shipment Received: The shipment is received subject to Tariff CNWY-199, Carrier's pricing schedules, terms, conditions and rules maintained at Carrier's general offices in effect on the date of issue of this Bill of Lading, as well as the National Motor Freight Classifications (NMFC), the Hazardous Materials Transportation Regulations (Title 49 – CFR, Subtitle B, Chapter 1, Sub Chapter A-C), and the Household Goods Mileage Guide (HHGB 105 Series), for shipments originating in the United States; and the Canadian Motor Vehicle Transport Act, the Transportation of Dangerous Goods Act, and the regulations in force in the provincial jurisdiction at the time and place of the shipment for shipments originating in Canada. The property described on this Bill of Lading is in apparent good order, but only to the extent that it is unconcealed and visible without further inspection and except as noted or marked. The property is consigned and destined as indicated above. The word Carrier is defined throughout this contract as meaning any person or corporation in possession of the property under this contract. It is mutually agreed as to Carrier and each party at any time interested in all or any of said property, that every service to be performed hereunder shall be subject to all of this Bill of Lading's terms and conditions in effect on the date of shipment, including, but not limited to, the "Terms and Conditions" listed on the back side of this Bill of Lading.

SHIPPER	CARRIER
Peabody Somerville / SABIA, Inc	☐ XPO LOGISTICS FREIGHT, INC. ☐ XPO LOGISTICS FREIGHT CANADA INC.
AUTHORIZED SIGNATURE: John Hagley	AUTHORIZED SIGNATURE: M. Drum DATE: 2-7-20

NUMBER OF UNITS RECEIVED: 1

04032.00 (10/15) Printed in USA (CNWY)

10919 Technology Place, Ste A
San Diego, CA 92127
Bus: (858) 217-2200
Fax: (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Packing List and Product Certification

Ship From	Ship To
Somerville Central Preparation Plant 6280 S. County Road 1025 East Oakland City, IN 47660	SABIA, Inc 10919 Technology Place Suite A San Diego, CA 92127
P.O. Number	Recipients Nuclear License Number
	NRC License # 11-27727-01
Source Manufacturer Contact Information	Date Shipped
Frontier Technology Corporation 1641 Burnett Drive Xenia, OH 45385 (937) 376-5691	Feb 6, 2020
	Shipped via
	XPO

Shipping Information

Shipping Container Type: DOT7A Type A

Transportation Index 3.5 mrem/hr

Container Model Number	Container Serial Number	Weight (kg/lbs)	Seal Number
50220	2381	275	

Radiation Information

Meter Type	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Due Date
Gamma	Ludlum	12-4	215352	Dec 31, 2019	Jun 30, 2020
Neutron	Ludlum	42-31	PR216898	Dec 31, 2019	Jun 30, 2020

	Radiation Level (mrem/hr)	
Radiation Type	On Contact	At One Meter
Gamma	30	1.5
Neutron	20	2
Total	50	3.5

Contamination Level:
alpha < 20 dpm / 100 cm^2
beta < 200 / 100 cm^2
gamma < 1000 / 100 cm2

CONFIDENTIAL © SABIA

Source Data as of:

Isotope Cf-252	Serial Number	Model Number	Source Activity (ug)	Source Activity (GBq)	Contamination/100 cm^2 (per source)
Cf-252	FTC-CF-3660	100SNS	3.91	0.078	alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
Cf-252	FTC-CF-4467	100	1.68	0.034	alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
Cf-252	FTC-CF-4468	100	1.65	0.033	alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
Cf-252	FTC-CF-6749	100S	8.14	0.163	alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
Other Isotopes	Serial Number	Model Number	Source Activity (mCi)	Source Activity (GBq)	Contamination/100 cm^2 (per source)
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm
					alpha < 20 dpm beta < 100 dpm gamma < 1000 dpm

Certifications

Notice: A radiation safety specialist must be present when this container is opened

Special Form: (If Applicable) At the time of shipment, the sources in this shipment met the requirements for special form.

Leak Test: The sources in this shipment have passed the applicable leak test

Certificate of Conformance: The products covered by this document are certified to meet the requirements of the contract.

Certificate of Origin

Approval for Shipping

Date Feb 6, 2020

FSE Signature

Printed Name John Hagley

Digital Signature

Date

Reviewer Signature

Printed Name

Digital Signature

CONFIDENTIAL © SABIA

Radioactive Source Shipment Survey Form

CUSTOMER INFORMATION

Site Name and Address

Somerville Central Preparation Plant
6280 S. County Road 1025 East
Oakland City, IN 47660

Site Contact: Ora Martin

Phone Number: 812-795-4033

E-mail Address: omartin@peabodyenergy.com

Date of Source Shipment: Feb 6, 2020

SABIA Inc. Field Service Engineer Printed Name: John Hagley

SABIA Inc. Field Service Engineer Signature

SABIA Reviewer Signature

SOURCE DATA

Type of Source	Quantity	Type of Radiation Emitted	Source Identification
Cf-252	4	Neutron, Alpha, Beta, Gamma	FTC-CF-3660, FTC-CF-~~4367~~ 4467, FTC-CF-~~4368~~ 4468 & FTC-CF-6749

SHIPPING CONTAINER DATA

Container Type	Container Model Number	Container Serial Number	Weight (kg/lbs)
DOT7A Type A	50220	2381	275

SURVEY INSTRUMENTS USED

Meter Type	Manufacturer	Model Number	Serial Number	Cal Date	Cal Due Date
Neutron	Ludlum	42-31	PR216898	Dec 31, 2019	Jun 30, 2020
Gamma	Ludlum	12-4	215352	Dec 31, 2019	Jun 30, 2020
Leak Test	SE International	Inspector	10395	Oct 4, 2019	Oct 4, 2020

RADIOLOGICAL CONTROL

Removable Contamination > 185 Bq or 0.005 uCi ?

- ○ Yes - This container is contaminated
- ◉ No - This container is **NOT** contaminated

	Radiation Levels of Container (mRem/hr)	
Radiation Type	On Surface	1 Meter
Gamma	30	2
Neutron	20	1.5

CONFIDENTIAL © SABIA

10919 Technology Place, Ste A
San Diego, CA 92127
Bus: +1(858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Emergency Response Information for Californium-252 (Cf-252) Sources

24 Hour Response: (800) 424-9300 CCN:19389

SOURCE INFORMATION

Date: February 6, 2020

Source: Cf-252

Activity: 0.31 GBq

Form: Solid

UN Number: 3332

	Radiation Level (mrem/hr)	
Radiation Type	Surface	1 meter
Gamma	30	2
Neutron	20	1.5
Total	50	3.5

GENERAL INFORMATION

RADIATION HAZARD	DESCRIPTION	DIMENSIONS
Neutron, Gamma - dose Alpha - contamination	Palladium cermet wire double encapsulated in a stainless steel capsule.	⅜ in. diameter 1½ in. length

INSTRUCTIONS

Source Intact

- DO NOT TOUCH SOURCE
- Place source back into the shipping container or a secured storage area. When handling source, use remote handling tools (tongs or pliers). The detector assembly can be handled directly.
- When moving the source, keep as much distance as possible between your person and the source.

Source Crushed

- DO NOT TOUCH BROKEN CAPSULE OR POWDER
- Rope off area approximately 10 feet around the source.
- Keep personnel away from area to prevent contamination.
- Personnel who may have walked through contaminated area or have accidentally touched the source should be segregated into a holding area to be checked for contamination.
- Notify the Radiological Emergency Response Organization in the area in which the accident occurred.

CONFIDENTIAL © SABIA

10919 Technology Place, Ste A
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Nuclear Source Leak Test Report

Site Name and Address

Somerville Central Preparation Plant
6280 S. County Road 1025 East
Oakland City, IN 47660
USA

Site Contact: Ora Martin

Phone Number: 812-795-4033

E-mail Address: omartin@peabodyenergy.com

Analyzer/Gauge Model: SABIA, Inc. XC-5000-25

Serial Number: 1204-600370-0011

Date of Leak Test: Jan 28, 2020

SABIA Inc. Field Service Engineer Printed Name: John Hagley

SABIA Inc. Field Service Engineer Signature

Test Equipment Used to Perform Leak Test

Instrument Type	Instrument Mfg.	Model #	Serial #	Calibration Date	Calibration Due
Geiger-Mueller	SE International	Inspector	10395	Oct 4, 2019	Oct 4, 2020

Test Results

Reason for Leak Test: Decommission

Sealed Isotope	Isotope Serial #	Activity Level	Activity Measured In	Smear Contamination Level (Measured in microcuries)
Cf-252	FTC-CF-3660	3.91	micrograms	Less than 0.005
Cf-252	FTC-CF-4467	1.68	micrograms	Less than 0.005
Cf-252	FTC-CF-4460	1.65	micrograms	Less than 0.005
Cf-252	FTC-CF-6749	8.14	micrograms	Less than 0.005

Reviewer Signature

Reviewer Title

Review Date

The Leak Test results documented by this report were obtained using a wipe (smear with a cloth patch) test in accordance with ANSI N5.10 - 1968 Appendix Section B2.1. A nuclear source such as the Cf-252, Cs-137 and Am-241 isotopes tested herein are deemed acceptable by State and Federal authorities if the contamination found on a smear test is less than .005 microcuries. Alpha, Beta and Gamma contamination is measured in the Cf-252 smear and Beta and Gamma in the Cs-137.

NRC License Number, 11-27727-01, 4323 Commerce Circle, Suite B, Idaho Falls, ID 83401 State of California License Number, 6663-37, 10915 Technology Place, San Diego, CA 92127

SABIA, Inc. Copyright © 2018 - CONFIDENTIAL

10919 Technology Place, Ste A
San Diego, CA 92127, USA
Tel: +1-858-217-2200
Fax: +1-858-217-2203
www.sabiainc.com
NRC License # 11-27727-01

February 26, 2020

Ora Martin
RSO
Peabody Energy
Somerville Preparation Plant
6280 S. County Road 1025 East
Oakland City, IN 47660

Dear Ora,
SABIA Inc is acknowledging the receipt of the following Californium Cf-252 sources February 26, 2020:
FTC-CF-3660
FTC-CF-4467
FTC-CF-4468
FTC-CF-6749
If you have any questions, please contact me.

Respectively,
Cody York
Field Service Engineer
O: (858) 217-2282
C: (760) 310-3294
cyork@sabiainc.com

Risner, Karen M.

From: John Hagley <jhagley@sabiainc.com>
Sent: Monday, April 26, 2021 2:42 PM
To: Risner, Karen M.
Subject: Somerville

[INTERNAL EMAIL]

Karen,

On Somerville when we remove the sources the very first step is to leak test the analyzer. We obviously want to make sure there is no contamination plus we need a leak test certificate for the shipment. Therefore you can make the connection that if there is no contamination on the sources there would be no contamination on the analyzer since it would have came from the sources. Records indicated 4 sources present and 4 sources were removed. Also a quick sweep of the analyzer was at background thus there wouldn't be any unaccounted for sources left in the unit. The holders were completely removed and checked as part of the process.

You were sent the shipping docs which would show the 4 sources shipped off site and a leak test certificate showing they were clean.

If you need more info let me know.

John Hagley
Sales and Application Engineer
SABIA, INC
Cell: 304-634-6175

Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s) and may contain material that is confidential, privileged and/or attorney work product. Any unauthorized review; usage, reliance, disclosure or distribution by others or forwarding without express permission is strictly prohibited. If you are not the intended recipient, please contact the sender by reply e-mail and delete and destroy all copies of the original message. Thank You.

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License# 6663-37

Print Form
Reset Form

Nuclear Source Leak Test Report and Inventory Certification

Date	Sep 11, 2019
Site	Somerville Central Preparation Plant
Address	6280 S. County Road 1025 East
City	Oakland City
State	IN
Zip Code	47660
Country	USA
Attn:	Mark Roberts

Work Completed By	John Hagley
Date Completed	Sep 11, 2019
Reviewed By	James F. Miller (Digitally signed by James F. Miller DN: cn=James F. Miller, o=SABIA, Inc, ou=R&D, email=jmiller@sabiainc.com, c=US Date: 2019.09.17 10:08:29 -07'00')
Reviewer Title	Senior vice president
Date Reviewed	Sep 17, 2019

To meet the requirements of the United States Nuclear Regulatory Commission and Agreement States concerning leak testing and semi-annual inventories of radioactive materials, SABIA certifies that:

- The radioactive source(s) listed on the attached inventory sheet are accounted for
- The radioactive source(s) have been leak tested and removable contamination is below allowable limits
- Nuclear Source Leak Test Report(s) have been completed and attached
- Shutter check conducted and operating as per manufacturers specifications
-

Next leak test due	Mar 11, 2020
Inventory/Shutter Check (if applicable)	Mar 11, 2020
Customer License Number	NRC 13-26785-01

John Hagley (Digitally signed by John Hagley DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US Date: 2019.09.13 12:06:20 -04'00')

SABIA, Inc. Field Service Engineer

CONFIDENTIAL © SABIA

Print Form
Reset Form

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Physical Inventory of Sealed Radioactive Sources

Date Sep 11, 2019 Site Somerville Central Preparation Plant Next Due Date Mar 11, 2020 Inventory Conducted By John Hagley

Item #	Description	Source	Source Serial #	Activity	Measured In	Shutter Test	Next Leak Test Due	Notes
1	SABIA, INC., XC 5000 SN: 1204	Cf-252	FTC-CF-4467	1.86	micrograms		Mar 11, 2020	FTC-CF-4467, FTC-CF-4468, FTC-CF-3660 are on the (R) FTC-CF-6749 is on the (L)
		Cf-252	FTC-CF-4468	1.82	micrograms			
		Cf-252	FTC-CF-3660	4.32	micrograms			
		Cf-252	FTC-CF-6749	8.99	micrograms			

FSE Signature John Hagley Digitally signed by John Hagley DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US Date: 2019.09.13 12:06:41 -04'00'

Reviewer Title Senior vice president

Reviewer Signature James F. Miller Digitally signed by James F. Miller DN: cn=James F. Miller, o=SABIA, Inc., ou=R & D, email=jmiller@sabiainc.com, c=US Date: 2019.09.17 10:07:43 -07'00'

Review Date Sep 17, 2019

CONFIDENTIAL © SABIA

Print Form
Reset Form

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Nuclear Source Leak Test Report

Site Name and Address

Somerville Central Preparation Plant
6280 S. County Road 1025 East
Oakland City, IN 47660
USA

Site Contact: Mark Roberts

Phone Number: +1 (812)-677-2603

E-mail Address: mroberts@peabodyenergy.com

Analyzer/Gauge Model: SABIA Inc. XC-5000-50

Serial Number: 1204-600370-0011

Date of Leak Test: Sep 11, 2019

SABIA Inc. Field Service Engineer Printed Name: John Hagley

SABIA Inc. Field Service Engineer Signature: John Hagley
Digitally signed by John Hagley
DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US
Date: 2019.09.13 12:05:47 -04'00'

Test Equipment Used to Perform Leak Test

Instrument Type	Instrument Mfg.	Model #	Serial #	Calibration Date	Calibration Due
Geiger-Mueller	SE International	Inspector 5	10395	Oct 8, 2018	Oct 8, 2019

Test Results

Reason for Leak Test: Periodic Wipe

Sealed Isotope	Isotope Serial #	Activity Level	Activity Measured In	Smear Contamination Level (Measured in microcuries)
Cf-252	FTC-CF-4467	1.86	micrograms	Less than 0.005
Cf-252	FTC-CF-4468	1.82	micrograms	Less than 0.005
Cf-252	FTC-CF-3660	4.32	micrograms	Less than 0.005
Cf-252	FTC-CF-6749	8.99	micrograms	Less than 0.005

James F. Miller
Digitally signed by James F. Miller
DN: cn=James F. Miller, o=SABIA, Inc., ou=R & D, email=jmiller@sabiainc.com, c=US
Date: 2019.09.17 10:06:24 -07'00'
Reviewer Signature

Senior vice president
Reviewer Title

Sep 17, 2019
Review Date

The Leak Test results documented by this report were obtained using a wipe (smear with a cloth patch) test in accordance with ANSI N5.10 - 1968 Appendix Section B2.1. A nuclear source such as the Cf-252, Cs-137 and Am-241 isotopes tested herein are deemed acceptable by State and Federal authorities if the contamination found on a smear test is less than .005 microcuries. Alpha, Beta and Gamma contamination is measured in the Cf-252 smear and Beta and Gamma in the Cs-137.
NRC License Number, 11-27727-01, 4323 Commerce Circle, Suite B, Idaho Falls, ID 83401 State of California License Number, 6663-37, 10915 Technology Place, San Diego, CA 92127

SABIA, Inc. Copyright © 2018 - CONFIDENTIAL

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License# 6663-37

Nuclear Source Leak Test Report and Inventory Certification

Date	Mar 11, 2019			Work Completed By	John Hagley
Site	Somerville Central Preparation Plant			Date Completed	Mar 11, 2019
Address	6280 S. County Road 1025 East			Reviewed By	
City	Oakland City	State IN	Zip Code 47660	Reviewer Title	Operations Admin
Country	USA			Date Reviewed	Mar 19, 2019
Attn:	Jim Evans +1(812)-795-4040 jevans@peabodyenergy.com				

To meet the requirements of the United States Nuclear Regulatory Commission and Agreement States concerning leak testing and semi-annual inventories of radioactive materials, SABIA certifies that:

- The radioactive source(s) listed on the attached inventory sheet are accounted for
- The radioactive source(s) have been leak tested and removable contamination is below allowable limits
- Nuclear Source Leak Test Report(s) have been completed and attached
- Shutter check conducted and operating as per manufacturers specifications
-

Next leak test due	Sep 11, 2019
Inventory/Shutter Check (if applicable)	Sep 11, 2019
Customer License Number	NRC 13-26785-01

John Hagley

Digitally signed by John Hagley
DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US
Date: 2019.03.18 21:25:10 -04'00'

SABIA, Inc. Field Service Engineer

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Nuclear Source Leak Test Report

Site Name and Address

Somerville Central Preparation Plant
6280 S. County Road 1025 East
Oakland City, IN 47660
USA

Site Contact: Jim Evans

Phone Number: +1 (812)-795-4040

E-mail Address: jevans@peabodyenergy.com

Analyzer/Gauge Model: SABIA Inc. XC-5000-50

Serial Number: 1204-600370-0011

Date of Leak Test: Mar 11, 2019

SABIA Inc. Field Service Engineer Printed Name: John Hagley

SABIA Inc. Field Service Engineer Signature: John Hagley
Digitally signed by John Hagley
DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US
Date: 2019.03.18 21:34:39 -04'00'

Test Equipment Used to Perform Leak Test

Instrument Type	Instrument Mfg.	Model #	Serial #	Calibration Date	Calibration Due
Geiger-Mueller	SE International	Inspector 5	10395	Oct 8, 2018	Oct 8, 2019

Test Results

Reason for Leak Test: Refurbishment

Sealed Isotope	Isotope Serial #	Activity Level	Activity Measured In	Smear Contamination Level (Measured in microcuries)
Cf-252	FTC-CF-4467	2.12	micrograms	Less than 0.005
Cf-252	FTC-CF-4468	2.08	micrograms	Less than 0.005
Cf-252	FTC-CF-3660	4.92	micrograms	Less than 0.005
Cf-252	FTC-CF-6749	10.25	micrograms	Less than 0.005

Reviewer Signature | Operations Admin (Reviewer Title) | Mar 19, 2019 (Review Date)

The Leak Test results documented by this report were obtained using a wipe (smear with a cloth patch) test in accordance with ANSI N5.10 - 1968 Appendix Section B2.1. A nuclear source such as the Cf-252, Cs-137 and Am-241 isotopes tested herein are deemed acceptable by State and Federal authorities if the contamination found on a smear test is less than .005 microcuries. Alpha, Beta and Gamma contamination is measured in the Cf-252 smear and Beta and Gamma in the Cs-137.
NRC License Number, 11-27727-01, 4323 Commerce Circle, Suite B, Idaho Falls, ID 83401 State of California License Number, 6663-37, 10915 Technology Place, San Diego, CA 92127

SABIA, Inc. Copyright © 2018 - CONFIDENTIAL

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Physical Inventory of Sealed Radioactive Sources

Date Mar 11, 2019 Site Somerville Central Preparation Plant Next Due Date Sep 11, 2019 Inventory Conducted By John Hagley

Item #	Description	Source	Source Serial #	Activity	Measured In	Shutter Test	Next Leak Test Due	Notes
1	SABIA, INC., XC 5000 SN: 1204	Cf-252	FTC-CF-4467	2.12	micrograms		Sep 11, 2019	FTC-CF-4467, FTC-CF-4468, FTC-CF-3660 are on the (R) FTC-CF-6749 is on the (L)
		Cf-252	FTC-CF-4468	2.08	micrograms			
		Cf-252	FTC-CF-3660	4.92	micrograms			
		Cf-252	FTC-CF-6749	10.25	micrograms			

FSE Signature John Hagley Digitally signed by John Hagley DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US Date: 2019.03.18 21:44:19 -04'00'

Reviewer Title Operations Admin

Reviewer Signature

Review Date Mar 19, 2019

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: (858) 217-2200
Fax: (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

Radioactive Materials Receipt Report

SHIPPING INFORMATION

Origin of Shipment	FTC Xenia, OH
Carrier & PRO Number	Conway Freight 613-818435
Delivery Accepted By	
Date Accepted	Jan 17, 2019

Do source activity levels exceed the Quantity of Concern?
○ Yes ◉ No

Condition of Container				
☒ Normal	☐ Punctured	☐ Dropped	☐ Crushed	☐ Wet
Notes	Normal Container			

Accompanying Documentation	
☒ Bill of Lading	☒ Packing List and Product Certification
☒ Leak Test Report	☒ Source Shipment Survey Record
☒ Unpacking and Handling Instructions (from Manufacturer)	
Notes	

SURVEY INFORMATION

Survey Date	Mar 11, 2019
Time Surveyed	15:00
Surveyor	John Hagley

Measured Gamma @ 1m	1.1	Original Transportation Index	3.1
Measured Neutron @ 1m	2.5	Measured Transportation Index	3.6
Measured Gamma @ Surface	12	Container Serial #	2357
Measured Neutron @ Surface	16		

CONTAINER WIPE TEST INFORMATION

Wipe Test (Outside)	43	CPM
Wipe Test (Inside)	34	CPM
Background	38	CPM
Empty Container	N/A	CPM

Survey Results of Empty Container

Measured Gamma @ Surface	N/A	Measured Gamma @ 1m	N/A
Measured Neutron @ Surface	N/A	Measured Neutron @ 1m	N/A

Disposition of container after inspection

CONFIDENTIAL © SABIA

WIPE TEST RESULTS FOR INDIVIDUAL SOURCES

Isotope	Source Model	Source Serial	Source Activity	Wipe Test CPM
CF 252	100	FTC-CF-6749	10.7 ug	49

NRC NOTIFICATION (IF REQUIRED)

If NRC or Carrier notification was required, give time, date and persons contacted

CONTACT 1	CONTACT 2

ADDITIONAL INFORMATION

AUTHORIZED SIGNATURES

John Hagley Digitally signed by John Hagley DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US Date: 2019.03.18 21:18:23 -04'00'

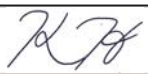
SABIA Field Service Engineer Signature

John Hagley

SABIA Field Service Engineer Name

March 11, 2019

Date



Reviewer Signature

Kyle Herbol Operations Admin

Reviewer Name & Title

March 19, 2019

Review Date

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

◯ SOURCE ON

◉ SOURCE OFF

XC-5000 Radiation Survey Form

CUSTOMER INFORMATION

Customer Name	Peabody Energy - Somerville	Address	6280 S. 1025 E. Oakland City, IN 47660
Site Contact (RSO)	Jim Evans		
Contact Phone	(812) 795-4040	Contact E-mail	jevans@peabodyenergy.com

ANALYZER INFORMATION

Analyzer Serial #	1204-600370-0011	Analyzer Location	Loadout Belt
Analyzer Model #	SABIA Inc. XC-5000-25	Belt Status	Empty

SURVEY INSTRUMENTS INFORMATION

Gamma Meter Information

Manufacturer	Model Number	Serial Number	Calibration Date	Next Calibration Due
Ludlum	2401-EC	335156	Jan 19, 2019	Jul 19, 2019

Neutron Meter Information

Manufacturer	Model Number	Serial Number	Calibration Date	Next Calibration Due
Ludlum	12-4	215352	Jan 18, 2019	Jan 18, 2019

SIGNATURES

☒ Radiation survey was completed in accordance with proper procedure by a SABIA-approved trained engineer.

J. Hagley	Mar 11, 2019	Kyle Herbol	Mar 19, 2019
Survey Performed By	Survey Date	Reviewed By	Review Date

John Hagley
Digitally signed by John Hagley
DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US
Date: 2019.03.18 22:16:36 -04'00'
Surveyor Signature

Reviewer Signature

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

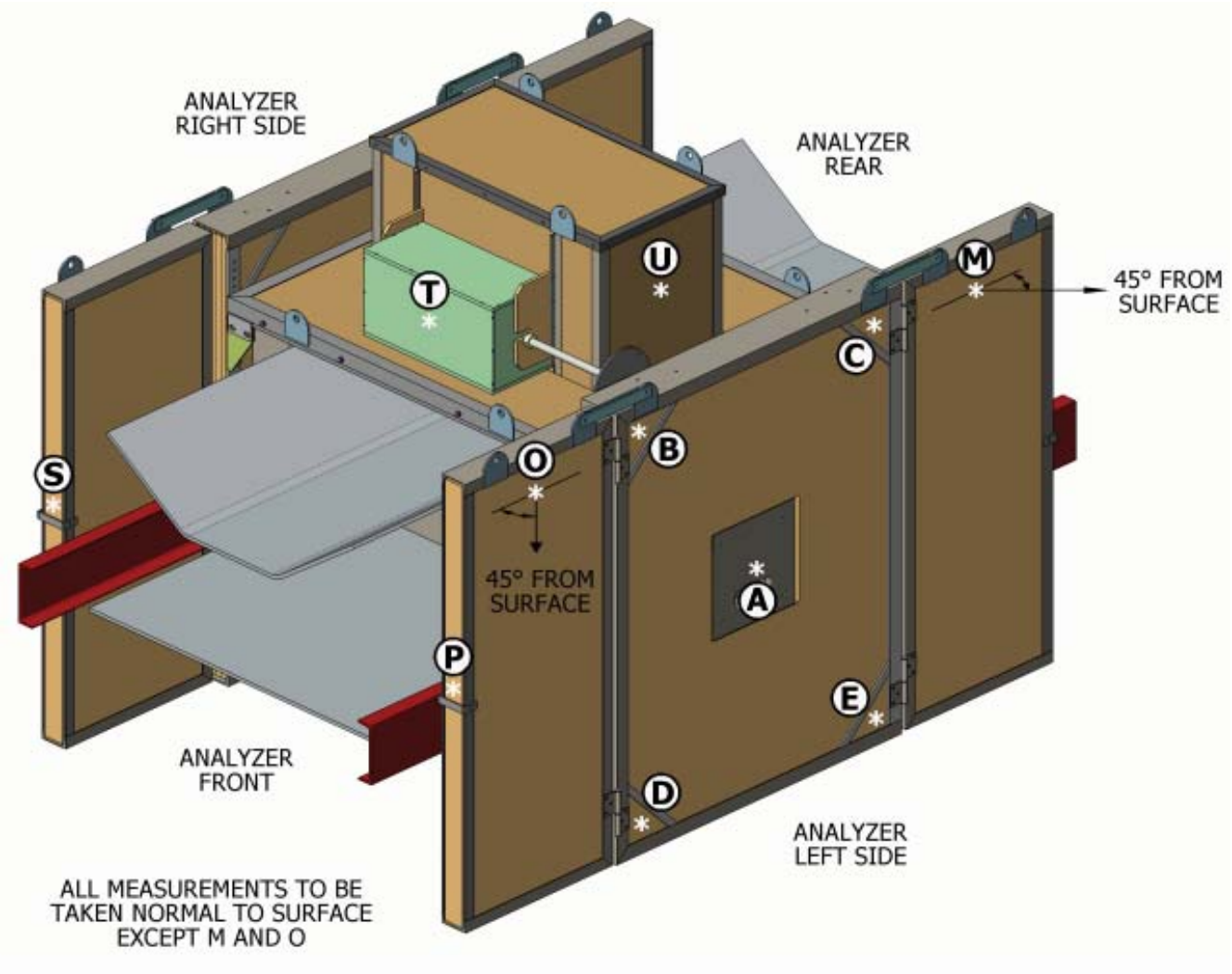
○ SOURCE ON

◉ SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr			
30 cm		1 m	
A	0.1	A	0.1
B	0.1	B	0.1
C	0.1	C	0.1
D	0.1	D	0.1
E	0.1	E	0.1
M	0.1	M	0.1
O	0.1	O	0.1
P	0.1	P	0.1
S	0.1	S	0.1
T	1.0	T	0.6
U	0.8	U	0.5



Neutron mR/hr			
30 cm		1 m	
A	0.1	A	0.1
B	0.1	B	0.1
C	0.1	C	0.1
D	0.1	D	0.1
E	0.1	E	0.1
M	0.1	M	0.1
O	0.1	O	0.1
P	0.1	P	0.1
S	0.1	S	0.1
T	1.6	T	0.5
U	0.9	U	0.4

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

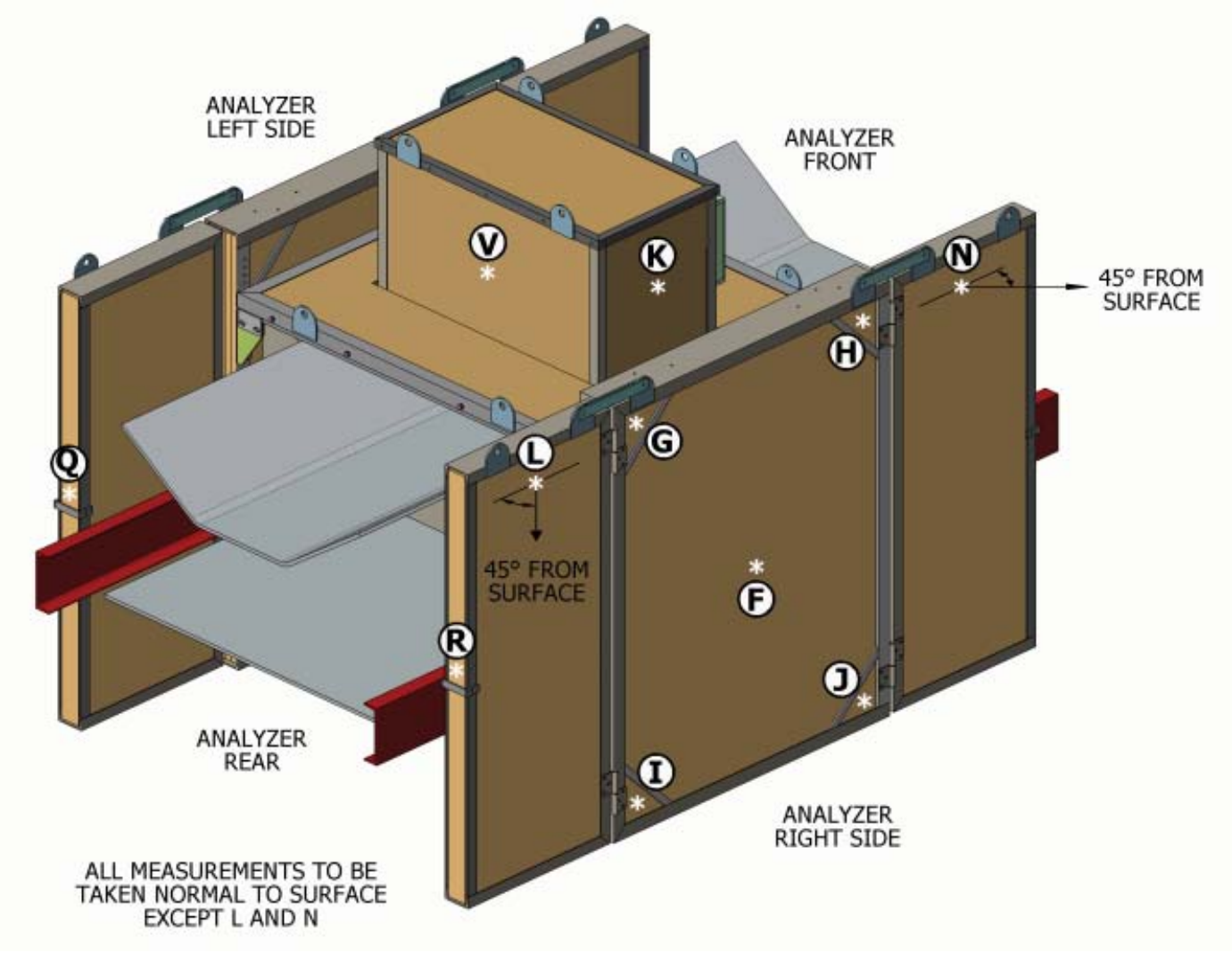
○ SOURCE ON

◉ SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr			
30 cm		1 m	
F	0.1	F	0.1
G	0.1	G	0.1
H	0.1	H	0.1
I	0.1	I	0.1
J	0.1	J	0.1
K	0.7	K	0.4
L	0.1	L	0.1
N	0.1	N	0.1
Q	0.1	Q	0.1
R	0.1	R	0.1
V	1.0	V	0.3



Neutron mR/hr			
30 cm		1 m	
F	0.1	F	0.1
G	0.1	G	0.1
H	0.1	H	0.1
I	0.1	I	0.1
J	0.1	J	0.1
K	0.9	K	0.5
L	0.1	L	0.1
N	0.1	N	0.1
Q	0.1	Q	0.1
R	0.1	R	0.1
V	1.8	V	1.0

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

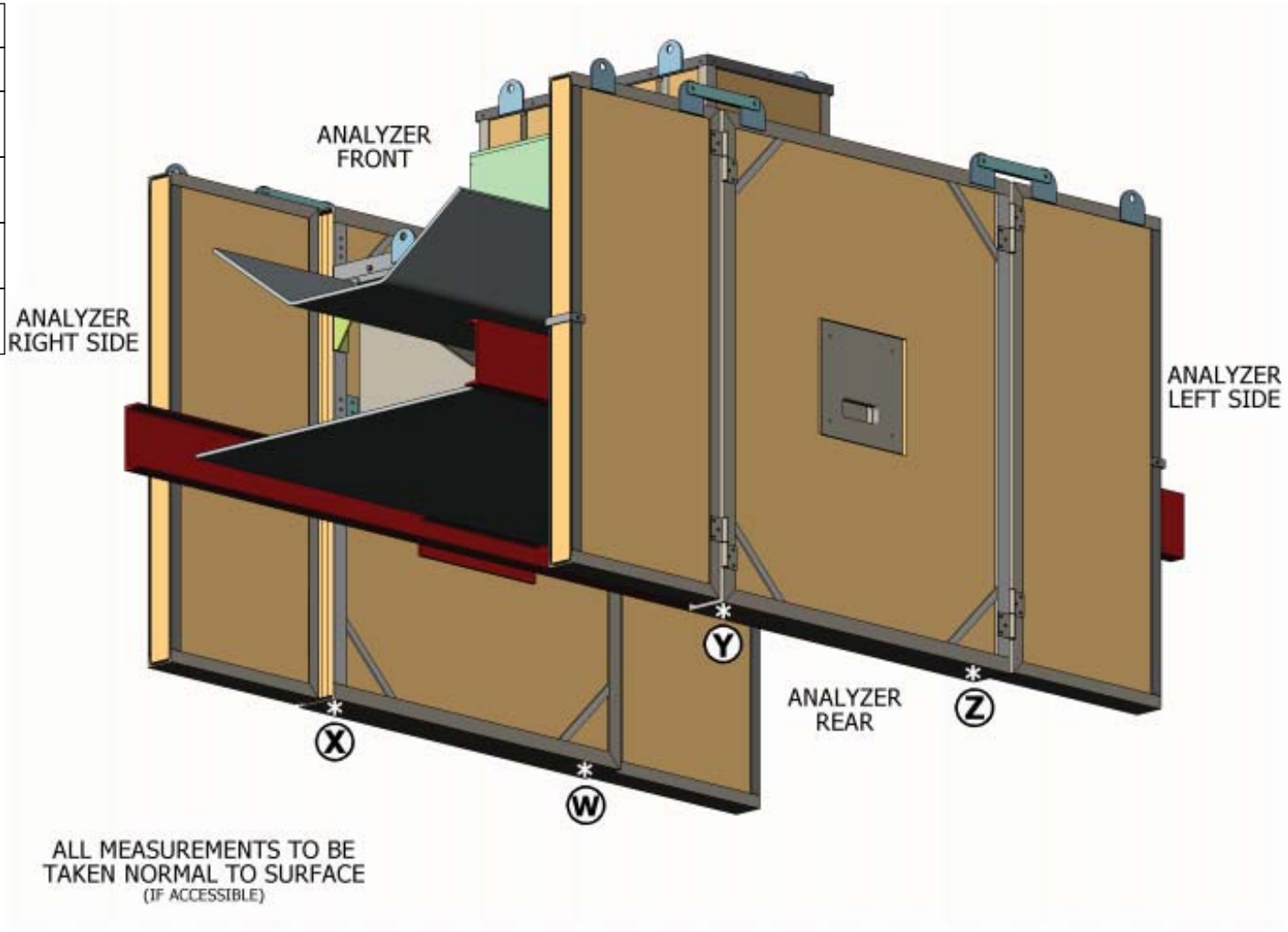
SOURCE ON

SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr			
30 cm		1 m	
W		W	
X		X	
Y		Y	
Z		Z	



Neutron mR/hr			
30 cm		1 m	
W		W	
X		X	
Y		Y	
Z		Z	

CONFIDENTIAL © SABIA

○ SOURCE ON

◉ SOURCE OFF

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

XC-5000 Radiation Survey Form

Source Location 1		Source Location 2	
Source Serial Number	Activity in (ug)	Source Serial Number	Activity in (ug)
FTC-CF-4467	2.12	FTC-CF-6749	10.25
FTC-CF-4468	2.08		0
FTC-CF-3660	4.92		0
			0
Total Source Activity in (ug) for Location 1	9.12	Total Source Activity in (ug) for Location 2	10.25

30 cm	Gamma mR/hr	Neutron mR/hr	Total mR/hr	1 meter	Gamma mR/hr	Neutron mR/hr	Total mR/hr	Notes
A	0.1	0.1	0.2	A	0.1	0.1	0.2	
B	0.1	0.1	0.2	B	0.1	0.1	0.2	
C	0.1	0.1	0.2	C	0.1	0.1	0.2	
D	0.1	0.1	0.2	D	0.1	0.1	0.2	
E	0.1	0.1	0.2	E	0.1	0.1	0.2	
F	0.1	0.1	0.2	F	0.1	0.1	0.2	
G	0.1	0.1	0.2	G	0.1	0.1	0.2	
H	0.1	0.1	0.2	H	0.1	0.1	0.2	
I	0.1	0.1	0.2	I	0.1	0.1	0.2	
J	0.1	0.1	0.2	J	0.1	0.1	0.2	
K	0.7	0.9	1.6	K	0.4	0.5	0.9	
L	0.1	0.1	0.2	L	0.1	0.1	0.2	
M	0.1	0.1	0.2	M	0.1	0.1	0.2	
N	0.1	0.1	0.2	N	0.1	0.1	0.2	
O	0.1	0.1	0.2	O	0.1	0.1	0.2	
P	0.1	0.1	0.2	P	0.1	0.1	0.2	
Q	0.1	0.1	0.2	Q	0.1	0.1	0.2	
R	0.1	0.1	0.2	R	0.1	0.1	0.2	
S	0.1	0.1	0.2	S	0.1	0.1	0.2	
T	1	1.6	2.6	T	0.6	0.5	1.1	
U	0.8	0.9	1.7	U	0.5	0.4	0.9	
V	1	1.8	2.8	V	0.3	1	1.3	
W				W				No Access
X				X				No Access
Y				Y				No Access
Z				Z				No Access

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

(●) SOURCE ON

( ) SOURCE OFF

XC-5000 Radiation Survey Form

CUSTOMER INFORMATION

Customer Name	Peabody Energy - Somerville	Address	6280 S. 1025 E. Oakland City, IN 47660
Site Contact (RSO)	Jim Evans		
Contact Phone	(812) 795-4040	Contact E-mail	jevans@peabodyenergy.com

ANALYZER INFORMATION

Analyzer Serial #	1204-600370-0011	Analyzer Location	Loadout Belt
Analyzer Model #	SABIA Inc. XC-5000-25	Belt Status	Empty

SURVEY INSTRUMENTS INFORMATION

Gamma Meter Information

Manufacturer	Model Number	Serial Number	Calibration Date	Next Calibration Due
Ludlum	2401-EC	335156	Jan 19, 2019	Jul 19, 2019

Neutron Meter Information

Manufacturer	Model Number	Serial Number	Calibration Date	Next Calibration Due
Ludlum	12-4	215352	Jan 18, 2019	Jan 18, 2019

SIGNATURES

☒ Radiation survey was completed in accordance with proper procedure by a SABIA-approved trained engineer.

Survey Performed By	Survey Date	Reviewed By	Review Date
J. Hagley	Mar 11, 2019	Kyle Herbol	Mar 19, 2019

John Hagley
Digitally signed by John Hagley
DN: cn=John Hagley, o=SABIA, Inc, email=jhagley@sabiainc.com, c=US
Date: 2019.03.18 21:54:58 -04'00'
Surveyor Signature

Reviewer Signature

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

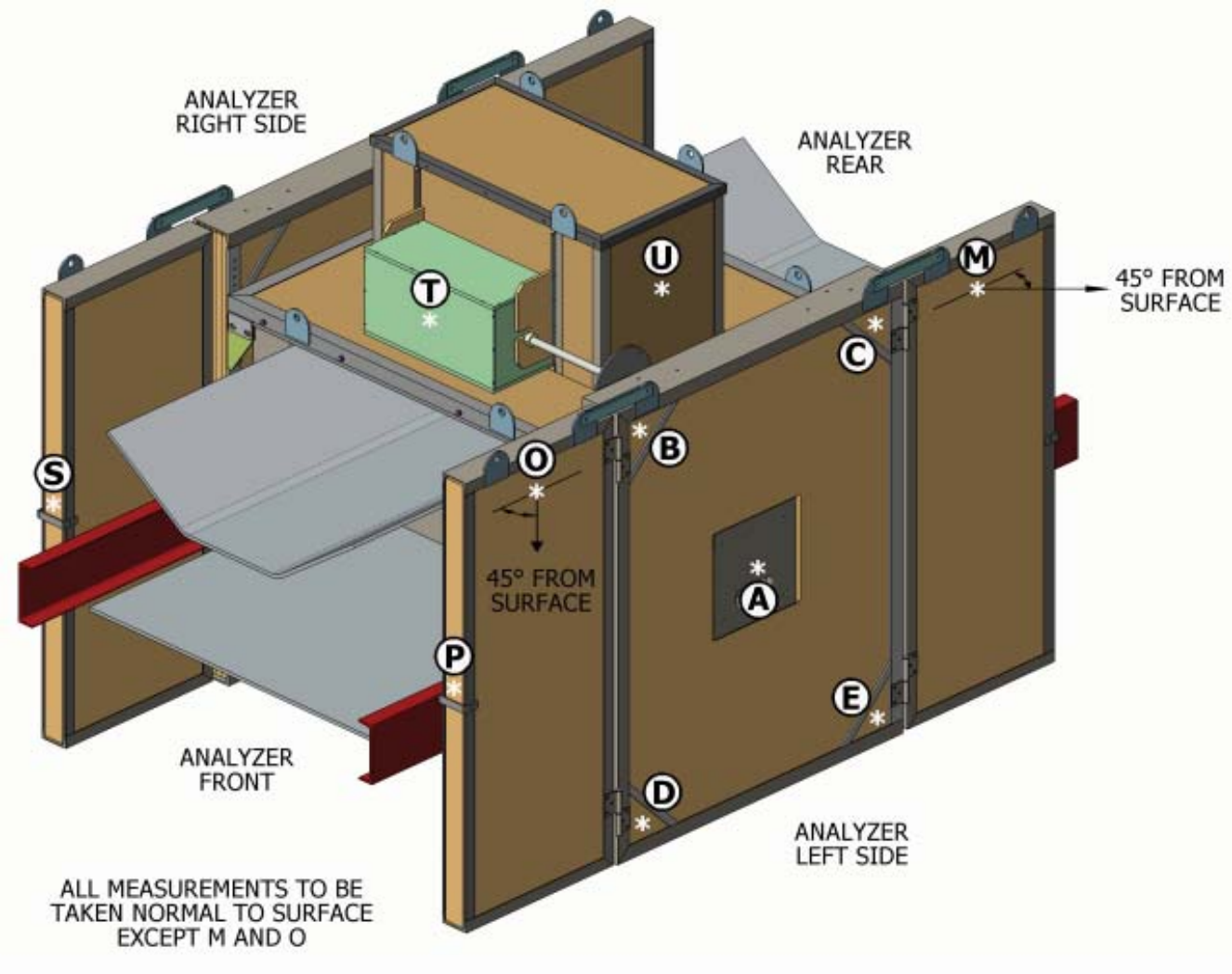
(●) SOURCE ON

( ) SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr			
30 cm		1 m	
A	0.1	A	0.1
B	0.1	B	0.1
C	0.1	C	0.1
D	0.1	D	0.1
E	0.1	E	0.1
M	0.1	M	0.1
O	0.1	O	0.1
P	0.1	P	0.1
S	0.1	S	0.1
T	0.9	T	0.5
U	0.6	U	0.3



Neutron mR/hr			
30 cm		1 m	
A	0.1	A	0.1
B	0.1	B	0.1
C	0.1	C	0.1
D	0.1	D	0.1
E	0.1	E	0.1
M	0.1	M	0.1
O	0.1	O	0.1
P	0.1	P	0.1
S	0.1	S	0.1
T	1.6	T	0.5
U	0.6	U	0.3

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

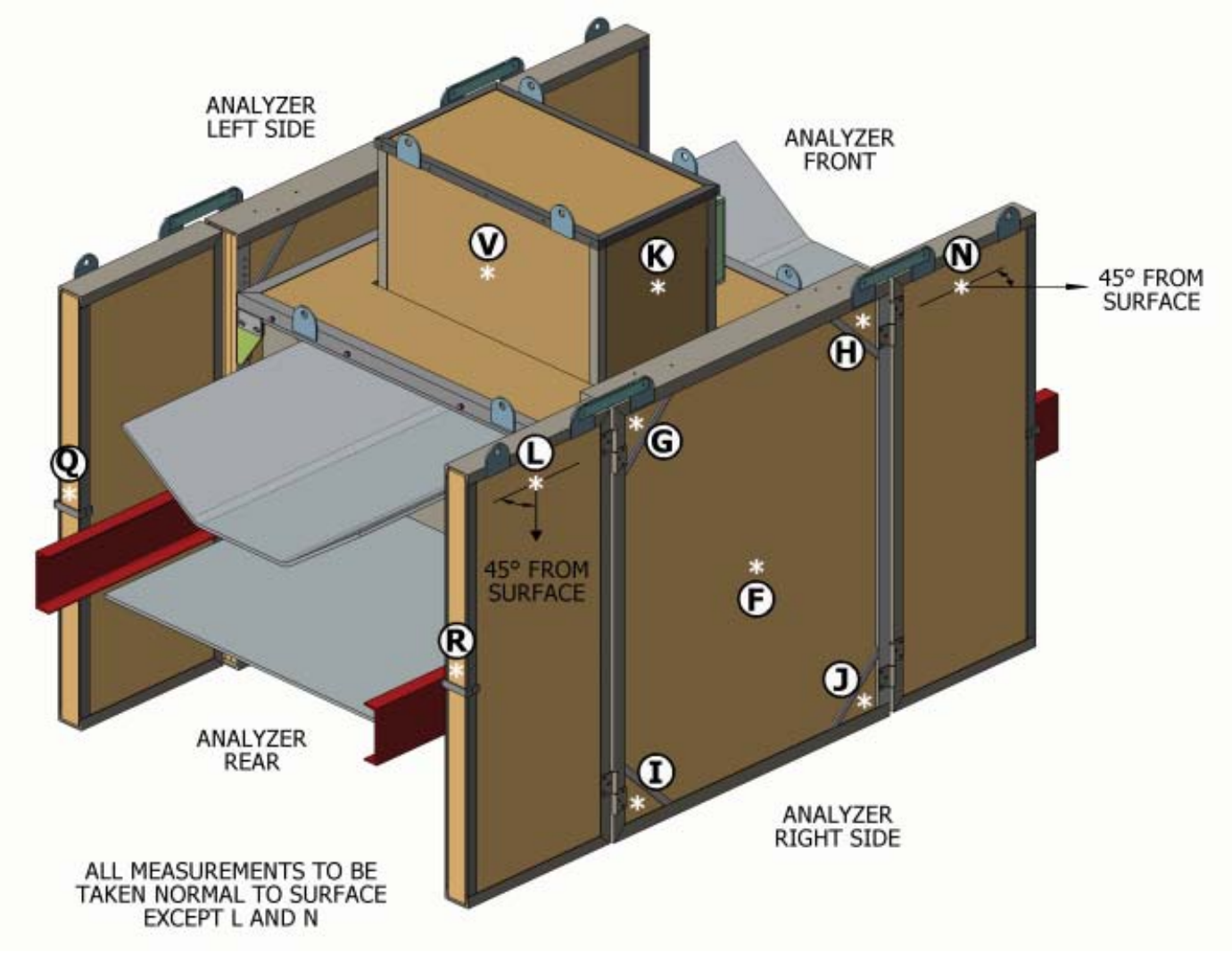
SOURCE ON

SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr			
30 cm		1 m	
F	0.1	F	0.1
G	0.1	G	0.1
H	0.1	H	0.1
I	0.1	I	0.1
J	0.1	J	0.1
K	0.6	K	0.4
L	0.1	L	0.1
N	0.1	N	0.1
Q	0.1	Q	0.1
R	0.1	R	0.1
V	0.8	V	0.3



Neutron mR/hr			
30 cm		1 m	
F	0.1	F	0.1
G	0.1	G	0.1
H	0.1	H	0.1
I	0.1	I	0.1
J	0.1	J	0.1
K	0.7	K	0.3
L	0.1	L	0.1
N	0.1	N	0.1
Q	0.1	Q	0.1
R	0.1	R	0.1
V	1.8	V	1.0

CONFIDENTIAL © SABIA

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

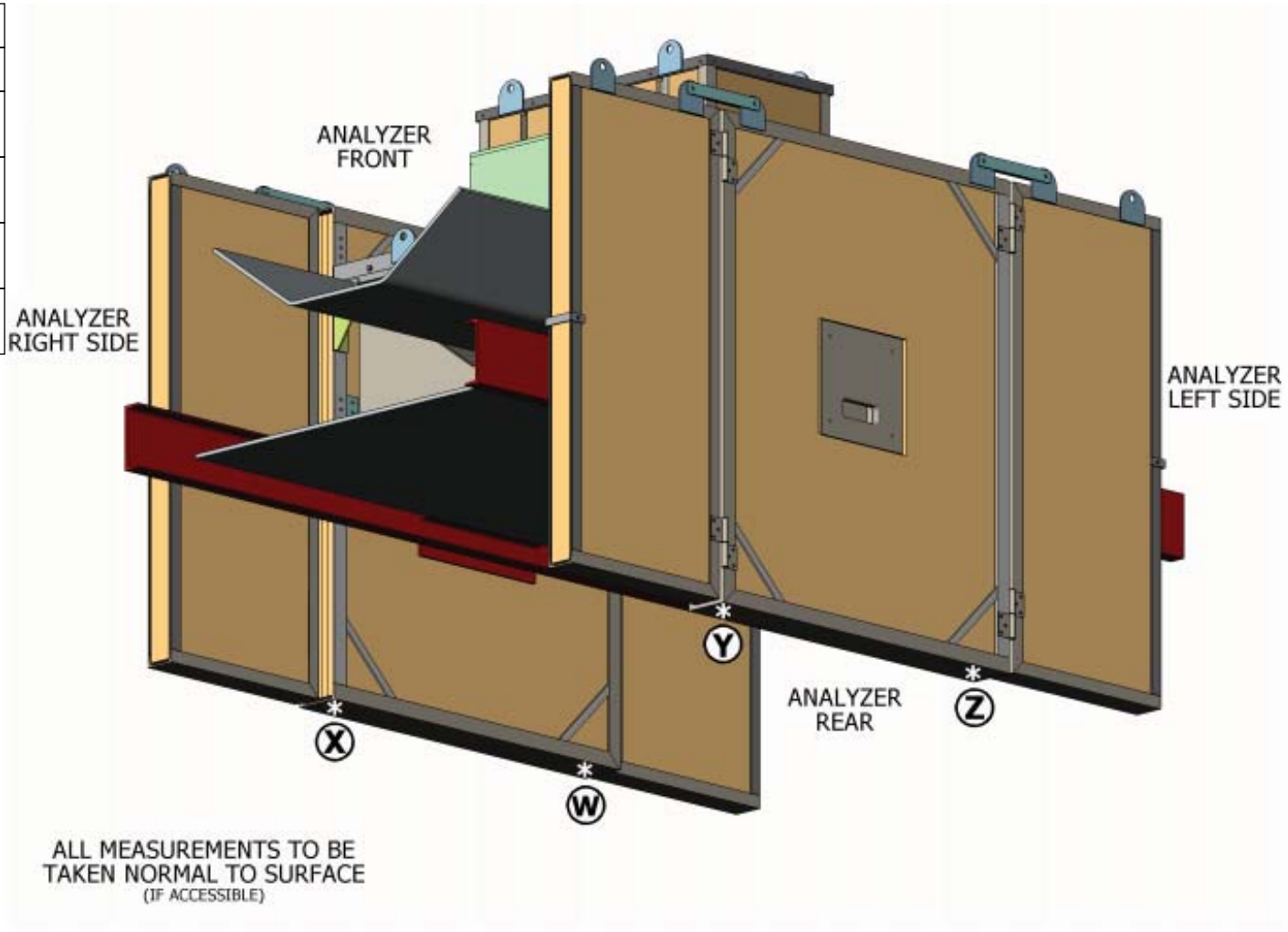
(•) SOURCE ON

( ) SOURCE OFF

XC-5000 Radiation Survey Form

Measurements are in mR/hr

Gamma mR/hr	
30 cm	1 m
W	W
X	X
Y	Y
Z	Z



Neutron mR/hr	
30 cm	1 m
W	W
X	X
Y	Y
Z	Z

CONFIDENTIAL © SABIA

◉ SOURCE ON

○ SOURCE OFF

10915 Technology Place
San Diego, CA 92127
Bus: +1 (858) 217-2200
Fax: +1 (858) 217-2203

NRC License # 11-27727-01
CA License # 6663-37

XC-5000 Radiation Survey Form

Source Location 1		Source Location 2	
Source Serial Number	Activity in (ug)	Source Serial Number	Activity in (ug)
FTC-CF-4467	2.12	FTC-CF-6749	10.25
FTC-CF-4468	2.08		0
FTC-CF-3660	4.92		0
			0
Total Source Activity in (ug) for Location 1	9.12	Total Source Activity in (ug) for Location 2	10.25

30 cm	Gamma mR/hr	Neutron mR/hr	Total mR/hr	1 meter	Gamma mR/hr	Neutron mR/hr	Total mR/hr	Notes
A	0.1	0.1	0.2	A	0.1	0.1	0.2	
B	0.1	0.1	0.2	B	0.1	0.1	0.2	
C	0.1	0.1	0.2	C	0.1	0.1	0.2	
D	0.1	0.1	0.2	D	0.1	0.1	0.2	
E	0.1	0.1	0.2	E	0.1	0.1	0.2	
F	0.1	0.1	0.2	F	0.1	0.1	0.2	
G	0.1	0.1	0.2	G	0.1	0.1	0.2	
H	0.1	0.1	0.2	H	0.1	0.1	0.2	
I	0.1	0.1	0.2	I	0.1	0.1	0.2	
J	0.1	0.1	0.2	J	0.1	0.1	0.2	
K	0.6	0.7	1.3	K	0.4	0.3	0.7	
L	0.1	0.1	0.2	L	0.1	0.1	0.2	
M	0.1	0.1	0.2	M	0.1	0.1	0.2	
N	0.1	0.1	0.2	N	0.1	0.1	0.2	
O	0.1	0.1	0.2	O	0.1	0.1	0.2	
P	0.1	0.1	0.2	P	0.1	0.1	0.2	
Q	0.1	0.1	0.2	Q	0.1	0.1	0.2	
R	0.1	0.1	0.2	R	0.1	0.1	0.2	
S	0.1	0.1	0.2	S	0.1	0.1	0.2	
T	0.9	1.6	2.5	T	0.5	0.5	1	
U	0.6	0.6	1.2	U	0.3	0.3	0.6	
V	0.8	1.8	2.6	V	0.3	1	1.3	
W				W				No Access
X				X				No Access
Y				Y				No Access
Z				Z				No Access

CONFIDENTIAL © SABIA

Pavon, Sandy

From: Kelly, Jason
Sent: Wednesday, April 28, 2021 10:29 AM
To: Song, Taehoon
Cc: Pavon, Sandy
Subject: FW: RE: RE: Materials License No. 13-26785-01
Attachments: 13-26785-01 License Amendment Letter to NRC 04282021.pdf

Taehoon,

Good morning. Attached is an incoming response for Materials License No. 13-26785-01 (Peabody Midwest Mining, LLC), Docket No. 030-34405 in reference to Control No. 625347.

Jason M Kelly, MPH
Health Physicist
U.S. NRC Region III – DNMS MLB
Phone: (630) 829-9737
E-mail: Jason.Kelly@nrc.gov

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Wednesday, April 28, 2021 10:11 AM
To: Kelly, Jason <Jason.Kelly@nrc.gov>
Subject: [External_Sender] RE: RE: Materials License No. 13-26785-01

Jason,

Please find attached a formal response letter outlining Peabody's request to remove Somerville Mine and the SABIA, Inc., Model XC-Series-25 Material Analyzer from Materials License No. 13-26785-01.

I have attached several files to the response letter to better clarify/document the request.

Thank you,

Karen Risner

From: Kelly, Jason <Jason.Kelly@nrc.gov>
Sent: Tuesday, April 27, 2021 8:38 AM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Subject: RE: RE: Materials License No. 13-26785-01

Ms. Risner:

This additional clarification from the manufacturer/distributor and other documentation provided is helpful. I suggest including it with your formal response letter, including your prior statements confirming that the SABIA, Inc., Model XC-Series-25 Material Analyzer and Somerville Mine should be removed from the licensed and that there have not been any incidents involving radioactive materials at the licensed location.

Please proceed with submitting your formal response. I will then review everything submitted and if appropriate will then seek concurrence/approval from a Senior License Reviewer. Thank you.

Jason M Kelly, MPH
Health Physicist
Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352
Office: (630) 829-9737
Fax: (630) 515-1078
U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment
http://www.nrc.gov/

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, April 26, 2021 3:13 PM
To: Kelly, Jason <Jason.Kelly@nrc.gov>
Subject: [External_Sender] RE: Materials License No. 13-26785-01

Hi Jason. I reached out to our contact at SABIA regarding the radiation survey of the analyzer. He provided an email stating the steps they took during the source removal. That email is attached. I also have attached the 2 previous leak test certificates of the 4 sources that were removed from the analyzer.

If this information is sufficient, I will prepare a response letter with the information and send it to you.

Thanks,
Karen

From: Kelly, Jason <Jason.Kelly@nrc.gov>
Sent: Monday, April 26, 2021 12:02 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Subject: RE: RE: Materials License No. 13-26785-01

Ms. Risner:

This is helpful clarification. With regards to Item 2, was a radiation survey of the SABIA, Inc. Model XC-5000-25 analyzer or area performed prior to the demolition activities that you describe? If available, please provide the results of the radiation survey along with the information you describe below with your signed response letter.

Because the californium-252 (Cf-252) sealed sources housed within the analyzer have a relatively short half-life, the manufacturer/distributor has to account for the decreasing activity by either adding or exchanging the Cf-252 sealed sources installed in the analyzer. Do you have past records for the receipt, installation and removal of the Cf-252 sealed sources associated with this analyzer? In lieu of a radiation survey, I may be able to accept copies of past Leak Test

Reports for all sealed sources previously used with the analyzer as documentation that there is no remaining material and/or radioactive contamination. Your request did include some Leak Test Reports for four Cf-252 sealed sources, but it is not clear to me if this accounts for all of the Cf-252 sealed sources previously used with this analyzer. If these four Cf-252 sealed sources were the only applicable sealed sources installed and used with this analyzer, you may so state that in your signed response letter.

Jason M Kelly, MPH
Health Physicist
Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352
Office: (630) 829-9737
Fax: (630) 515-1078

http://www.nrc.gov/

From: Risner, Karen M. <KRisner@peabodyenergy.com>
Sent: Monday, April 26, 2021 11:29 AM
To: Kelly, Jason <Jason.Kelly@nrc.gov>
Subject: [External_Sender] RE: Materials License No. 13-26785-01

Jason,

I am reviewing your request for additional information dated 4/20/21. Attached is the decommissioning paperwork from SABIA. Is this sufficient to satisfy the request?

The Somerville Mine has closed, and Somerville washplant has been demolished. There is no longer any coal being processed or analyzed. You are correct that the location can be removed as an authorized location of use and storage of radioactive material and we are decommissioning the Material Analyzer.

I can put the attached documents with a cover letter stating that we have closed the Somerville Mine and the washplant is no longer in use. I will also include that there have been no incidents involving radioactive materials at the licensed location.

Thanks,
Karen

From: Kelly, Jason <Jason.Kelly@nrc.gov>
Sent: Tuesday, April 20, 2021 5:47 PM
To: Risner, Karen M. <KRisner@peabodyenergy.com>
Cc: Pancake, Alan <APancake@peabodyenergy.com>
Subject: Materials License No. 13-26785-01

Ms. Risner:

Attached is a request for additional or clarifying information regarding the letter dated April 8, 2021, signed by Alan Pancake, RSO.

In summary, please clarify if you are requesting the removal of license authorization for the possession and use of the SABIA, Inc., Model XC-Series-25 Materials Analyzer.

As the SABIA, Inc. Model XC-Series-25 Materials Analyzer was the only device authorized for use at the Somerville Central Preparation Plant, this location should also be removed as an authorized location of use and storage of radioactive material if you are decommissioning the material analyzer. If applicable, submit records demonstrating that the SABIA, Inc., Model XC-Series-25 Material Analyzer and the Somerville Central Preparation Plant are acceptable for release to unrestricted use.

Acceptable documentation may include a radiation survey of the empty SABIA, Inc., Model XC-Series-25 Material Analyzer demonstrating that all californium-252 sealed sources have been removed and there is no remaining residual radioactive contamination and/or neutron activation products. Further, please identify any incidents involving radioactive material at the Somerville Central Preparation Plant, including any incidents involving ruptured, leaking or lost sealed sources.

You may submit your response on company letterhead having the request signed by Alan Pancake, RSO, or another management representative. You are welcome to e-mail your response to me. Please contact me if either you or Mr. Pancake have any questions about this request for additional information or if you would like to arrange for a Microsoft Teams meeting to review the request letter.

Jason M Kelly, MPH
Health Physicist
Materials Licensing Branch
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532-4352
Office: (630) 829-9737
Fax: (630) 515-1078

http://www.nrc.gov/