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

Certified 7015 1730 0002 4382 8579

May 22, 2017

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

RE: Materials License Renewal
Peabody Midwest Mining LLC – Somerville & Francisco Mine Analyzer
License # 13-26785-01

To whom it may concern:

Please find enclosed a completed NRC Form 313 with attachments. Also enclosed is a copy of the current license which expires on July 31, 2017. Peabody requests a renewal of Materials License 13-26785-01.

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

Sincerely,

Karen Risner

Karen Risner
Authorized Representative

Enclosure

cc: Somerville NRC File
Francisco NRC File
James Evans
Alan Pancake

RECEIVED MAY 26 2017

NRC FORM 313 (06-2016) 10 CFR 30, 32, 33, 34 35, 36, 37, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPLICATION FOR MATERIALS LICENSE

APPROVED BY OMB: NO. 3150-0120 EXPIRES: 06/30/2019

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 FOIA, Privacy, and Information Collections Branch (T-5 F53), 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-1556 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/sr1556/. 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

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
1600 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 13-26785-01

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

Peabody Midwest Mining, LLC
566 Dickeyville Rd.
Lynnville, IN 47619

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

See Attachment A

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Karen Risner

BUSINESS TELEPHONE NUMBER: (812) 922-1048

BUSINESS CELLULAR TELEPHONE NUMBER:

BUSINESS EMAIL ADDRESS: krisner@peabodyenergy.com

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: $

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 , 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTANED 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	SIGNATURE	DATE
Alan Pancake, RSO		5-19-17

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

APPLICATION FOR RENEWAL
MATERIAL LICENSE 13-12785-01
ATTACHMENT A

ITEM	APPLICANT RESPONSE
3	**The existing license authorizes use of licensed material at the following locations:** Somerville Central Prep Plant 6280 South 1025 East Oakland City, IN 47660 Francisco Prep Plant County Road 725 East Francisco, IN 47649
5	**The existing license authorizes possession of the following materials:** A. Californium-252, sealed source, 9 sources not to exceed 108 millicuries total B. Cesium-137, sealed source, 2 sources not to exceed 25 millicuries C. Californium-252, sealed source, 1 analyzer not to exceed 6 sources, total activity 13.5 millicuries
6	**Purpose for which licensed material will be used:** 5A & 5B: To be used in Gamma-Metrics Bulk Material Analyzer Model 2000 source holder for measurements of elemental analysis of coal and measurements of density/weight. 5C: To be used in Sabia Model XC-25 Series Material Analyzer for analysis of the chemical elemental composition of coal.
7	**Individuals responsible for radiation safety program at each facility:** Alan Pancake, Radiation Safety Officer James Evans, Assistant Radiation Safety Officer **Training:** Before using licensed materials, authorized users will have successfully completed one of the training courses described in the 'Criteria' part of the section titled, 'Authorized Users' in NUREG-1556, Volume 4, Revision 1, 'Consolidated Guidance about Materials Licenses: Program-Specific Guidance About Fixed Gauge Licenses.'
8	**Training for individuals working in or frequenting restricted areas:** The applicant is not required to and should not submit its training program for individuals who in the course of employment are likely to receive occupational doses of radiation in excess of 1mSv (100 mrem) in a year (occupationally exposed workers) and ancillary personnel to the NRC for review during the licensing phase.

9	**Facilities and Equipment:** The applicant will ensure that the location of each fixed gauge meets the criteria in Section 8.9, 'Facilities and Equipment,' in NUREG-1556, Volume 4, Revision 1, 'Consolidated Guidance About Materials Licenses: Program Specific Guidance About Fixed Gauge Licenses.
10	**Radiation Safety Program:** **Radiation Monitoring Instruments:** Surveys according to 10 CFR 20.1501 will be performed by a person specifically authorized by the NRC or an Agreement State to perform these surveys. **Material Receipt and Accountability:** Physical inventories will be conducted every 6 months or at other intervals approved by the NRC to account for all sealed sources and devices received and possessed under the license. **Occupational Dose:** The applicant will maintain, for inspection by the NRC, documentation demonstrating that unmonitored individuals are not likely to receive a radiation dose in excess of the limits in 10 CFR 20.1502(a). **Operating, Emergency and Security Procedures:** Operating, emergency, and security procedures will be developed, implemented, maintained, and distributed, and will meet the criteria in Section 8.10.6, 'Operating, Emergency, and Security Procedures' in NUREG-1556, Volume 4, Revision 1, 'Consolidated Guidance About Materials Licenses: Program Specific Guidance About Fixed Gauge Licenses.' **Leak Test:** Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the SSD registration certificate. Leak tests will be performed by an organization licensed by the NRC ofr an Agreement State to provide leak testing services to other licensees; or using a leak test sample collection kit supplied by an organization licensed by the NRC or an Agreement State to provide leak test kits and/or sample analysis services to other licensees and according to the kit suppliers instructions. Records of leak test results will be maintained. **Routine Maintenance:** The applicant will implement and maintain procedures for routine maintenance of analyzers according to each manufacturer's or distributor's written recommendations and instructions. **Non-Routine Maintenance:** The analyzer manufacturer, distributor, or other person licensed by the NRC or an Agreement State will perform non-routine operations such as installation, initial radiation survey, repair and maintenance of radiological safety components, relocation, replacement, alignment, removal from service, and disposal of sealed sources.
11	**Waste Management:** The licensee will establish and include gauge transfer and waste disposal procedures in its radiation protection program.

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 11

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with the letter dated **January 9, 2015,**
1. Peabody Midwest Mining, LLC	3. License number 13-26785-01 is amended in its entirety to read as follows:
2. 7100 Eagle Crest Blvd. Evansville, IN 47715	4. Expiration date July 31, 2017
	5. Docket No. 030-34405 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Californium-252	A. Sealed Source (Amersham Model CVN.CY6 or Frontier Technology Model 100 Series or Monsanto Model MRC 2765)	A. 9 sources not to exceed 108 millicuries total. Total activity 108 millicuries.
B. Cesium-137	B. Sealed Sources (Isotopes Products Labs Model 225 or Amersham Models CDC.704 and CDC.705)	B. 2 sources not to exceed 25 millicuries. Total activity 25 millicuries.
C. Californium-252	C. Sealed Sources (AEA Technologies, Inc. Models CVN.CN2, CVN.CY6, CVN.5, CVN.6, CVN.7, CVN.10, and CVN.11; Frontier Technology Models 100 and 100S)	C. One analyzer, not to exceed 6 sources. Total activity 13.5 millicuries.

9. Authorized Use:

A. and B. To be used in Gamma-Metrics Bulk Material Analyzer Model 2000 source holder for measurements of elemental analysis of coal and measurements of density/weight.

C. To be used in Sabia Model XC-25 Series material analyzer for analysis of the chemical elemental composition of coal.

CONDITIONS

10. A. Licensed material listed in Subitems 6.A and 6.B. shall be used at the licensee's facility located at Francisco Mine, County Road 850 East, Francisco, Indiana.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
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Docket or Reference Number
030-34405

Amendment No. 11

B. Licensed material listed in Subitem 6.C. shall be used at the licensee's facilities located at Somerville Central Mine, R.R. #3, Box 155, Oakland City, Indiana.

11. A. The Radiation Safety Officer (RSO) for this license is **Alan Pancake.**

B. The Assistant Radiation Safety Officer for this license is James Evans.

12. Licensed material shall only be used by, or under the supervision of individuals who have received the training described in Facsimile dated July 24, 2007. The licensee shall maintain records of individuals designated as users for 3 years following the last use of licensed material by the individual.

13. A. Sealed sources shall be tested for leakage and/or contamination at intervals not to exceed the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State.

B. Notwithstanding Paragraph A of this condition, sealed sources designed to primarily emit alpha particles shall be tested for leakage and/or contamination at intervals not to exceed 3 months.

C. In the absence of a certificate from a transferor indicating that a leak test has been made within the intervals specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or by an Agreement State, prior to the transfer, a sealed source received from another person shall not be put into use until tested and the test results received.

D. Sealed sources need not be tested if they contain only hydrogen-3; or they contain only a radioactive gas; or the half-life of the isotope is 30 days or less; or they contain not more than 100 microcuries of beta and/or gamma emitting material or not more than 10 microcuries of alpha emitting material.

E. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer. No sealed source shall be stored for a period of more than 10 years without being tested for leakage and/or contamination.

F. The leak test shall be capable of detecting the presence of 0.005 microcurie (185 becquerels) of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie (185 becquerels) or more of removable contamination, a report shall be filed with the U.S. Nuclear Regulatory Commission in accordance with 10 CFR 30.50(c)(2), and the source shall be removed immediately from service and decontaminated, repaired, or disposed of in accordance with Commission regulations.

G. Tests for leakage and/or contamination, limited to leak test sample collection, shall be performed by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. The licensee is not authorized to perform the analysis. Analysis of leak test samples must be performed by persons specifically licensed by the Commission or an Agreement State to perform such services.

H. Records of leak test results shall be kept in units of microcuries and shall be maintained for 3 years.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
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Docket or Reference Number
030-34405

Amendment No. 11

14. Sealed sources containing licensed material shall not be opened or sources removed from source holders by the licensee, except as specifically authorized.

15. The licensee shall conduct a physical inventory every 6 months, or at other intervals approved by the U.S. Nuclear Regulatory Commission, to account for all sealed sources and/or devices received and possessed under the license. Records of inventories shall be maintained for 5 years from the date of each inventory, and shall include the radionuclides, quantities, manufacturer's name and model numbers, and the date of the inventory.

16. A. Each gauge shall be tested for the proper operation of the on-off mechanism (shutter) and indicator, if any, at intervals not to exceed 6 months or at such longer intervals as specified in the certificate of registration issued by the U.S. Nuclear Regulatory Commission pursuant to 10 CFR 32.210 or the equivalent regulations of an Agreement State.

    B. Notwithstanding the periodic on-off mechanism (shutter) and indicator test, the requirement does not apply to gauges that are stored, not being used, and have the shutter lock mechanism in a locked position. The gauges exempted from this periodic test shall be tested before use.

17. The following services shall not be performed by the licensee: installation, initial radiation surveys, relocation, removal from service, dismantling, alignment, replacement, disposal of the sealed source and non-routine maintenance or repair of components related to the radiological safety of the gauge (i.e., the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, shielding). These services shall be performed only by persons specifically licensed by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services.

18 A. The licensee may maintain, repair, or replace device components that are not related to the radiological safety of the device containing byproduct material and that do not result in the potential for any portion of the body to come into contact with the primary beam or in increased radiation levels in accessible areas.

    B. The licensee may not maintain, repair, or replace any of the following device components: the sealed source, the source holder, source drive mechanism, on-off mechanism (shutter), shutter control, or shielding, or any other component related to the radiological safety of the device, except as provided otherwise by specific condition of this license.

19. Prior to initial use and after installation, relocation, dismantling, alignment, or any other activity involving the source or removal of the shielding, the licensee shall assure that a radiological survey is performed to determine radiation levels in accessible areas around, above, and below the gauge with the shutter open. This survey shall be performed only by persons authorized to perform such services by the U.S. Nuclear Regulatory Commission or an Agreement State.

20. The licensee shall operate each device containing licensed material within the manufacturer's specified temperature and environmental limits such that the shielding and shutter mechanism of the source holder are not compromised.

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Amendment No. 11

21. The licensee shall assure that the shutter mechanism of each device is locked in the closed position during periods when a portion of an individual's body may be subject to the direct radiation beam. The licensee shall review and modify, as appropriate, its "lock-out" procedures whenever a new device is obtained to incorporate the device manufacturer's recommendations.

22. Except for maintaining labeling as required by 10 CFR Part 20, or 71, the licensee shall obtain authorization from the U.S. Nuclear Regulatory Commission before making any changes in the sealed source, device or source-device combination that would alter the description or specifications as indicated in the respective certificate of registration issued either by the Commission pursuant to 10 CFR 32.210 or by an Agreement State.

23. The licensee is authorized to transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

24. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Application dated March 13, 2007;

    B. Letters dated March 13, 2007, August 2, 2011 (with attachments), January 9, 2012, February 28, 2012, and **February 20, 2104,** and;

    C. Facsimiles dated May 29, 2007 (with attached application and its Attachment A), a second one also dated May 29, 2007 (addressing two replacement Assistant RSOs), and July 24, 2007 (modified Attachment A to renewal application).

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date FEB 27 2015

By William P. Reichhold
William P. Reichhold
Materials Licensing Branch
Region III

Peabody Midwest Mining, LLC
566 Dickeyville Rd.
Lynnville, IN 47619

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