

NRC FORM 313  
(4-2004)  
10 CFR 30, 32, 33,  
34, 35, 36, 39, and 40

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0120

EXPIRES: 10/31/2005

Estimated burden per response to comply with this mandatory collection request: 7 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 Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [infocollects@nrc.gov](mailto:infocollects@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.

APPLICATION FOR MATERIAL LICENSE

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY  
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, MISSISSIPPI, 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  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PA 19406-1415

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, 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  
611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TX 76011-4005

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

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Cumberland Coal Resources LP  
855 Kirby Rd  
Waynesburg Pa. 15370  
attn: Preparation Plant Paul Bradley

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

Cumberland Coal Resources LP  
855 Kirby Rd  
Waynesburg Pa. 15370  
attn: Paul Bradley

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Paul Bradley

TELEPHONE NUMBER

(724) 852-5704

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 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 (See 10 CFR 170 and Section 170.31)

FEE CATEGORY

AMOUNT ENCLOSURE \$ 1,200.00

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, 39, AND 40, AND THAT ALL INFORMATION CONTAINED 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

Paul B Bradley Radiation Safety Officer

SIGNATURE

Paul B Bradley

DATE

4-20-05

FOR NRC USE ONLY

TYPE OF FEE FEE LOG FEE CATEGORY AMOUNT RECEIVED CHECK NUMBER COMMENTS

APPROVED BY

DATE

- 5) Radioisotope – Californium -252 (neutrons ) Sealed Sources per NR-1195 – D -103 –S maximum activity 25 micrograms (13.5 mCi ) Manufacturer and Model No. –SABIA On –Belt Model XC -5000 -25 Nuclear Elemental Analyzer for Coal (NR-1195 –D-103 – S )
- 6) The fixed gauge will be used for the purposes listed on the SSD registration Certificated. The Model XC-5000 is designed to perform a complete on-line elemental analysis of a moving stream of coal materials, run –of –mine, stockpile, and finished product. It utilizes the well-established technique of neutron induced gamma spectroscopy (also known as PGNA) to deliver an on-line, real-time, precise and accurate analysis of the materials on a moving conveyor belt once every minute.
- 7) RSO Officer is Paul Bradley
- Training: 1) 24 Hour Radiation Safety Officer Training and Instruction as required by NUREG-1556, Volume 1, Appendix D and NUREG-1556, Volume 4, Appendix G and 49 CFR 172, Subpart H presented by Applied Health Physics, Inc October 6<sup>th</sup> through October 8<sup>th</sup> , 2003
- 2) Sabia Radiation Safety Training Course July 2004
- 8) Training for the Radiation Safety Officer and Authorized Users will be to the guidelines outlined in NUREG-1556, Volume 4 Appendix G.
- 9) Facilities and Equipment: we will ensure that the location of each fixed gauge meets the criteria in the section entitled “ Facilities and Equipment “ in NUREG-1556, Volume, 4, dated August 1998.
- 10) Radiation Safety Program: See Attachment
- 11) No response

**EMERGENCY PROCEDURES  
for  
DEVICES CONTAINING NUCLEAR SOURCES**

Emergency procedures in case of an accident involving a device containing a nuclear source or in the event of damage to the source or source shielding.

**Secure the area immediately:**

- **Sabia Analyzer** Rope off an area at least **50** feet in all directions around the gauge.
- Berthold Density Gauge, 6th floor behind H.M. Vessel. Block access to stairs next to Flotation Cells at the fifth floor. Block access to 6th floor. Leave stairway open on the east side of the 6th floor and also the walkway on the north side and access to the 6th floor MCC Room.
- Berthold Belt scale on C-Belt at the Harbor. Block walkway access to C-Belt. If the gauge and nuclear source cannot be located do not allow loaded barges to leave the harbor until the source location is verified.
- Berthold Density Gauge, 3rd floor by new MCC Room. Block an area 25 feet around the gauge. Block off both doors to the EE Room, block access to the old MCC Room from the New Control Room, block access behind #2 and #3 Clean Coal D&R Screens and also block access behind the 1100 Centrifuge.

**Notify Radiation Safety Officer Immediately:**

**Paul Bradley**  
RAG Cumberland RSO

Work - 724) 852-5704  
Home- [REDACTED]

**Terry Dayton**  
Environmental Engineer

Work- (724) 627-2219  
Home- [REDACTED]

- The Radiation Safety Officer will notify the device manufacturer. The device manufacturer will come to the site and assess the danger from or damage to the source.
- The Radiation Safety Officer will notify the NRC within 24 hours of any theft, accident or incident involving the gauge.
- Cumberland employees shall not move a gauge with a nuclear source present. They may assist a qualified manufacturer's representative in moving a gauge after the snutter is closed and locked out by the representative.
- Nuclear gauges present no major health dangers if basic precautions are taken and common sense used. By following proper procedures and principles of radiation protection, and by helping others do likewise, you can feel comfortable and assured that your workplace is a safe one.

Copies of the following documents are available for employee review  
In the Environmental Engineer's Office.

CFR 10, 19, 20, 21

Section 206 of Energy Operating and Emergency Reorganization Act of 1974

**PERSONAL INFORMATION WAS REMOVED  
BY NRC. NO COPY OF THIS INFORMATION  
WAS RETAINED BY THE NRC.**

# **Emergency Procedures**

## **INTRODUCTION**

The purpose of this procedure is to define the proper actions which should be taken in an emergency.

## **FIRE**

In case of fire in, on, or near a radiation gauge, the proper precautions are:

Remove power from the radiation gauge.

Clear personnel from the area near the gauge.

Rope off area of 50 feet from analyzer and prevent personnel from entering area.

Perform steps to control fire, if practical.

Notify safety authorities or fire authorities of the fire and of the presence of the radiation gauge.

Following fire, perform radiation survey of the radiation gauge and of the area near the gauge.

Contact:

SABIA Field Service at (304) 357-7392

Nuclear Regulatory Commission, notify of the fire, condition of gauge, and request any assistance or recommendations at (301) 816-5100 or (301) 951-0550.

## **RADIATION GAUGE DAMAGE**

In case of damage to a radiation gauge, the proper precautions are:

Remove power from the radiation gauge.

Clear personnel from the area near the gauge.

Rope off area of 50 feet from analyzer and prevent personnel from entering area.

Perform radiation survey of the radiation gauge and of the area near the gauge.

Following proof of radiation levels less than 2 mR/hr in accessible areas, verify the operation of the source shutter mechanism, and close and lock the shutter in the **OFF** position.

Contact manufacturer for assistance or recommendations for repair to the radiation gauge.

Contact:

SABIA Field Service at (304) 357-7392

Nuclear Regulatory Commission notify of accident and condition of gauge, if required at (301) 816-5100 or (301) 951-0550.

## **PERSONNEL CONTAMINATION**

In case of personnel contamination in the use of any sealed source:

Remove any contaminated clothing.

Scrub hands or other contaminated areas with soap and water to remove as much contamination as possible.

Contact:

SABIA Field Service at (304) 357-7392

Nuclear Regulatory Commission, notify of accident and request assistance, if required at (301) 816-5100 or (301) 951-0550.

# **Analyzer Safety**

The following outlines the proper safety for the SABIA elemental analyzer.

1. The analyzer contains Californium-252, a radioisotope that produces alpha particles and also produces neutrons and gamma rays through spontaneous fission. The radioactive source is double encapsulated in stainless steel. The alpha particles are stopped by the stainless steel capsule. The neutrons and gamma rays are reduced by the shielding of the analyzer.
2. This source is required to be tested at intervals of six months to ensure that there is no leakage or contamination of the Californium-252 outside of the source capsule.
3. The user is not allowed under any circumstances to work with, move, replace, repair, or perform any other work on the radioactive source or source housing, unless specifically identified on the site radiation license.
4. All leak testing, source installation, source removal, source replenishment, or other maintenance is only to be performed by SABIA personnel or by other persons specifically licensed to perform the work.
5. The user is not allowed to remove or replace any components on the source housing.
6. All maintenance on the source housing, including replacement or repairs to the electronic detector are only to be performed by SABIA trained field personnel.

## RADIATION SAFETY PROGRAM

- a. Audit Program – On file at Foundation Coal Co., Cumberland Mine.
- b. Survey Instruments – We will use instruments that meet the Criteria in the section entitled “Radiation Safety Program – Instruments”, in NUREG-1556, Vol. 4, dated August 1998. Each survey meter will be calibrated by the manufacturer or other person authorized by the NRC or an Agreement State to perform survey meter calibrations.
- c. Material Receipt and Accountability – Physical inventories will be conducted at intervals not to exceed 6 months or at other intervals approved by the NRC, to account for all sealed sources and devices received and possessed under the license.
- d. Occupational Dosimetry – Company will perform a prospective evaluation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10% of the allowable limits in 10CFR Part 20 or company will provide dosimetry that meets the criteria in section entitled “Radiation Safety Program – Occupational Dosimetry”, in NUREG-1556, Vol 4, dated August 1998.
- e. Public Dose – No response required.
- f. Operating & Emergency Procedures – Operating and emergency procedures will be developed, implemented, maintained, and distributed, and will meet the criteria in section entitled “Radiation Safety Program – Operating and Emergency Procedures”, in NUREG-1556, Vol 4, dated August 1998.
- g. Leak Test – Leak tests will be performed at intervals approved by the NRC or an Agreement State and specified in the Sealed Source and Device Registration Certificate. Leak tests will be performed by an organization authorized by the NRC or Agreement State to provide leak testing services for other licensees or using a leak test kit supplied by an organization authorized by the NRC or an Agreement State to provide leak test kits to other licensees and according to the kit suppliers’ instructions.
- h. Maintenance
  - I. Routine Maintenance – We will implement and maintain procedures for routine maintenance of our fixed gauges according to each manufacturers or distributors written recommendations and instructions.
  - II. Non-Routine Maintenance Operations – The gauge manufacturer, distributor or other person authorized by the NRC or an Agreement State will perform non-routine operations such as installation, initial radiation survey, repair,

and maintenance of components related to the radiological safety of the gauge, gauge relocation, replacement, and disposal of sealed sources, alignment, or removal of a gauge from service.

- i. Transportation – No response required
- j. Fixed Gauges Used at Temporary Job Sites – This is not applicable to our program. We will not use fixed gauges at temporary job sites.
- k. Minimization of Contamination – No response required



This is to acknowledge the receipt of your letter/application dated

4/20/2005, and to inform you that the initial processing which includes an administrative review has been performed.

☒ New License Application (03086930)  
There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

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A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 136924.  
When calling to inquire about this action, please refer to this control number.  
You may call us on (610) 337-5398, or 337-5260.

