LANCE R. LEFLEUR
DIRECTOR

KAY IVEY
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Alabama Department of Environmental Management
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Montgomery, Alabama 36130-1463
(334) 271-7700 ■ FAX (334) 271-7950

January 4, 2023

Mr. Eric Martin
Peabody Southeast Mining, LLC
654 Camp Creek Portal Road
Oakman, AL 35579

RE: **UIC PERMIT NUMBER ALSI9937717**
Shoal Creek Mine
8005 Nancy Ann Bend Road
Adger, Jefferson County, AL

Dear Mr. Martin:

A **Draft** copy of the permit is enclosed for your review.

If you have any comments on the draft permit, please submit them to this office **within the next thirty (30) days** so that any issues of concern might be resolved.

If you have any questions concerning this permit, please contact me at (334) 271-7959 or jessica.spence@adem.alabama.gov.

Sincerely,

Jessica Spence

Jessica Spence
UIC Program

Enclosure

JS/

Birmingham Branch
110 Vulcan Road
Birmingham, AL 35209-4702
(205) 942-6168
(205) 941-1603 (FAX)

Decatur Branch
2715 Sandlin Road, S.W.
Decatur, AL 35603-1333
(256) 353-1713
(256) 340-9359 (FAX)

Mobile Branch
2204 Perimeter Road
Mobile, AL 36615-1131
(251) 450-3400
(251) 479-2593 (FAX)

Mobile-Coastal
3664 Dauphin Street, Suite B
Mobile, AL 36608-1211
(251) 304-1176
(251) 304-1189 (FAX)

UNDERGROUND INJECTION CONTROL PERMIT

PERMITTEE:	**Peabody Southeast Mining, LLC**
FACILITY/LOCATION:	**Shoal Creek Mine** **8005 Nancy Ann Bend Road** **Adger, Jefferson County, Alabama** **Lat: N 33.485313º/Long: W -87.270799º**
PERMIT NUMBER:	**ALSI9937717**
INJECTION WELL CLASS:	**Class V**
SOURCE OF POLLUTANTS:	**Injection of coal washer slurry into abandoned sections of the Shoal Creek Mine.**

In accordance with and subject to the provisions of the Safe Drinking Water Act, as amended, 42 U.S.C. §§ 300f-300j (the "SWDA"), the Alabama Water Pollution Control Act, as amended, ***Code of Alabama 1975,*** *§§ 22-22-1 to 22-22-14, (the "AWPCA"), the Alabama Environmental Management Act, as amended,* ***Code of Alabama 1975****, §§ 22-22A-1 to 22-22A-15, and rules and regulations adopted thereunder, and subject further to the terms and conditions set forth in this permit, the Permittee is hereby authorized to construct and operate injection well(s) of the above-described class.*

ISSUANCE DATE:

EFFECTIVE DATE:

EXPIRATION DATE:

_____

Alabama Department of Environmental Management

PART I Authorization to Operate

A. The permittee is authorized to operate Class V Injection Well(s) at the facility described in the permit application and in the cover page of this permit, in accordance with the provisions set forth in this permit.

B. Only the coal washer slurry wastewater described in the reissuance application approved by the Alabama Department of Environmental Management (ADEM) shall be injected.

C. This permit and the authorization to inject shall remain in effect until the expiration date stated on the cover page of this permit. If the permittee desires to continue injection past the expiration date of this permit, the permittee shall request a permit reissuance at least 180 days prior to expiration of this permit.

PART II Construction Requirements

A. Injection Well Requirements

1. Injection shall only be via the injection wells proposed in the original permit application, permitted modifications, and permit renewals issued by ADEM; or approved by ADEM. To obtain ADEM approval for construction and operation of auxiliary well(s), the permittee must provide the following 30 days prior to construction of the well(s):

   a) a plan view of the site which shows the location of the well(s)

   b) a sectional view of the well(s) which indicates the depth of the well(s) and how the well(s) will be constructed

2. The injection zone shall be the abandoned section(s) of the coal mine described in the original permit application, permitted modifications, and permit renewals issued by ADEM.

3. The annulus around each injection well casing above the injection zone shall be sealed to prevent passage of surface water, groundwater, or injected fluids.

4. The permittee shall submit to ADEM as built descriptions and geologic logs of each injection well within 60 days after drilling.

5. The permittee shall provide a means of sampling the wastewater being injected after treatment and prior to injection.

B. Monitoring Well Construction

1. The permittee shall maintain monitoring well(s) down gradient of the injection zone for the purpose of monitoring groundwater quality.

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2. Each monitoring well shall include the following:

   a) The permittee shall screen the monitoring well in the target monitoring zone.

   b) The annulus around the well casing above the well screen shall be sealed with bentonite to prevent the passage of surface water and/or injection fluids.

   c) The surface installation shall include a concrete protective pad around the base of the well, a metal protective casing, and a locking cap.

3. All surface water shall be routed away from the monitoring well's surface installation.

4. The permittee shall submit to ADEM as built descriptions and geologic logs of monitoring wells within 60 days after drilling.

C. Modifications

Approval by ADEM shall be obtained prior to modification of any injection well or supporting surface. Modification shall mean any action that will change the configuration of the well beneath the surface, the methods of monitoring injection, or will result in injection of a fluid not specifically authorized by this permit.

PART III Monitoring and Operating Requirements

A. Injection Fluid

1. The permittee shall not inject any substance that is defined as hazardous or toxic by Federal or State laws or regulations or any substance not identified in the application for this permit. The use or injection of substances other than those identified in the permit application is prohibited.

2. The permittee shall monitor the fluid to be injected as specified in Appendix A of this permit.

3. The permittee shall not exceed the limits established in Appendix A of this permit. Injection is prohibited if this condition is not satisfied.

4. ADEM may change the sampling requirements if the sampling data indicates a need to do so.

B. Loss of Injection Zone Integrity

The permittee shall cease injection if a loss of injection zone integrity occurs during operations.

C. Monitoring Well

1. The permittee shall sample the monitoring well in accordance with Appendix B of this permit. The permittee is required to sample the well prior to injection and in accordance with Appendix B of this permit to establish background quality conditions.

2. The permittee shall not exceed the limits established in Appendix B of this permit.

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3. The permittee shall purge the monitoring well prior to sampling.

4. ADEM may change the sampling requirements if the sampling data indicates a need to do so.

D. Test Procedures

Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 of the Federal Register and guidelines published pursuant to Section 304(h) of the Federal Water Pollution Control Act (FWPCA). If more than one method of analysis of a substance is approved for use, a method having a detection limit lower that the permit limit shall be used. If the detection limit of all methods is higher than the permit limit, the method having the lowest detection limit shall be used and a report of less than detection limit shall constitute compliance. However, should the Environmental Protection Agency (EPA) approve a method with a lower detection limit during the term of this permit the permittee shall use the newly approved method.

E. Operation

1. The injection well(s) operated under this permit shall function properly and wastewater shall not surface. Should the injection well(s) fail to function properly, the permittee shall take immediate corrective action to include cessation of injection.

2. Within 30 days upon the effective date of this permit, the permittee shall submit an effective spill prevention plan to address all aspects of transportation and disposal of liquid waste related to injection operations at the facility. The spill prevention plan must describe the operation, type of liquid waste generated, methods of liquid waste disposal, and methods used for transport of liquid wastes to disposal sites. The plan must describe the measures to be used to detect leaks or ruptures in pipelines and to detect plugging or overflow conditions at injection wells. Where detection devices are used to automatically detect leaks and ruptures, the plan must describe how often each device is tested to ensure proper operation, who performs the testing, and require a written record to be maintained of the date of testing and the person performing the testing. When visual inspections are made to detect leaks and ruptures, the plan must describe the inspection, frequency of inspection, the persons who perform the inspections and reports and records to be maintained to document the date of inspections, who performed the inspections and the findings. The plan must describe the containment structure installed at the injection well; devices installed in containment structures to automatically detect when a well plugs and which will automatically shut down the pumping system; describe the frequency of testing for such devices to insure proper operation; indicate the persons who perform the testing; and identify reports and records to be made to document the person(s) performing such testing, date and results of testing and inspection.

   a) The plan must include emergency procedures to be followed to contain any spill that occurs and to mitigate the impact to receiving waters. Provisions must be included for notification of appropriate regulatory authorities (list) in the event such a spill occurs. The plan must state that a site-specific cleanup and mitigation plan will be developed in the event of a spill to minimize adverse impacts to the environment from that spill.

   b) The plan submitted must be prepared by an Alabama Registered Professional Engineer and signed by a company official. A letter by the company official must

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be submitted to the Department certifying that the spill protection plan satisfies conditions of this permit and has been implemented.

c) The permittee shall address to the satisfaction of the Department, any deficiencies in the plan identified by the Department.

3. The permittee shall adopt the following best management practices:

a) Inspect terminal equipment, tanks, and chemical containers regularly for leaks.

b) Calibrate treatment and application equipment regularly.

c) Comply with Federal, State, and local solids and liquid waste disposal regulations.

PART IV Records, Reports, & Submittals

A. Records

1. The permittee shall record the information listed below for all monitoring activities:

a) The date, exact place, and time of sampling or sampling measurement(s);

b) The name of individual(s) who perform the sampling or measurement(s);

c) The date(s) analyses were performed;

d) The name of the individual(s) who performed the analyses;

e) The analytical or technical methods used;

f) The results of each analysis performed; and

g) The completed chain-of-custody forms for all samples collected.

2. The permittee shall retain all records concerning the data used to complete the permit application, the operation of the wells, and the nature and composition of pollutants injected; to include records of the calibration of instruments, meters and gauges, quality control records, and recordings from continuous monitoring instrumentation; until at least three years after the closure of well(s).

3. When requested by ADEM, the permittee shall deliver copies of any of the records maintained in accordance with this permit.

B. Reports

1. The permittee shall submit not later than 28 days after the reporting period, a monitoring report which shall include:

a) The date and exact place of sampling;

b) The results of each analysis performed.

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2. The permittee shall report to ADEM any of the following:

   a) Any planned action which will change the use of the injection wells, will result in injection of a fluid different from that authorized by this permit, will change the method of operations of any injection well, or will change the method of the monitoring of well operations or injected fluids.

   b) Any planned transfer of ownership of all or part of the permitted facility.

   c) Any relevant facts of which the permittee becomes aware which should have been submitted in a permit application and any corrections to data previously submitted in a permit application.

3. Other Submittals

   Studies, engineering reports, plans and specifications, plugging and abandonment plans, logging reports, and other technical documents submitted to comply with this permit shall be prepared by or under the supervision of qualified persons defined by Rule 6-8-.13 of the Underground Injection Control (UIC) Regulations of the ADEM.

4. **Within 30 days upon the effective date of this permit the permittee must enroll and participate in the Department's Alabama Environmental and Permitting Compliance System (AEPACS) (https://adem.alabama.gov/aepacs).** Once the permittee is enrolled in the system, the permittee must utilize the system for the submittal of DMRs. If the system is down due to technical problems originating with the Department's system, the permittee is not relieved of the obligation to submit DMR data by the required submittal date via faxing, e-mailing, mailing, or hand-delivery of data such that they are received by the required reporting date.

PART V Plugging and Abandonment

A. Within 90 days from the effective date of this permit, the permittee shall submit to the ADEM a Plugging and Abandonment Plan for the injection wells.

B. The permittee shall submit to the ADEM an updated, well specific Plugging and Abandonment Plan within the 90 day period immediately following the termination of the useful life of any injection well and shall properly plug and abandon the injection well within 180 days following the termination.

C. The permittee shall submit a report to the ADEM documenting the plugging and abandonment of any well within 30 days of the date that abandonment actions are completed.

D. The permittee shall perform any abandonment and closure actions that may be required by ADEM to remove a threat to groundwater quality or to the health of persons which is caused by the injection activity.

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PART VI Permit Modification, Revocation, Suspension, and Termination

A. ADEM may impose emergency additional conditions to this permit when necessary to protect waters of the state from pollution. These conditions may include suspension of the permit to inject and shall remain in effect until the permit is modified, revoked, suspended or terminated in accordance with Rules 6-8-.12(a)3-5 and 6-8-.12(f) of the UIC Regulations of ADEM.

B. Non-emergency permit modification, revocation, suspension, and termination actions shall be accomplished in accordance with ADEM Administrative Code Rule 335-6-8.

PART VII General Provisions

A. The permittee shall comply with all provisions of the UIC Regulations of the ADEM and shall comply with all provisions of this permit and shall reduce or halt injection if needed to maintain compliance with the permit and regulations.

B. The permittee shall comply with all applicable Federal and State hazardous waste management regulations.

C. The permittee shall allow members of the ADEM staff to:

1. Access property and records of the permittee for purposes of inspection.

2. Collect samples of the injected fluids, process and wastewater streams associated with the permitted injection wells.

3. Collect samples from any monitoring wells.

4. Obtain copies of records upon request.

D. The permittee shall immediately take all reasonable steps to minimize or correct any adverse environmental impact resulting from the operation of the permitted injection wells.

E. This permit does not convey any property rights of any sort, or any exclusive privilege.

F. The filing of a request by the permittee for a permit modification, revocation, and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G. Any noncompliance with this permit constitutes a violation of the Alabama Water Pollution Control Act and/or the UIC Regulations and is grounds for enforcement action such as permit termination, revocation, modification; or denial of a permit renewal application.

H. Injection into waters of the state, which is this case is groundwater, in accordance with this permit shall not result in the exceedance of any primary Maximum Contaminant Level (MCL) in groundwater as established by the Environmental Protection Agency. Injection into groundwater, in accordance with this permit shall not result in a violation of a surface water quality standard.

I. All provisions of ADEM Admin. Code Rule 335-6-8-.12 are incorporated as terms and conditions of this permit by reference.

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J. The permittee authorized to discharge under this permit, who wishes to continue to discharge upon the expiration of this permit, shall submit an application for reissuance, using the Department's Alabama Environmental Permitting and Compliance System (AEPACS), unless the Permittee submits in writing valid justification as to why the electronic submittal process cannot be utilized and the Department approves in writing the utilization of hard copy submittals. The AEPACS can be accessed at the following link: http://adem.alabama.gov/AEPACS. Such application shall be submitted at least 180 days prior to the expiration date of this permit. Permit requests for initial issuance and modifications of the existing permit should all be submitted through the AEPACS system.

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APPENDIX A

The waste water discharge shall be limited and monitored by the permittee as specified below:
The following limitations shall apply to a representative sample of the decant of the slurry injection:

EFFLUENT CHARACTERISTICS	UNITS	DISCHARGE LIMITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
pH	Standard Units	Report	Quarterly	Grab
Total Suspended Solids	mg/l	Report	Quarterly	Grab
Total Dissolved Solids	mg/l	Report	Quarterly	Grab
Antimony	mg/l	Report	Quarterly	Grab
Arsenic	mg/l	Report	Quarterly	Grab
Barium	mg/l	Report	Quarterly	Grab
Beryllium	mg/l	Report	Quarterly	Grab
Cadmium	mg/l	Report	Quarterly	Grab
Chromium	mg/l	Report	Quarterly	Grab
Copper	mg/l	Report	Quarterly	Grab
Cyanide	mg/l	Report	Quarterly	Grab
Lead	mg/l	Report	Quarterly	Grab
Mercury	mg/l	Report	Quarterly	Grab
Selenium	mg/l	Report	Quarterly	Grab
Thallium	mg/l	Report	Quarterly	Grab
Iron	mg/l	Report	Quarterly	Grab
Manganese	mg/l	Report	Quarterly	Grab
Volume Injected	Gallons/day	< or = vol withdrawn	Quarterly	Total
Volume Withdrawn	Gallons/day	Report	Quarterly	Total

APPENDIX B

All groundwater monitoring wells shall be sampled by the permittee as specified below:
The groundwater shall be limited by the permittee as specified below:

EFFLUENT CHARACTERISTICS	UNITS	DISCHARGE LIMITS	MONITORING REQUIREMENTS	
			FREQUENCY	SAMPLE TYPE
pH	Standard Units	Report	Quarterly	Grab
Total Suspended Solids	mg/l	Report	Quarterly	Grab
Total Dissolved Solids	mg/l	Report	Quarterly	Grab
Antimony	mg/l	0.006	Quarterly	Grab
Arsenic	mg/l	0.01	Quarterly	Grab
Barium	mg/l	2	Quarterly	Grab
Beryllium	mg/l	0.004	Quarterly	Grab
Cadmium	mg/l	0.005	Quarterly	Grab
Chromium	mg/l	0.1	Quarterly	Grab
Copper	mg/l	Report	Quarterly	Grab
Cyanide	mg/l	0.2	Quarterly	Grab
Lead	mg/l	0.015	Quarterly	Grab
Mercury	mg/l	0.002	Quarterly	Grab
Selenium	mg/l	0.05	Quarterly	Grab
Thallium	mg/l	0.002	Quarterly	Grab
Iron	mg/l	Report	Quarterly	Grab
Manganese	mg/l	Report	Quarterly	Grab

Due to the fact that inorganic constituents can sometimes be present at levels which exceed drinking water standards, the permit will allow the discharge to continue as long as the discharge does not cause a significant increase in levels above background concentration established prior to injection.

ADEM Permit Rationale

Date: November 30, 2022
Prepared By: Jessica Spence

Permittee Name:	Peabody Southeast Mining, LLC c/o Eric Martin 654 Camp Creek Portal Road Oakman, AL
Facility/Site Name:	Shoal Creek Mine
Location:	8005 Nancy Ann Bend Road Adger, Jefferson County, AL 35006 Latitude: 33.485313/Longitude: -87.270799
UIC Permit Number:	ALSI9937717
Draft permit is:	Reissuance
Injection Description:	Injection of coal washer slurry into abandoned sections of the Shoal Creek Mine.
Discussion:	Standard permit drafted.

1. No hazardous injection
2. Sampling point required
3. Discharge must be sampled quarterly
4. Results must be submitted in a timely manner
5. Monitoring wells will be sampled quarterly
6. Best Management Practices included in permit
7. AEPACS Requirement included in permit
8. AEPACS required to be utilized for permit reissuances/modifications/transfers