



OHIO E.P.A.

APR 29 2008

**OHIO ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF DRINKING AND GROUND WATERS** ENTERED DIRECTOR'S JOURNAL
**UNDERGROUND INJECTION CONTROL 5X13 AREA PERMIT TO DRILL AND AREA
PERMIT TO OPERATE CLASS V INJECTION WELLS**

Ohio Permit No. UIC 05-53-34-PTD-V
UIC 05-53-34-PTO-V

Applicant: Southern Ohio Coal Company
Meigs Mine Number 31

Address: P.O. Box 269
Wilkesville, Ohio

Telephone: (740) 669-7720

Facility Name: Southern Ohio Coal Company
Meigs Mine Number 31

Facility Location: Located at Fractional Section 6, Salem Township,
Meigs County, Near Salem Center, Ohio

Description: Class V Underground Injection Wells to inject a
dilute slurry (3-5% solids) of acid mine drainage
(AMD) that has been treated with sodium hydroxide
into the unused workings of the Meigs Mine
Number 31 Clarion 4A Coal Bed.

Issuance Date: April 29, 2008

Effective Date: April 29, 2008

Expiration Date: April 29, 2013

I certify this to be a true and accurate copy of the
official documents as filed in the records of the Ohio
Environmental Protection Agency.

By:  Date: 4-29-08

The above named applicant is hereby ISSUED an Area Permit to Drill and an Area Permit to Operate for the above described underground injection well pursuant to Sections 6111.043 and 6111.044 of the Ohio Revised Code and to Chapter 3745-34 of the Ohio Administrative Code. Issuance of this Area Permit to Drill and Area Permit to Operate does not constitute expressed or implied approval or agreement that, if constructed and/or modified in accordance with the specifications and/or information accompanying the permit applications, the above described activity will be in compliance with applicable State and Federal laws and rules and regulations. This Area Permit to Drill and Area Permit to Operate are issued subject to the attached conditions which are hereby incorporated and made a part hereof.

Expiration Date: This permit shall expire at midnight on the expiration date indicated above, unless terminated or modified under Chapter 3745-34 of the Ohio Administrative Code.



Chris Korleski, Director
OHIO ENVIRONMENTAL PROTECTION AGENCY

PART I
GENERAL PERMIT COMPLIANCE

A. EFFECT OF PERMIT

The permittee is authorized to engage in the operation of Class V underground injection wells in accordance with Chapter 3745-34 of the Ohio Administrative Code (OAC) and the conditions of these permits. Notwithstanding any other provisions of these permits, the permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement of injection or formation fluids into underground sources of drinking water (USDWs) if the presence of that material may cause a violation of any primary drinking water regulation under OAC Chapter 3745-81 or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in these permits is prohibited. Compliance with these permits during their term constitutes compliance for purposes of enforcement, exclusively with Sections 6111.043 and 6111.044 of the Ohio Revised Code (ORC).

Such compliance does not constitute a defense to any action brought under ORC Sections 6109.31, 6109.32 or 6109.33 or any other common or statutory law other than ORC Sections 6111.043 and 6111.044. Issuance of these permits does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of state or local law. Nothing in these permits shall be construed to relieve the permittee of any duties under applicable state and federal law, regulations, or permits.

B. PERMIT ACTIONS

1. Modification, Revocation, Reissuance and Termination. The Director may, for cause or upon request from the permittee, modify, revoke and reissue, or terminate these permits in accordance with OAC Rules 3745-34-07, 3745-34-23, and 3745-34-24. Also, the permits are subject to minor modifications for cause as specified in OAC Rule 3745-34-25. The filing of a request for a permit modification, revocation and reissuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee does not stay the applicability or enforceability of any permit condition.
2. Transfer of Permits. These permits may be transferred to a new owner or operator pursuant to OAC Rule 3745-34-22, 3745-34-23, 3745-34-24, 3745-34-25(D) or 3745-34-26(L)(3), as may become applicable.

C. SEVERABILITY

The provisions of these permits are severable, and if any provision of these permits or the application of any provision of these permits to any circumstance is held invalid, the application of such provision to any other circumstances and the remainder of these permits shall not be affected thereby.

D. CONFIDENTIALITY

In accordance with OAC Rule 3745-34-03 any information submitted to the Ohio EPA pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping words "confidential business information" on each page containing such information. If no claim is made at the time of submission, the Ohio EPA may make the information available to the public without further notice. If a claim is asserted, documentation for the claim must be tendered and the validity of the claim will be assessed in accordance with the procedures in OAC Rule 3745-34-03. If the documentation for the claim of confidentiality is not received, the Ohio EPA may deny the claim without further inquiry. Claims of confidentiality for the following information will be denied:

1. The name and address of the permittee;
2. Information which deals with the existence, absence or level of contaminants in receiving water and amounts or contents of fluids injected.

E. DUTIES AND REQUIREMENTS (OAC RULE 3745-34-26)

1. Duty to Comply. The permittee shall comply with all applicable UIC regulations and conditions of these permits. Any permit noncompliance constitutes a violation of ORC Chapter 6111, and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. Such noncompliance also may be grounds for enforcement action under other applicable state and federal law.
2. Penalties for Violations of Permit Conditions. Any person who violates a requirement of these permits is subject to injunctive relief, civil penalties, fines and/or other enforcement action under ORC Chapter 6111. Any person who knowingly or recklessly violates permit conditions may be subject to criminal prosecution.
3. Continuation of Expiring Permits. Duty to Reapply. If the permittee wishes to continue an activity regulated by these permits after the expiration date of these permits, the permittee shall submit a complete application for new permits at least 180 days before expiration of these permits.

4. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense, for a permittee in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of these permits.
5. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with these permits.
6. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of these permits. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of these permits.
7. Duty to Provide Information. The permittee shall furnish to the Director, within a time specified, any information which the Director may request in order to determine whether cause exists for modifying, revoking and reissuing, or terminating these permits, or to determine compliance with the permits. The permittee shall furnish to the Director, upon request, copies of all records required to be kept by the permittee.
8. Inspection and Entry. The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:
 - a. Enter permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of these permits;
 - b. Have access to and copy, at reasonable times any records that are required to be kept under the conditions of these permits;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under these permits; and
 - d. Sample or monitor at reasonable times for the purposes of assuring permit compliance or as otherwise authorized by ORC Chapter 6111. and OAC Chapter 3745-34, any substances or parameters at any location.

9. Records.

- a. The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all reports required by these permits for a period of at least five (5) years from the date of the sample, measurement or report or for the duration of the permitted life of the well, whichever is longer.
- b. The permittee shall maintain records of all data used to complete the permit application forms and any supplemental information submitted under OAC Rule 3745-34-16 for a period of at least five (5) years from the date the applications were signed. These periods may be extended by request of the Director during that period of time.
- c. The permittee shall retain records concerning the nature and composition of all injected fluids for three (3) years after completion of plugging and abandonment of the wells.
- d. The permittee shall continue to retain such records after the retention period specified by paragraphs (a) to (c) above, unless he delivers the records to the Director or obtains written approval from the Director to discard the records.
- e. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
- f. Records of monitoring information shall include the following as applicable pursuant to OAC Rule 3745-34-26(J)(3):
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The name(s) of the individual(s) who performed the sampling or measurements;
 - iii. A precise description of sampling methodology;
 - iv. The date(s) analyses or measurements were performed;

The name(s) of the individual(s) who performed the analyses or measurements and the laboratory that performed the analyses or measurements;
 - vi. The analytical techniques or methods used; and
 - vii. All results of such analyses.

10. Signatory Requirements. All reports or other information, required to be submitted by these permits or requested by the Director, shall be signed and certified in accordance with OAC Rule 3745-34-17. Within thirty (30) days of the effective date of this permit, the permittee shall designate the duly authorized representative for all submissions required under this permit, in written form to the Director, in compliance with OAC Rule 3745-34-17(B)(1)-(3).

11. Reporting Requirements.
 - a. Planned Changes. The permittee shall give written notice to the Director, as soon as possible, of any planned physical alterations or additions to the permitted facility. Such notice shall be given at least ten (10) days prior to the commencement of construction or implementation of any planned change. The permittee shall include as part of such written notice to the Director justification of any planned physical alterations to the permitted wells.
 - b. Anticipated Noncompliance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
 - c. Compliance Schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of these permits shall be submitted no later than thirty (30) days following each schedule date.
 - d. Twenty-four (24) Hour Reporting.
 1. The permittee shall report to the Director any noncompliance which may endanger health or the environment. Appropriate information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. The following shall be included as information which must be reported orally within 24 hours:
 - i. Any monitoring or other information which indicates that any contaminant may cause an endangerment to an underground source of drinking water.
 - ii. Any noncompliance with a permit condition, or malfunction of the injection system, which may cause unpermitted fluid migration into or between underground sources of drinking water.

2. A written submission also shall be provided within five (5) business days of the time the permittee becomes aware of the circumstances of such noncompliance. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, the anticipated time it is expected to continue; and if the noncompliance has or has not been corrected, and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance.
- e. Other Noncompliance. The permittee shall report all other instances of noncompliance not otherwise reported under paragraph (E)(11)(d) above at the time monitoring reports are submitted. The reports shall contain the information listed in permit condition 11(d)(2) above.
- f. Other Information. When the permittee becomes aware of failure to submit any relevant facts in the permit applications or that incorrect information was submitted in a permit application or in any report to the Director, the permittee shall submit such facts and corrected information within ten (10) days.
- g. If the authorization under Part I (E)(10) of this permit is no longer valid, a new authorization satisfying the requirements of OAC Rule 3745-34-17(B) and (C) shall be submitted in written form prior to or together with any reports, information or applications requiring the signature and certification of the authorized signatory.
- h. Monthly Operating Reports shall be submitted as required in Part II of this permit.

F. PLUGGING AND ABANDONMENT

1. Plan for Plugging and Abandonment. At least thirty (30) days before any well installed pursuant to these permits is taken out of service, the permittee shall submit to the Ohio Environmental Protection Agency a plan for the plugging and abandonment of such well per OAC Rule 3745-34-13(F). The required plan shall specify procedures and contain such other provisions as are necessary to ensure that no movement of fluids into an underground source of drinking water is allowed. After review and acceptance of this plan by the Ohio Environmental Protection Agency, that plan shall automatically become a condition of this permit.

2. Abandonment Requirements. Injection wells declared as temporarily abandoned shall be maintained in strict compliance with Rule 3745-9-09 of the OAC to ensure that the well will not endanger underground sources of drinking water during the period of temporary abandonment. Injection wells declared as permanently abandoned shall be plugged in accordance with Rule 3745-9-10(c) of the OAC.
3. Abandonment Report. Within thirty (30) days after abandoning the well, the permittee shall submit a report to the Director. The report shall be certified as accurate by the person who performed the abandonment operation and by the permittee and shall contain a statement defining the abandonment procedure. At a minimum, the report shall include: Surface and subsurface diagrams locating the position at which the plugs are situated (if applicable); and, a description of all casing, subsurface structures and piping left in the well or subsurface.

G. FINANCIAL RESPONSIBILITY

1. Financial Responsibility. The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner consistent with Chapters 3745-9 and 3745-34 of the OAC. The permittee is required to show evidence of current financial responsibility to the Director in the form of a surety bond submitted within 45 days of the effective date of this permit, and once every twelve (12) months thereafter.

H. CORRECTIVE ACTION

1. The permittee shall develop a corrective action plan in the event that routine monitoring or any other information indicates that primary drinking water standards as defined in Chapter 3745-81 of the OAC, are or may be exceeded in any USDW as a result of injection activities.

Such plan shall include a determination of the nature, rate, and extent of the degradation. The Director may also require the plan to include appropriate remedial actions including, but not limited to discontinuance of injection operations.

2. The plan for corrective action shall be submitted to the Director within thirty (30) days of the date the permittee discovers evidence, or is notified by the Director, that an exceedance of one or more primary drinking water standards as defined in OAC Chapter 3745-81 is resulting or may be resulting in a USDW from the injection well operation. The corrective action plan shall be subject to review and approval by Ohio EPA prior to implementation.

PART II
SPECIAL PERMIT CONDITIONS

WELL CONSTRUCTION AND COMPLETION

1. The injection wells shall be continuously cased and grouted from the ground surface to the top of the injection zone using either eight (8) inch, HDPE SDR 11 pipe or eight (8) inch, PVC CertainTeed: Certa-Lok, well casing. Ohio EPA will be notified of the casing material selected, thirty (30) days prior to installation of the well casing and a detailed as-built drawing of the well shall be submitted following completion of construction.

The surface injection well entries will be connected directly to piping used to transfer the sludge from the Mine 31 treatment plant. The sludge (AMD treatment slurry) will flow to a concrete sump or similar structures where it will flow by gravity to one or both of the injection wells. The surface piping, valving and well casing will limit combined flow to the wells at any time to 1,500 gpm.

2. The wells shall be constructed such that the injection zone is the abandoned Clarion 4A Coal Bed, approximately 326 feet below ground surface.

A. AGENCY INVOLVEMENT

Personnel from Ohio EPA have unrestricted right of entry to the wells during normal business hours.

B. GENERAL

The wells shall be constructed in such a manner that prevents the migration of injected fluids or mine water into underground sources of drinking water (USDWs) above, below or adjacent to the injection formation if that fluid may cause a violation of any primary drinking water regulation under OAC Chapter 3745-81 or may otherwise adversely affect the health of any person. The applicant shall have the burden of showing that these requirements are met.

Issuance of these permits presumes compliance with all applicable sections of OAC Rules 3745-34-26, 3745-34-27, all parts of OAC Rule 3745-34-20, Effect of a Permit, and Chapter 6111. of the Ohio Revised Code (ORC).

C. WELL OPERATION

All well construction and operations shall be conducted in accordance with the specifications submitted with the applications for this permit. Activities conducted under this permit include, but are not limited to, the following:

1. Injectate Quality. The permittee shall monitor injectate quality in accordance with the schedule and parameter list established in Part II(E) of this permit. "Initial monitoring term" as used in these permits means twenty-four (24) months from the date the injection begins. The results of data collected during the initial monitoring term shall be evaluated to ensure that the quality of the water in Mine Number 31 is not declining with respect to primary drinking water standards such that the operation of the wells is not in compliance with OAC Rule 3745-34-07(A). If at any time during or after the initial monitoring term it is determined that the wells are not in compliance with OAC Rule 3745-34-07(A), the Director shall take, or require the permittee to take, corrective action in accordance with OAC Rule 3745-34-07(C).

Monitoring specified in Part II(E) of these permits shall continue throughout the term of the permit, unless such permit conditions are modified in accordance with Chapter 3745-34 of the OAC.

The data required to be collected under these permits shall be used by Ohio EPA to determine whether the Director shall require additional or modified conditions as part of continued authorization for the project under this permit. Such additional or modified conditions shall be incorporated into conditions of this permit either through minor modification in accordance with OAC Rule 3745-34-25 or modification, or revocation and reissuance, in accordance with OAC Rule 3745-34-23. All monitoring data information collected under this permit shall be considered cause for modification or revocation and reissuance under OAC Rule 3745-34-23(A)(2).

Monitoring specified in Part II(E) of these permits shall continue throughout the term of the permit, unless such permit conditions are modified in accordance with Chapter 3745-34 of the OAC.

2. Injection Pressure Limitation. Injection pressure at each of the well heads shall be limited to atmospheric pressure (gravity flow) at all times.
3. Injection Well. The permittee shall, at all times, operate the injection wells in such a way that will not result in the migration of injected fluids or mine water into any underground sources of drinking water above, below or adjacent to the injection zone. Only those substances listed on the cover page of these permits and as described in the Permit to Operate application shall be injected. Disposal of any other fluids, including hazardous wastes (as defined in Chapter 3745-51 of the OAC), into this well is strictly prohibited.
4. Injection Rate. Injection of fluids shall not exceed a total of 1,500 gallons per minute for both wells.

D. MONITORING

1. Injected Fluids. To be monitored:
 - a. Daily measured flow rate for each working day. ("Working day" shall be Monday through Friday excluding major holidays.) Daily measured flow rate and monthly average flow rate shall be reported in the monthly report.
 - b. Total solids, total dissolved solids, total iron, total manganese, arsenic, cadmium, chromium, lead, total acidity, total alkalinity, conductivity, pH and sulfate; reported monthly;
 - c. Calcium, barium, mercury, selenium, silver, chloride, sodium, phenol, total cyanide and magnesium, reported quarterly.
2. Injection Zone. To be monitored:
 - a. Within one hundred eighty (180) days of the effective date of these permits, the permittee shall submit a plan for sampling and analysis of the water in the permitted injection zone. The plan shall include at a minimum: a map to scale showing the sampling location and a description of the sampling and analytical methodology.
 - b. Sampling of this combined injection zone water and injectate shall be conducted according to the same parameter lists and monthly and quarterly schedules as listed in Part II(E)(1)(a) through (c) of these permits.

E. REPORTING

The permittee shall submit monitoring reports to the Ohio EPA, Division of Drinking and Ground Waters, Underground Injection Control Unit by the 15th day of the month following each month that monitoring results are required in accordance with schedules described in Part II(E) of this permit at the following address:

Ohio EPA
Division of Drinking and Ground Waters
Underground Injection Control Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

Reports shall contain information regarding types of tests and methods used to generate monitoring data, as specified in Part I(E)(9) of this permit.