



1 ENERGY AND ENVIRONMENT CABINET

2 Department for Environmental Protection

3 Division of Waste Management

4 (Amendment)

5 401 KAR 46:110. Standards for the disposal of coal combustion residuals (CCR) in CCR units.

6 RELATES TO: KRS 224.1, 224.10, 224.50, 224.70, 224.99, 16 U.S.C. 1531, 33 U.S.C.

7 1251, 42 U.S.C. 82, 40 C.F.R. 257.50-257.107[257.106]

8 STATUTORY AUTHORITY: KRS 224.10-100, 224.50-760, 151.250

9 NECESSITY, FUNCTION, AND CONFORMITY: KRS 224.10-100(28) authorizes the
10 cabinet to promulgate administrative regulations not inconsistent with the provisions of law
11 administered by the cabinet. KRS 224.50-760(1)(d) authorizes the cabinet to promulgate
12 administrative regulations for the management of special wastes. This administrative regulation
13 establishes the requirements for the disposal of CCR in CCR units.

14 Section 1. Scope and Applicability. [(+)] Except as established[~~provided~~] in this section,
15 the purpose, scope, and applicability of 401 KAR Chapter 46 to CCR units and the beneficial use
16 of CCR shall be as established in 40 C.F.R. 257.50 and[~~through~~] 257.52.

17 (1) Floodplain requirements shall be as established in 40 C.F.R. 257.3-1.

18 (2) Endangered species requirements shall be as established in 40 C.F.R. 257.3-2.

19 (3) Surface water requirements shall be as established in 40 C.F.R. 257.3-3.

1 ~~[(2) 401 KAR Chapter 46 shall not apply to a special waste surface impoundment subject~~
2 ~~to 401 KAR Chapter 45 containing special waste and liquids at a facility that ceased producing~~
3 ~~electricity prior to October 19, 2015.]~~

4 Section 2. Location Restrictions.

5 (1) The location restrictions for a CCR unit shall be as established in 40 C.F.R. 257.60
6 through 257.64 and this section.

7 (2) For a new CCR landfill, a new CCR surface impoundment, and a lateral expansion,
8 CCR shall not be disposed:

9 (a) Within 100 feet of an adjacent owner property boundary line;

10 (b) Within 250 feet of a sinkhole, or other karst feature in karst terrain, unless the applicant
11 obtains a variance approval in accordance with Section 13; or

12 (c) Within the 100-year floodplain unless the applicant complies with the applicable
13 requirements of 401 KAR 4:060.

14 (3) For a new CCR unit or lateral expansion, an owner or operator may utilize a
15 deterministic scenario-based seismic hazard analysis demonstration in lieu of the probabilistic
16 seismic hazard analysis demonstration required by 40 C.F.R. 257.63(a).

17 Section 3. Design Criteria. The design criteria for a CCR unit shall be as established in 40
18 C.F.R. 257.70 through 257.72.

19 Section 4. Structural Integrity Criteria.

20 (1) The structural integrity criteria shall be as established in 401 KAR 4:070, Sections 2
21 and 3.

22 (2) The citation to 40 C.F.R. 257.73 within 40 C.F.R. 257.50 through 257.107~~[257.106]~~
23 shall be replaced with 401 KAR 4:070, Section 2.

(3) The citation to 40 C.F.R. 257.74 within 40 C.F.R. 257.50 through 257.107~~[257.106]~~ shall be replaced with 401 KAR 4:070, Section 3.

Section 5. Requirements for Identifying CCR management units.

(1) Except as established in this section, the requirements for identifying CCR management units shall be as established in 40 C.F.R. 257.75.

(2) The facility evaluation and identification requirements established in 40 C.F.R. 257.75(b) through (d) shall be replaced with the requirement to complete a conceptual site model for the facility as established in 401 KAR 46:130.

(3) The citations to 40 C.F.R. 257.75 within 40 C.F.R. 257.50 through 257.107 shall be replaced with this section.

Section 6. Operating Criteria. The operating criteria for a CCR unit shall be as established in 40 C.F.R. 257.80, 257.81, and 257.84.

Section 7~~[6]~~. Hydrologic and Hydraulic Capacity Requirements for CCR Surface Impoundments.

(1) The hydrologic and hydraulic capacity requirements for CCR surface impoundments shall be as established in 401 KAR 4:070, Section 4.

(2) The citation to 40 C.F.R. 257.82 within 40 C.F.R. 257.50 through 257.107~~[257.106]~~ shall be replaced with 401 KAR 4:070, Section 4.

Section 8~~[7]~~. Inspection Requirements for CCR Surface Impoundments.

(1) The inspection requirements for CCR surface impoundments shall be as established in 401 KAR 4:070, Section 5.

(2) The citation to 40 C.F.R. 257.83 within 40 C.F.R. 257.50 through 257.107~~[257.106]~~ shall be replaced with 401 KAR 4:070, Section 5.

1 Section 9[8]. Groundwater Monitoring and Corrective Action.

2 (1)(a) The groundwater applicability, monitoring systems, sampling and analysis
3 requirements, and detection monitoring program [~~corrective action requirements~~] for a CCR unit
4 shall be as established in 40 C.F.R. 257.90 through 257.91, 257.93 through 257.94, and this section
5 [257.98].

6 (b) Groundwater assessment monitoring, assessment of corrective measures, selection of
7 remedy, and corrective action shall be as established in 401 KAR 46:130 and this section.

8 (c) Any alterations or data gaps required by the cabinet in the groundwater monitoring
9 system, additional monitoring wells required, or other required modifications to address data gaps,
10 to ensure compliance with this section shall be addressed in the conceptual site model established
11 in 401 KAR 46:130.

12 (d) The requirements established in 40 C.F.R. 257.90(b)(3) shall be replaced with the
13 requirement to complete a conceptual site model established in 401 KAR 46:130.

14 (e) For CCR facilities subject to 401 KAR 46:130:

15 1. The requirements established in 40 C.F.R. 257.90(e) shall be replaced with the
16 requirement to submit an annual Corrective Action Update as established in 401 KAR 46:130,
17 Section 3; and

18 2. The requirements to be submitted in the annual report established by 40 C.F.R. 257.90(e)
19 shall be included as a part of the Corrective Action Update established in 401 KAR 46:130, Section
20 3.

21 (2)(a) A commingled facility may comply with the requirements of 401 KAR 46:130 and
22 this section in lieu of the requirements established in 401 KAR 45:160.

1 (b) If an owner or operator of a commingled facility chooses to comply with the
2 requirements of this section in lieu of the requirements established in 401 KAR 45:160, the owner
3 or operator shall give prior notice to the cabinet in writing.

4 (3)(a) In addition to the requirements for installing a groundwater monitoring system in 40
5 C.F.R. 257.91(a), if the CCR unit is located in a karst terrain area, the owner or operator of a CCR
6 unit shall:

7 1. Determine whether other detection and background monitoring points that are
8 hydraulically connected to the CCR facility based on site-specific geology and hydrogeology are
9 appropriate and necessary to accurately represent the upgradient and downgradient groundwater
10 quality in addition to or as an appropriate monitoring point for the installation of groundwater
11 monitoring wells to meet the requirements established in 40 C.F.R. 257.91(a), including:

12 a. Springs;

13 b. Cave streams;

14 c. Bedrock wells;

15 d. Wells on fracture traces and fracture-trace intersections;

16 e. Wells in soil or regolith;

17 f. Wells in epikarst;

18 g. Upgradient wells that contain water that is geochemically similar to compliance
19 monitoring points; and

20 h. Alternative monitoring points; and

21 2. Incorporate those site-specific sample locations into a detection monitoring system.

22 (b) For the purposes of groundwater corrective action, in addition to the requirement in 40
23 C.F.R. 257.91(a)(2), monitoring points shall be established at locations in accordance with

1 subsection (3)(a)1. of this section, at a distance from the CCR unit waste boundary to accurately
2 represent the quality of groundwater beyond the waste boundary that ensures monitoring of
3 groundwater contamination in the uppermost aquifer. All hydraulically connected contaminant
4 pathways shall be monitored.

5 (c) The requirements established in 40 C.F.R. 257.91(e) shall be replaced with the
6 requirement that all monitoring wells shall be installed, maintained and abandoned pursuant to the
7 standards established in 401 KAR Chapter 6.

8 (d) The citations to 257.95 referenced in 40 C.F.R. 257.94 shall be replaced with 401 KAR
9 46:130.

10 Section 10[9]. Closure and Post-closure Care. The closure and post-closure care
11 requirements for a CCR unit shall be as established in 40 C.F.R. 257.100 through 257.104.

12 Section 11[10]. Recordkeeping,~~and~~ Notification, and Publicly Accessible Internet Site
13 Requirements. (1)[Except for 40 C.F.R. 257.107, including cross references to 40 C.F.R. 257.107
14 within 40 C.F.R. 257.50 through 257.106,] The recordkeeping,~~and~~ notification, and publicly
15 accessible internet site requirements for an owner or operator of a CCR unit shall be as established
16 in 40 C.F.R. 257.105 through 257.107 and this section[and 257.106].

17 (2) All recordkeeping, notification, and publicly accessible documents required to be
18 posted on the internet by the owner or operator in accordance with this section shall also be
19 submitted to the Division of Waste Management, except for those related to 401 KAR 4:070 which
20 shall be submitted to the Division of Water.

21 Section 12. Constituents for Detection and Assessment Monitoring. (1) The constituents
22 for detection monitoring shall be as established in Appendix III to 40 C.F.R. Part 257.

1 (2) The constituents for assessment monitoring shall be as established in Appendix IV to
2 40 C.F.R. Part 257.

3 (3) Surface water and groundwater sample shall be collected and analyzed according to the
4 following criteria:

5 (a) Samples and measurements taken for the purpose of monitoring shall be representative
6 of the monitored activity.

7 (b) The owner or operator shall retain records of all monitoring information, copies of all
8 reports required by the permit, and records of all data used to complete the application for the
9 permit, for a period of at least three (3) years from the date of the sample, measurement, report,
10 certification, or application. In addition, the owner or operator shall maintain records from all
11 groundwater monitoring wells and associated groundwater surface elevations, for the active life of
12 the facility, and for the post-closure period.

13 (c) Records of monitoring information shall be submitted to the cabinet on the
14 "Groundwater Monitoring Sample Data Reporting Form, DEP 46_110_1".

15 Section 13. Variances. (1)(a) Any variance to the requirements established in 401 KAR
16 Chapter 46 shall be as protective as the requirements established in KRS Chapter 224 and 401
17 KAR Chapter 46.

18 (b) The cabinet shall grant individual variances only for specific provisions of 401 KAR
19 Chapter 46 that are in addition to or more stringent than the federal regulations.

20 (2) A request for a variance from a requirement of 401 KAR Chapter 46 shall be submitted
21 in a report in sufficient detail to satisfy a request from the cabinet to provide the analyses,
22 procedures, controls, and other pertinent data necessary to support the request for variance. The
23 granting of a request by the cabinet shall be in writing and shall specify appropriate conditions

1 such as duration, limitations, and review procedures to provide adequate protection to health and
2 the environment.

3 (3) The cabinet shall grant a variance from the requirements of 401 KAR Chapter 46 or a
4 CCR permit requirement, if the proposed alternative process, equipment, method of operation, or
5 plan to be used, is determined by the cabinet that it will:

6 1. Not threaten human health or the environment in accordance with KRS Chapter 224; or
7 2. Be handled, processed, or disposed of pursuant to administrative regulations of another
8 governmental agency, if the administrative regulations of other agencies meet the requirements of
9 401 KAR Chapter 46, including federal exemption rule-making actions pertaining to CCR
10 management.

11 (4) The cabinet shall not grant any request for a variance that would:

12 (a) Alter a federal regulatory requirement;

13 (a) Be in conflict with Kentucky Revised Statutes;

14 (c) Be in conflict with a regulatory provision stating that no variance shall be granted;

15 (d) Vary the requirements of the environmental performance standards in 401 KAR 30:031;

16 or

17 (e) Vary the financial responsibility requirements established in 401 KAR 46:120, Section

18 8.

19 Section 14. Inspection and Entry. (1) The owner or operator shall allow the cabinet or its
20 authorized representative to:

21 (a) Enter upon the premises of the owner or operator where a regulated CCR facility or
22 activity is located or conducted, or where records shall be kept by the permit;

1 (b) Have access to and copy at reasonable times any records that shall be kept under the
2 conditions of the permit; and

3 (c) Inspect any facility equipment, including monitoring and control equipment, practices,
4 or operations regulated or required by the permit.

5 (2) The owner or operator shall notify the cabinet 48 hours prior to sampling at the CCR
6 facility required by Section 9 of this administrative regulation and 401 KAR 46:130.

7 Section 15. Incorporation by Reference. The following material is incorporated by
8 reference:

9 (1) "Groundwater Monitoring Sample Data Reporting Form, DEP 46 110 1", October
10 2026.

11 (2) This material may be inspected, copied, or obtained, subject to applicable copyright
12 law, at the Division of Waste Management, 300 Sower Boulevard, 2nd Floor, Frankfort,
13 Kentucky 40601, Monday through Friday, 8:00 a.m. to 4:30 p.m.

14 (3) This material may also be obtained on the division's Web site at
15 eec.ky.gov/environmental-protection/waste.

401 KAR 46:110 Standards for the disposal of coal combustion residuals (CCR) in CCR units is approved for filing.

10/14/20
Date

John Lyons, P.E. Sec.
John Lyons, Secretary
Energy and Environment Cabinet

PUBLIC HEARING AND PUBLIC COMMENT PERIOD

A public hearing on this administrative regulation shall be held on December 22, 2026, at 10:00 a.m. EST (9:00 a.m. CST), at 300 Sower Blvd., 1st Floor, Training Room B. Individuals interested in being heard at this hearing shall notify this agency in writing by five workdays prior to the hearing, of their intent to attend. If no notification of intent to attend the hearing was received by that date, the hearing may be cancelled. A transcript of the public hearing will not be made unless a written request for a transcript is made. If you do not wish to be heard at the public hearing, you may submit written comments on the proposed administrative regulation. Written comments shall be accepted through December 31, 2026. Send written notification of intent to be heard at the public hearing or written comments on the proposed administrative regulation to the contact person.

The hearing facility is accessible to persons with disabilities. Requests for reasonable accommodations, including auxiliary aids and services necessary to participate in the hearing, may be made to the contact person at least five (5) workdays prior to the hearing.

CONTACT PERSON: Louanna Aldridge
Assistant Director II
Division of Waste Management
300 Sower Blvd., 2nd Floor
Telephone: (502) 782-0863
Louanna.Aldridge@ky.gov

REGULATORY IMPACT ANALYSIS AND TIERING STATEMENT

401 KAR 46:110

Contact Person: Louanna Aldridge
Telephone: (502) 782-0863
Louanna.Aldridge@ky.gov

(1) Provide a brief summary of:

(a) What this administrative regulation does: This administrative regulation establishes the requirements for the disposal of coal combustion residuals (CCR) in CCR units.

(b) The necessity of this administrative regulation: This administrative regulation establishes the requirements for the disposal of CCR in CCR units in accordance with KRS 224.50-760.

(c) How this administrative regulation conforms to the content of the authorizing statutes: KRS 224.10-100 and KRS 224.50-760 authorizes the cabinet to promulgate administrative regulations for the management of special wastes. This administrative regulation establishes technical standards for the disposal of CCR in CCR units.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes: This administrative regulation assists in the effective administration of the statutes by establishing technical standards for the disposal of CCR in CCR units.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation: This amendment amends renumbered statutory references. This amendment aligns Kentucky administrative regulations with federal requirements. It also is consistent with current requirement for karst geography and provides a more prescriptive method to address groundwater monitoring.

(b) The necessity of the amendment to this administrative regulation: The amendments are necessary to incorporate the provisions that have been amended in 40 C.F.R. 257 and by subsequent court rulings. In addition, it is necessary to provide for the karst geology in the commonwealth in a groundwater monitoring system sampling and detection plan.

(c) How the amendment conforms to the content of the authorizing statutes: The amendment conforms to KRS 224.50-760 by establishing technical standards for the disposal of CCR in CCR units and aligning Kentucky's administrative regulation with 40 C.F.R. 257.

(d) How the amendment will assist in the effective administration of the statutes: This administrative regulation assists in the management of CCR as established by KRS 224.50-760 by establishing technical standards for the disposal of CCR in a CCR unit and aligns Kentucky's administrative regulation with 40 C.F.R. 257.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation: Six (6) utility companies and any new owner or operator of a CCR unit, Division of Waste Management, Division of Water, Division of Enforcement, Kentucky Transportation Cabinet, and potentially all Kentucky counties and ratepayers of the Commonwealth.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment: This administrative regulation is an adoption of federal regulations and will not require additional actions by regulated utilities to comply, except for owners and operators accounting for the karst geology in Kentucky in the groundwater monitoring system sampling and detection plan. In addition, entities will have to submit the federally required data for groundwater sampling analyses on the Kentucky form.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3): The costs associated with complying with this administrative regulation are unknown and are dependent on the size of facilities and number of CCR units at the facility.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3): This administrative regulation will benefit the regulated entities by being consistent with the federal regulations, thereby only having one standard with which they must comply.

(5) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially: The administrative body has personnel costs associated with the review and approval of documents and inspections conducted. The cost of implementation of the CCR program, including this administrative regulation, is estimated to be \$420,800.

(b) On a continuing basis: The cost of implementation of the CCR program, including this administrative regulation, is estimated to be \$420,800 on an annual basis.

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation: Funding needed for the CCR program will be sourced from the CCR facility annual fee established in 401 KAR 46:120, in addition to a one-time federal grant of \$136,000.

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment: This administrative regulation has an indirect fee structure established in 401 KAR 46:120..

(8) State whether or not this administrative regulation established any fees or directly or indirectly increased any fees: This administrative regulation has an indirect fee structure established in 401 KAR 46:120.

(9) TIERING: Is tiering applied? (Explain why or why not) Tiering is not applied in this administrative regulation as all entities are treated equally.

FEDERAL MANDATE ANALYSIS COMPARISON

401 KAR 46:110

Contact Person: Louanna Aldridge
Telephone: (502) 782-0863
Louanna.Aldridge@ky.gov

1. Federal statute or regulation constituting the federal mandate. 40 C.F.R. 257.50 through 257.107

2. State compliance standards. KRS 224.10-100, 224.50-760, 151.250

3. Minimum or uniform standards contained in the federal mandate. 40 C.F.R. 257.50 through 257.107

4. Will this administrative regulation impose stricter requirements, or additional or different responsibilities or requirements, than those required by the federal mandate? This administrative regulation is more prescriptive to demonstrate compliance equivalent with federal standards by providing alternative requirements in Section 2(3), Section 5(2), and Section 9(1). It also imposes additional, stricter requirements with regard to CCR disposal location restrictions in Section 2(2) and with groundwater installation in Section 9(2).

5. Justification for the imposition of the stricter standard, or additional or different responsibilities or requirements. 40 C.F.R. 257 does not provide specific provisions for karst geology regions as it is a broad federal rule applying to all states. The additional requirements for CCR disposal and groundwater installation help to account for the commonwealth's karst geology to protect human health and the environment in the commonwealth's unique landscape. Providing alternative options for the seismic hazard analysis demonstration requirement for a new CCR unit and replacing requirements for a facility evaluation and identification with a Conceptual Site Model help to supply the reviewers with information better suited to Kentucky's karst geological features.

FISCAL IMPACT STATEMENT

401 KAR 46:110

Contact Person: Louanna Aldridge
Telephone: (502) 782-0863
Louanna.Aldridge@ky.gov

- (1) Identify each state statute, federal statute, or federal regulation that requires or authorizes the action taken by the administrative regulation: KRS 224.10-100, 224.40-305, 224.50-760, 151.250

(2) Identify the promulgating agency and any other affected state units, parts, or divisions: Energy and Environment Cabinet, Department for Environmental Protection, Division of Waste Management

- (a) Estimate the following for the first year:

Expenditures: The administrative body has personnel costs associated with the review and approval of documents and inspections conducted. The cost of implementation of the CCR program, including this administrative regulation, is estimated to be \$420,800.

Revenues: The indirect annual fee established in 401 KAR 46:120 is estimated to generate \$420,000 in revenue for the CCR program.

Cost Savings: There are no known cost savings for the promulgating agency in this administrative regulation.

- (b) How will expenditures, revenues, or cost savings differ in subsequent years?

The effective administration of the CCR program is estimated to cost \$420,800 annually. As CCR surface impoundment facilities move all units into post closure, the annual fee decreases as established in 401 KAR 46:120.

- (3) Identify affected local entities (for example: cities, counties, fire departments, school districts):

All Kentucky counties where CCR landfills or surface impoundments may be sited, or where beneficial reuse of CCR may be utilized.

- (a) Estimate the following for the first year:

Expenditures: There are no known expenditures for local entities in this administrative regulation.

Revenues: There are no known revenues for local entities in this administrative regulation.

Cost Savings: There are no known cost savings for local entities in this administrative regulation.

(b) How will expenditures, revenues, or cost savings differ in subsequent years? There are no known expenditures, revenues, or cost savings for local entities in this administrative regulation.

(4) Identify additional regulated entities not listed in questions (2) or (3):

Utility Companies: Six (6)

(a) Estimate the following for the first year:

Expenditures: There are no known expenditures for additional regulated entities in this administrative regulation. The annual fee for a CCR facility is \$30,000, unless all CCR units are in post-closure in which case the annual fee is decreased to \$5,000 as established in 401 KAR 46:120.

Revenues: There are no known revenues for additional regulated entities in this administrative regulation.

Cost Savings: There are no known cost savings for additional regulated entities in this administrative regulation.

(b) How will expenditures, revenues, or cost savings differ in subsequent years? There are no known expenditures, revenues, or cost savings for additional regulated entities in this administrative regulation.

(5) Provide a narrative to explain the:

(a) Fiscal impact of this administrative regulation: The CCR program, including this administrative regulation will cost approximately \$420,800 each year to effectively administer.

(b) Methodology and resources used to determine the fiscal impact: The Division of Waste Management estimates the program to require 3.3 full-time equivalent (FTE) positions in order to effectively administer the program estimated to cost \$420,800.

(6) Explain:

(a) Whether this administrative regulation will have an overall negative or adverse major economic impact to the entities identified in questions (2) - (4). (\$500,000 or more, in aggregate) There is no major economic impact from this administrative regulation.

(a) (b) The methodology and resources used to reach this conclusion: The amendments to this administrative regulation will not have a major economic impact as the estimated costs associated with the CCR program are less than \$500,000 and funded by CCR annual fees. A total of 14 CCR facilities paying \$30,000 annually totals \$420,000.

SUMMARY OF MATERIAL INCORPORATED BY REFERENCE

The "Groundwater Sample Analysis", Form DEP 46_110_1, is the 7-page reporting form that CCR owner or operators are required to file in order to ensure compliance with Kentucky's groundwater monitoring standards.