

First Notice

JCAR350845-2507471r01

1 TITLE 35: ENVIRONMENTAL PROTECTION
2 SUBTITLE G: WASTE DISPOSAL
3 CHAPTER I: POLLUTION CONTROL BOARD
4 SUBCHAPTER j: COAL COMBUSTION WASTE SURFACE IMPOUNDMENTS
5

6 PART 845
7 STANDARDS FOR THE DISPOSAL OF COAL COMBUSTION
8 RESIDUALS IN SURFACE IMPOUNDMENTS
9

10 SUBPART A: GENERAL PROVISIONS
11

12	Section	
13	845.100	Scope and Purpose
14	845.110	Applicability of Other Regulations
15	845.120	Definitions
16	845.130	Surface Impoundment Identification
17	845.140	Right of Inspection
18	845.150	Incorporations by Reference
19	845.160	Severability
20	845.170	Inactive Closed CCR Surface Impoundments

21
22 SUBPART B: PERMITTING
23

24	Section	
25	845.200	Permit Requirements and Standards of Issuance
26	845.210	General Provisions
27	845.220	Construction Permits
28	845.230	Operating Permits
29	845.240	Pre-Application Public Notification and Public Meeting
30	845.250	Tentative Determination and Draft Permit
31	845.260	Draft Permit Public Notice and Participation
32	845.270	Final Permit Determination and Appeal
33	845.280	Transfer, Modification and Renewal
34	845.290	Construction Quality Assurance Program

35
36 SUBPART C: LOCATION RESTRICTIONS
37

38	Section	
39	845.300	Placement Above the Uppermost Aquifer
40	845.310	Wetlands
41	845.320	Fault Areas
42	845.330	Seismic Impact Zones
43	845.340	Unstable Areas and Floodplains

44 845.350 Failure to Meet Location Standards

45

46 SUBPART D: DESIGN CRITERIA

47 Section

48 845.400 Liner Design Criteria for Existing CCR Surface Impoundments

49 845.410 Liner Design Criteria for New CCR Surface Impoundments and Any Lateral

50 Expansion of a CCR Surface Impoundment

51 845.420 Leachate Collection and Removal System

52 845.430 Slope Maintenance

53 845.440 Hazard Potential Classification Assessment

54 845.450 Structural Stability Assessment

55 845.460 Safety Factor Assessment

56

57 SUBPART E: OPERATING CRITERIA

58

59 Section

60 845.500 Air Criteria

61 845.510 Hydrologic and Hydraulic Capacity Requirements for CCR Surface

62 Impoundments

63 845.520 Emergency Action Plan

64 845.530 Safety and Health Plan

65 845.540 Inspection Requirements for CCR Surface Impoundments

66 845.550 Annual Consolidated Report

67

68 SUBPART F: GROUNDWATER MONITORING AND CORRECTIVE ACTION

69

70 Section

71 845.600 Groundwater Protection Standards

72 845.610 General Requirements

73 845.620 Hydrogeologic Site Characterization

74 845.630 Groundwater Monitoring Systems

75 845.640 Groundwater Sampling and Analysis Requirements

76 845.650 Groundwater Monitoring Program

77 845.660 Assessment of Corrective Measures

78 845.670 Corrective Action Plan

79 845.680 Implementation of the Corrective Action Plan

80

81 SUBPART G: CLOSURE AND POST-CLOSURE CARE

82

83 Section

84 845.700 Required Closure or Retrofit of CCR Surface Impoundments

85 845.710 Closure Alternatives

86 845.720 Closure Plan

- 87 845.730 Initiation of Closure
- 88 845.740 Closure by Removal
- 89 845.750 Closure with a Final Cover System
- 90 845.760 Completion of Closure Activities
- 91 845.770 Retrofitting
- 92 845.780 Post-Closure Care Requirements

SUBPART H: RECORDKEEPING

- 96 Section
- 97 845.800 Facility Operating Record
- 98 845.810 Publicly Accessible Internet Site Requirements

SUBPART I: FINANCIAL ASSURANCE

- 102 Section
- 103 845.900 General Provisions
- 104 845.910 Upgrading Financial Assurance
- 105 845.920 Release of Financial Institution and Owner or Operator
- 106 845.930 Cost Estimates
- 107 845.940 Revision of Cost Estimates
- 108 845.950 Mechanisms for Financial Assurance
- 109 845.960 Trust Fund
- 110 845.970 Surety Bond Guaranteeing Payment
- 111 845.980 Surety Bond Guaranteeing Performance
- 112 845.990 Letter of Credit

AUTHORITY: Implementing Sections 12, 22, and 22.59 of the Environmental Protection Act [415 ILCS 5/12, 22, and 22.59] and authorized by Sections 22.59, 27, and 28 of the Environmental Protection Act [415 ILCS 5/22.59, 27, and 28].

SOURCE: Adopted in R20-19 at 45 Ill. Reg. 5884, effective April 21, 2021; amended in R20-19B at 49 Ill. Reg. _____, effective _____.

SUBPART B: PERMITTING

Section 845.220 Construction Permits

- a) All construction permit applications must contain the following information and documents.
 - 1) Design and Construction Plans (Construction History)

- A) Identifying Information
 - i) The name and address of the person or persons owning or operating the CCR surface impoundment;
 - ii) The name associated with the CCR surface impoundment; and
 - iii) The identification number of the CCR surface impoundment if one has been assigned by the Agency.
- B) A statement of the purpose for which the CCR surface impoundment is being used, how long the CCR surface impoundment has been in operation, and the types of CCR that have been placed in the CCR surface impoundment.
- C) The name and size in acres of the watershed within which the CCR surface impoundment is located.
- D) A description of the physical and engineering properties of the foundation and abutment materials on which the CCR surface impoundment is constructed.
- E) A statement of the type, size, range, and physical and engineering properties of the materials used in constructing each zone or stage of the CCR surface impoundment; the method of site preparation and construction of each zone of the CCR surface impoundment; and the approximate dates of construction of each successive stage of construction of the CCR surface impoundment.
- F) At a scale that details engineering structures and appurtenances relevant to the design, construction, operation, and maintenance of the CCR surface impoundment, detailed dimensional drawings of the CCR surface impoundment, including a plan view and cross-sections of the length and width of the CCR surface impoundment, showing all zones, foundation improvements, drainage provisions, spillways, diversion ditches, outlets, instrument locations, and slope protection, in addition to the normal operating pool surface elevation and the maximum pool surface elevation following peak discharge from the inflow design flood, the expected maximum depth of CCR within the CCR surface impoundment, and any identifiable natural or manmade

features that could adversely affect operation of the CCR surface impoundment due to malfunction or mis-operation.

- G) A description of the type, purpose, and location of existing instrumentation.
- H) Area-capacity curves for the CCR surface impoundment.
- I) A description of each spillway and diversion design features and capacities and calculations used in their determination.
- J) The construction specifications and provisions for surveillance, maintenance, and repair of the CCR surface impoundment.
- K) Any record or knowledge of structural instability of the CCR surface impoundment.

2) Narrative Description of the Facility. The permit application must contain a written description of the facility with supporting documentation describing the procedures and plans that will be used at the facility to comply with the requirements of this Part. The descriptions must include, ~~but are not limited to,~~ the following information:

- A) The types of CCR expected in the CCR surface impoundment, including a chemical analysis of each type of expected CCR;
- B) An estimate of the maximum capacity of each surface impoundment in gallons or cubic yards;
- C) The rate at which CCR and non-CCR waste streams currently enter the CCR surface impoundment in gallons per day and dry tons;
- D) The estimated length of time the CCR surface impoundment will receive CCR and non-CCR waste streams; and
- E) An on-site transportation plan that includes all existing and planned roads in the facility that will be used during the operation of the CCR surface impoundment.

3) Site Location Map. All permit applications must contain a site location map on the most recent United States Geological Survey (USGS) quadrangle of the area from the 7½ minute series (topographic), or on another map whose scale clearly shows the following information:

- A) The facility boundaries and all adjacent property, extending at least 1000 meters (3280 feet) beyond the boundary of the facility;
 - B) All surface waters;
 - C) The prevailing wind direction;
 - D) The limits of all 100-year floodplains;
 - E) All-natural areas designated as a Dedicated Illinois Nature Preserve under the Illinois Natural Areas Preservation Act [525 ILCS 30];
 - F) All historic and archaeological sites designated by the National Historic Preservation Act (16 USC 470 et seq.) and the Illinois Historic Sites Advisory Council Act [20 ILCS 3410]; and
 - G) All areas identified as critical habitat under the Endangered Species Act of 1973 (16 USC 1531 et seq.) and the Illinois Endangered Species Protection Act [520 ILCS 10].
- 4) Site Plan Map. The application must contain maps, including cross-sectional maps of the site boundaries, showing the location of the facility. The following information must be shown:
 - A) The entire facility, including any proposed and all existing CCR surface impoundment locations;
 - B) The boundaries, both above and below ground level, of the facility and all CCR surface impoundments or landfills containing CCR included in the facility;
 - C) All existing and proposed groundwater monitoring wells [including monitoring wells for a CCR storage unit under Section 845.740\(c\)\(4\)\(B\)\(vi\), if applicable](#); and
 - D) All main service corridors, transportation routes, and access roads to the facility.
- 5) A narrative description of the proposed construction of, or modification to, a CCR surface impoundment and any projected changes in the volume or nature of the CCR or non-CCR waste streams.

- 6) Plans and specifications fully describing the design, nature, function and interrelationship of each individual component of the facility.
 - 7) A new groundwater monitoring program or any modification to an existing groundwater monitoring program that includes but is not limited to the following information:
 - A) A hydrogeologic site investigation meeting the requirements of Section 845.620, if applicable;
 - B) Design and construction plans of a groundwater monitoring system meeting the requirements of Section 845.630; and
 - C) A proposed groundwater sampling and analysis program that includes selection of the statistical procedures to be used for evaluating groundwater monitoring data (see Sections 845.640 and 845.650).
 - 8) The signature and seal of a qualified professional engineer.
 - 9) Certification that the owner or operator of the CCR surface impoundment completed the public notification and public meetings required under Section 845.240, a summary of the issues raised by the public, a summary of any revisions, determinations, or other considerations made in response to those issues, and a list of interested persons in attendance who would like to be added to the Agency's listserv for the facility.
- b) New Construction. In addition to the requirements in subsection (a), all construction permit applications to build a new CCR surface impoundment, lateral expansion of a CCR surface impoundment, or retrofit an existing CCR surface impoundment must also contain the following information and documents:
- 1) Plans and specifications that demonstrate the proposed CCR surface impoundment will meet the location standards in the following Sections:
 - A) Section 845.300 (Placement Above the Uppermost Aquifer);
 - B) Section 845.310 (Wetlands);
 - C) Section 845.320 (Fault Areas);

- D) Section 845.330 (Seismic Impact Zones); and
 - E) Section 845.340 (Unstable Areas and Floodplains).
 - 2) Plans and specifications that demonstrate the proposed CCR surface impoundment will meet the following design criteria:
 - A) The CCR surface impoundment will have a liner meeting the liner requirements of Section 845.400(b) or (c);
 - B) The CCR surface impoundment will have a leachate collection system meeting the requirements of Section 845.420; and
 - C) The CCR surface impoundment, if not incised, will be constructed with slope protection, as required by Section 845.430.
 - 3) CCR fugitive dust control plan (see Section 845.500(b)).
 - 4) Preliminary written closure plan (see Section 845.720(a)).
 - 5) Initial written post-closure care plan, if applicable (see Section 845.780(d)).
- c) Corrective Action Construction. In addition to the requirements in subsection (a), all construction permit applications that include any corrective action performed under Subpart F must also contain the following information and documents:
 - 1) Corrective action plan (see Section 845.670);
 - 2) Groundwater modeling, including:
 - A) The results of groundwater contaminant transport modeling and calculations showing how the corrective action will achieve compliance with the applicable groundwater standards;
 - B) All modeling inputs and assumptions;
 - C) Description of the fate and transport of contaminants with the selected corrective action over time; and
 - D) Capture zone modeling, if applicable;

- 343 3) Any necessary licenses and software needed to review and access both the
344 models and the data contained within the models required by subsection
345 (c)(2);
346
- 347 4) Corrective action groundwater monitoring program, including
348 identification of revisions to the groundwater monitoring system for
349 corrective action; and
350
- 351 5) Any interim measures necessary to reduce the contaminants leaching from
352 the CCR surface impoundment, and/or potential exposures to human or
353 ecological receptors, including an analysis of the factors specified in
354 Section 845.680(a)(3).
355
- 356 d) Closure Construction. In addition to the requirements in subsection (a), all
357 construction permit applications for closure of the CCR surface impoundment
358 under Subpart G must contain the following information and documents:
359
- 360 1) Closure prioritization category, if applicable (see Section 845.700(g));
361
- 362 2) Final closure plan (see Section 845.720(b)), including the closure
363 alternatives analysis required by Section 845.710;
364
- 365 3) Groundwater modeling, including:
366
- 367 A) The results of groundwater contaminant transport modeling and
368 calculations showing how the closure will achieve compliance with
369 the applicable groundwater standards;
370
- 371 B) All modeling inputs and assumptions;
372
- 373 C) Description of the fate and transport of contaminants, with the
374 selected closure over time;
375
- 376 D) Capture zone modeling, if applicable; and
377
- 378 E) Any necessary licenses and software needed to review and access
379 both the model and the data contained within the model.
380
- 381 4) Proposed schedule to complete closure; ~~and~~
382
- 383 5) Post-closure care plan specified in Section 845.780(d), if applicable; ~~and~~;
384

6) Design and construction plans and specifications for a CCR storage unit and any associated barriers or berms, if applicable, including:

- A) The dimensions of the CCR storage unit and the type of storage pad or geomembrane to be used;
- B) The estimated maximum and estimated average tons or cubic yards of CCR that will be stored in the CCR storage unit monthly or annually;
- C) An estimate of the amount of time the CCR storage unit will be operational;
- D) A description of the function of any barriers or berms that will be used to control wind and water run-on and run-off;
- E) A description of the demolition and disposal of the components of the CCR storage unit; and
- F) An assessment of how the CCR storage unit will meet the operating criteria under Section 845.740(c)(4).

e) *Owners or operators of CCR surface impoundments who submitted a closure plan to the Agency before May 1, 2019, and who complete closure before July 30, 2021, shall not be required to obtain a construction permit for closure under subsection (d). [415 ILCS 5/22.59(e)]*

f) A single construction permit application may be submitted for new construction, corrective action, and closure if the construction is related to the same multi-phased project. The permit application for a project with multiple phases must contain all information required by subsections (a), (b), (c), and (d), as applicable.

g) Duration of Construction Permits

- 1) For any construction permit that is not for the closure or retrofit of the CCR surface impoundment, the construction permit must be issued for fixed terms not to exceed 3 years.
- 2) For any construction permit for the closure or retrofit of a CCR surface impoundment, the construction permit must be issued for an initial fixed term expiring within the timeframe approved by the Agency in the construction permit or five years, whichever is less. The Agency may

427 renew a construction permit for closure or retrofit in two-year increments
428 under Section 845.760(b).

429

430 (Source: Amended at 49 Ill. Reg. _____, effective _____)