

**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY
CHAPTER 517. DISPOSAL OF COAL COMBUSTION RESIDUALS FROM
ELECTRIC UTILITIES**

252:517-1-3. Definitions

The following words or terms, when used in this Chapter, shall have the following meaning, unless the context clearly indicates otherwise. Any term not defined in this Chapter shall be defined as set forth in OAC 252:517-1-4.

"Acre foot" means the volume of one acre of surface area to a depth of one foot.

"Active facility" or **"active electric utilities"** or **"independent power producers"** means any facility subject to the requirements of this Chapter in operation on October 19, 2015. An electric utility or independent power producer is in operation if it is generating electricity that is provided to electric power transmission systems or to electric power distribution systems on or after October 19, 2015. An off-site CCR unit is in operation if it is accepting or managing CCR on or after October 19, 2015.

"Active life" or **"in operation"** means the period of operation beginning with the initial placement of CCR in the CCR unit and ending at completion of closure activities in accordance with OAC 252:517-15-7.

"Active portion" means that part of the CCR unit that has received or is receiving CCR or non-CCR waste and that has not completed closure in accordance with OAC 252:517-15-7.

"Aquifer" means a geologic formation, group of formations, or portion of a formation capable of yielding usable quantities of groundwater to wells or springs.

"Area-capacity curves" means graphic curves which readily show the reservoir water surface area, in acres, at different elevations from the bottom of the reservoir to the maximum water surface, and the capacity or volume, in acre-feet, of the water contained in the reservoir at various elevations.

"Areas susceptible to mass movement" means those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where, because of natural or human-induced events, the movement of earthen material at, beneath, or adjacent to the CCR unit results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides and flows, soil fluctuation, block sliding, and rock fall.

"Beneficial use of CCR" means the CCR meet all of the following conditions:

- (A) The CCR must provide a functional benefit;
- (B) The CCR must substitute for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction;
- (C) The use of the CCR must meet relevant product specifications, regulatory standards or design standards when available, and when such standards are not available, the CCR is not used in excess quantities; and
- (D) When unencapsulated use of CCR involving placement on the land of 12,400 tons or more in non-roadway applications, the user must demonstrate and keep records, and provide such documentation upon request, that environmental releases to groundwater, surface water, soil and air are comparable to or lower than those from analogous products made without CCR, or that environmental releases to groundwater, surface water, soil

and air will be at or below relevant regulatory and health-based benchmarks for human and ecological receptors during use.

"CLIMOCS" means the following publication of the Oklahoma Climatological Survey: Shafer, Mark A., CLIMOCS: A Climatological Summary of 168 Oklahoma Cooperative Stations, Oklahoma Climatological Survey, February 1993, 184 pp.

"Closed" means placement of CCR in a CCR unit has ceased, and the owner or operator has completed closure of the CCR unit in accordance with OAC 252:517-15-7 and has initiated post-closure care in accordance with OAC 252:517-15-9.

"Coal combustion residuals (CCR)" means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

"CCR fugitive dust" means solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than a stack or chimney.

"CCR landfill" or **"landfill"** means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this Chapter, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

"CCR pile" or **"pile"** means any non-containerized accumulation of solid, non-flowing CCR that is placed on the land. CCR that is beneficially used off-site is not a CCR pile.

"CCR surface impoundment" or **"impoundment"** means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

"CCR unit" means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

"Dike" means an embankment, berm, or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

"Displacement" means the relative movement of any two sides of a fault measured in any direction.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste as defined in Section 27A O.S. § 2-10-103 into or on any land or water so that such solid waste, or constituent thereof, may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. For purposes of this Chapter, disposal does not include the storage or the beneficial use of CCR.

"Downstream toe" means the junction of the downstream slope or face of the CCR surface impoundment with the ground surface.

"Eligible unlined CCR surface impoundment" means an existing CCR surface impoundment that meets all of the following conditions:

(A) The owner or operator has documented that the CCR unit is in compliance with the location restrictions specified under OAC 252:517-5-1 through OAC 252:517-5-5;

(B) The owner or operator has documented that the CCR unit is in compliance with the periodic safety factor assessment requirements under OAC 252:517-11-4(e) and (f); and

(C) No constituent listed in Appendix B to this Chapter has been detected at a statistically significant level exceeding a groundwater protection standard defined under OAC 252:517-9-6(h).

"Encapsulated beneficial use" means a beneficial use of CCR that binds the CCR into a solid matrix that minimizes its mobilization into the surrounding environment.

"Existing CCR landfill" means a CCR landfill that receives CCR both before and after October 19, 2015, or for which construction commenced prior to October 19, 2015 and receives CCR on or after October 19, 2015. A CCR landfill has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun prior to October 19, 2015.

"Existing CCR surface impoundment" means a CCR surface impoundment that receives CCR both before and after October 19, 2015, or for which construction commenced prior to October 19, 2015 and receives CCR on or after October 19, 2015. A CCR surface impoundment has commenced construction if the owner or operator has obtained the federal, state, and local approvals or permits necessary to begin physical construction and a continuous on-site, physical construction program had begun prior to October 19, 2015.

"Facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, disposing, or otherwise conducting solid waste management of CCR. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them).

"Factor of safety (Safety factor)" means the ratio of the forces tending to resist the failure of a structure to the forces tending to cause such failure as determined by accepted engineering practice.

"Fault" means a fracture or a zone of fractures in any material along which strata on one side have been displaced with respect to that on the other side.

"Flood hydrograph" means a graph showing, for a given point on a stream, the discharge, height, or other characteristic of a flood as a function of time.

"Freeboard" means the vertical distance between the lowest point on the crest of the impoundment dike and the surface of the waste contained therein.

"Free liquids" means liquids that readily separate from the solid portion of a waste under ambient temperature and pressure.

"Groundwater" means water below the land surface in a zone of saturation.

"Hazard potential classification" means the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances. The hazardous potential classifications include high hazard potential CCR surface impoundment, significant hazard potential CCR surface impoundment, and low hazard potential CCR surface impoundment, which terms mean:

(A) High hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation will probably cause loss of human life.

(B) Low hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.

(C) Significant hazard potential CCR surface impoundment means a diked surface impoundment where failure or mis-operation results in no probable loss of human life, but can cause economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

"Height" means the vertical measurement from the downstream toe of the CCR surface impoundment at its lowest point to the lowest elevation of the crest of the CCR surface impoundment.

"Holocene" means the most recent epoch of the Quaternary period, extending from the end of the Pleistocene Epoch, at 11,700 years before present, to present.

"Hydraulic conductivity" means the rate at which water can move through a permeable medium (i.e., the coefficient of permeability).

"Inactive CCR surface impoundment" means a CCR surface impoundment that no longer receives CCR on or after October 19, 2015 and still contains both CCR and liquids on or after October 19, 2015.

"Incised CCR surface impoundment" means a CCR surface impoundment which is constructed by excavating entirely below the natural ground surface, holds an accumulation of CCR entirely below the adjacent natural ground surface, and does not consist of any constructed diked portion.

"Inflow design flood" means the flood hydrograph that is used in the design or modification of the CCR surface impoundments and its appurtenant works.

"In operation" means the same as active life.

"Karst terrain" means an area where karst topography, with its characteristic erosional surface and subterranean features, is developed as the result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in karst terranes include, but are not limited to, dolines, collapse shafts (sinkholes), sinking streams, caves, seeps, large springs, and blind valleys.

"Lateral expansion" means a horizontal expansion of the waste boundaries of an existing CCR landfill or existing CCR surface impoundment made after October 19, 2015.

"Liquefaction factor of safety" means the factor of safety (safety factor) determined using analysis under liquefaction conditions.

"Lithified earth material" means all rock, including all naturally occurring and naturally formed aggregates or masses of minerals or small particles of older rock that formed by crystallization of magma or by induration of loose sediments. This term does not include man-made materials, such as fill, concrete, and asphalt, or unconsolidated earth materials, soil, or regolith lying at or near the earth surface.

"Maximum horizontal acceleration in lithified earth material" means the maximum expected horizontal acceleration at the ground surface as depicted on a seismic hazard map, with a 98% or greater probability that the acceleration will not be exceeded in 50 years, or the maximum expected horizontal acceleration based on a site-specific seismic risk assessment.

"New CCR landfill" means a CCR landfill or lateral expansion of a CCR landfill that first receives CCR or commences construction after October 19, 2015. A new CCR landfill has commenced construction if the owner or operator has obtained permits necessary to begin physical construction and a continuous on-site, physical construction program had begun after October 19, 2015. Overfills are also considered new CCR landfills.

"New CCR surface impoundment" means a CCR surface impoundment or lateral expansion of an existing or new CCR surface impoundment that first receives CCR or commences construction after October 19, 2015. A new CCR surface impoundment has commenced construction if the owner or operator has obtained the permits necessary to begin physical construction and a continuous on-site, physical construction program had begun after October 19, 2015.

"Operator" means the person(s) responsible for the overall operation of a CCR unit.

"Overfill" means a new CCR landfill constructed over a closed CCR surface impoundment.

"Owner" means the person(s) who owns a CCR unit or part of a CCR unit.

"Permit boundary" means the outermost edge of the area described by legal description in the owner/operator's permit. The permitted boundary includes the area in the buffer zone.

"Poor foundation conditions" mean those areas where features exist which indicate that a natural or human-induced event may result in inadequate foundation support for the structural components of an existing or new CCR unit. For example, failure to maintain static and seismic factors of safety as required in OAC 252:517-11-4(e) and OAC 252:517-11-5(e) would cause a poor foundation condition.

"Probable maximum flood" means the flood that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in the drainage basin.

"Qualified person" means a person or persons trained to recognize specific appearances of structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit by visual observation and, if applicable, to monitor instrumentation.

"Qualified professional engineer" means an individual who is licensed as a Professional Engineer in the state of Oklahoma by the State Board of Registration for Professional Engineers and Land Surveyors.

"Recognized and generally accepted good engineering practices" means engineering maintenance or operation activities based on established codes, widely accepted standards, published technical reports, or a practice widely recommended throughout the industry. Such practices generally detail approved ways to perform specific engineering, inspection, or mechanical integrity activities.

"Representative sample" means a sample of a universe or whole (e.g., waste pile, lagoon, and groundwater) which can be expected to exhibit the average properties of the universe or whole. See EPA publication SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Chapter 9.

"Retrofit" means to remove all CCR and contaminated soils and sediments from the CCR surface impoundment, and to ensure the unit complies with the requirements in OAC 252:517-11-3.

"Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a CCR landfill or lateral expansion of a CCR landfill.

"Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a CCR landfill or lateral expansion of a CCR landfill.

"Sand and gravel pit or quarry" means an excavation for the extraction of aggregate, minerals or metals. The term sand and gravel pit and/or quarry does not include subsurface or surface coal mines.

"Seismic factor of safety" means the factor of safety (safety factor) determined using analysis under earthquake conditions using the peak ground acceleration for a seismic event with a 2% probability of exceedance in 50 years, equivalent to a return period of approximately 2,500 years, based on the U.S. Geological Survey (USGS) seismic hazard maps for seismic events with this return period for the region where the CCR surface impoundment is located.

"Seismic impact zone" means an area having a 2% or greater probability that the maximum expected horizontal acceleration, expressed as a percentage of the earth's gravitational pull (g), will exceed 0.10 g in 50 years.

"Slope protection" means engineered or non-engineered measures installed on the upstream or downstream slope of the CCR surface impoundment to protect the slope against wave action or erosion, including but not limited to rock riprap, wooden pile, or concrete revetments, vegetated wave berms, concrete facing, gabions, geotextiles, or fascines.

"Solid waste management or management" means the systematic administration of the activities which provide for the collection, source separation, storage, transportation, processing, treatment, or disposal of solid waste.

"State Director" means the Executive Director of the DEQ or designee.

"Static factor of safety" means the factor of safety (safety factor) determined using analysis under the long-term, maximum storage pool loading condition, the maximum surcharge pool loading condition, and under the end-of-construction loading condition.

"Structural components" mean liners, leachate collection and removal systems, final covers, run-on and run-off systems, inflow design flood control systems, and any other component used in the construction and operation of the CCR unit that is necessary to ensure the integrity of the unit and that the contents of the unit are not released into the environment.

"Technically feasible" means possible to do in a way that would likely be successful.

"Technically infeasible" means not possible to do in a way that would likely be successful.

"Unstable area" means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity, including structural components of some or all of the CCR unit that are responsible for preventing releases from such unit. Unstable areas can include poor foundation conditions, areas susceptible to mass movements, and karst terrains.

"Uppermost aquifer" means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary. Upper limit is measured at a point nearest to the natural ground surface to which the aquifer rises during the wet season.

"Waste boundary" means a vertical surface located at the hydraulically downgradient limit of the CCR unit. The vertical surface extends down into the uppermost aquifer.

"Wetlands" means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

252:517-1-7. Permits

(a) **Permit required.** All CCR units must be permitted in accordance with the rules of this Chapter.

(b) **Existing CCR landfill permits.** ~~(1) Existing permits.~~ Permits for active CCR landfills issued under previous rules, and those in the post-closure monitoring period on the effective date of this

Chapter, remain in effect.

~~(2) Permit upgrades. Within 180 days of the effective date of this Chapter, or unless a specific date is provided, the owner/operator of the CCR landfill shall submit a permit modification application to the DEQ to ensure compliance with requirements of this Chapter.~~

(c) **Existing CCR impoundment permits.** Existing CCR impoundments permitted under OAC 252:616 must be permitted in accordance with the rules of this Chapter upon expiration of the existing permit or no later than October 19, 2018, whichever occurs first.

(d) Permit upgrades. Within 180 days of the effective date of this Chapter, or unless a specific date is provided, the owner/operator of a CCR unit shall submit a permit modification application to the DEQ to ensure compliance with requirements of this Chapter.

252:517-9-1. General provisions

(a) **Applicability.** All CCR landfills, CCR surface impoundments, and lateral expansions of CCR units are subject to the groundwater monitoring and corrective action requirements under OAC 252:517-9-1 through OAC 252:517-9-9.

(b) **Initial timeframes.**

(1) **Existing CCR landfills and existing CCR surface impoundments.** No later than October 17, 2017, the owner or operator of the CCR unit must be in compliance with the following groundwater monitoring requirements:

(A) Install the groundwater monitoring system as required by OAC 252-517-9-2;

(B) Develop the groundwater sampling and analysis program to include selection of the statistical procedures to be used for evaluating groundwater monitoring data as required by OAC 252:517-9-4;

(C) Initiate the detection monitoring program to include obtaining a minimum of eight independent samples for each background and downgradient well as required by OAC 252:517-9-5(b); and

(D) Begin evaluating the groundwater monitoring data for statistically significant increases over background levels for the constituents listed in Appendix A of this Chapter as required by OAC 252:517-9-5.

(2) **New CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units.** Prior to initial receipt of CCR by the CCR unit, the owner or operator must be in compliance with the groundwater monitoring requirements specified in paragraph (b)(1)(A) and (B) of this Section. In addition, the owner or operator of the CCR unit must initiate the detection monitoring program to include obtaining a minimum of eight independent samples for each background well as required by OAC 252:517-9-5(b).

(c) **Groundwater monitoring and corrective action.** Once a groundwater monitoring system and groundwater monitoring program has been established at the CCR unit as required by this Chapter, the owner or operator must conduct groundwater monitoring and, if necessary, corrective action throughout the active life and post-closure care period of the CCR unit.

(d) **Control releases.** In the event of a release from a CCR unit, the owner or operator must immediately take all necessary measures to control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of contaminants into the environment. The owner or operator of the CCR unit must comply with all applicable requirements in OAC 252:517-9-7, OAC 252:517-9-8, and OAC 252:517-9-9.

(e) **Annual groundwater monitoring and corrective action report.** For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this Chapter, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this Section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by OAC 252:517-19-1(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

- (1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;
- (2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
- (3) In addition to all the monitoring data obtained under OAC 252:517-9-1 through OAC 252:517-9-9, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- (4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); ~~and~~
- (5) Other information required to be included in the annual report as specified in OAC 252:517-9-1 through OAC 252:517-9-9; and
- (6) A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
 - (A) At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in OAC 252:517-9-5 or the assessment monitoring program in OAC 252:517-9-6;
 - (B) At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in OAC 252:517-9-5 or the assessment monitoring program in OAC 252:517-9-6;
 - (C) If it was determined that there was a statistically significant increase over background for one or more constituents listed in Appendix A to this Chapter pursuant to OAC 252:517-9-5(e):
 - (i) Identify those constituents listed in Appendix A to this Chapter and the names of the monitoring wells associated with such an increase; and

(ii) Provide the date when the assessment monitoring program was initiated for the CCR unit.

(D) If it was determined that there was a statistically significant level above the groundwater protection standard for one or more constituents listed in Appendix B to this Chapter pursuant to OAC 252:517-9-6(g) include all of the following:

(i) Identify those constituents listed in Appendix B to this Chapter and the names of the monitoring wells associated with such an increase;

(ii) Provide the date when the assessment of corrective measures was initiated for the CCR unit;

(iii) Provide the date when the public meeting was held for the assessment of corrective measures for the CCR unit; and

(iv) Provide the date when the assessment of corrective measures was completed for the CCR unit.

(E) Whether a remedy was selected pursuant to OAC 252:517-9-8 during the current annual reporting period, and if so, the date of remedy selection; and

(F) Whether remedial activities were initiated or are ongoing pursuant to OAC 252:517-9-9 during the current annual reporting period.

(f) **Recordkeeping.** The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in OAC 252:517-19-1(h), the notification requirements specified in OAC 252:517-19-2(h)(g), and the internet requirements specified in OAC 252:517-19-3(h).

(g) **DEQ approval required.** The annual groundwater monitoring and corrective action report shall be submitted to the DEQ for approval.

252:517-9-2. Groundwater monitoring systems

(a) **Performance standard.** The owner or operator of a CCR unit must install a groundwater monitoring system that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that:

(1) Accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the CCR management area where:

(A) Hydrogeologic conditions do not allow the owner or operator of the CCR unit to determine what wells are hydraulically upgradient; or

(B) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Accurately represent the quality of groundwater passing the waste boundary of the CCR unit. The downgradient monitoring system must be installed at the waste boundary that ensures detection of groundwater contamination in the uppermost aquifer. All potential contaminant pathways must be monitored.

(b) **Site-specific considerations.** The number, spacing, and depths of monitoring systems shall be determined based upon site-specific technical information that must include thorough characterization of:

(1) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and

(2) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

(c) **Minimum number.** The groundwater monitoring system must include the minimum number of monitoring wells necessary to meet the performance standards specified in paragraph (a) of this Section, based on the site-specific information specified in paragraph (b) of this Section. The groundwater monitoring system must contain:

- (1) A minimum of one upgradient and three downgradient monitoring wells; and
- (2) Additional monitoring wells as necessary to accurately represent the quality of background groundwater that has not been affected by leakage from the CCR unit and the quality of groundwater passing the waste boundary of the CCR unit.

(d) **Multi-unit groundwater monitoring system.** The owner or operator of multiple CCR units may install a multiunit groundwater monitoring system instead of separate groundwater monitoring systems for each CCR unit.

(1) The multiunit groundwater monitoring system must be equally as capable of detecting monitored constituents at the waste boundary of the CCR unit as the individual groundwater monitoring system specified in paragraphs (a) through (c) of this Section for each CCR unit based on the following factors:

- (A) Number, spacing, and orientation of each CCR unit;
- (B) Hydrogeologic setting;
- (C) Site history; and
- (D) Engineering design of the CCR unit.

(2) [RESERVED]

~~(2) If the owner or operator elects to install a multiunit groundwater monitoring system, and if the multiunit system includes at least one existing unlined CCR surface impoundment as determined by OAC 252:517-11-2(a), and if at any time after October 19, 2015 the owner or operator determines in any sampling event that the concentrations of one or more constituents listed in Appendix B to this Chapter are detected at statistically significant levels above the groundwater protection standard established under OAC 252:517-9-6(h) for the multiunit system, then all unlined CCR surface impoundments comprising the multiunit groundwater monitoring system are subject to the closure requirements under OAC 252:517-15-6(a) to retrofit or close.~~

(e) **Monitoring wells.** Monitoring wells must be constructed in accordance with OAC 252:517-7-3.

(1) The owner or operator of the CCR unit must document and include in the operating record the design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices. The qualified professional engineer must be given access to this documentation when completing the groundwater monitoring system certification required under paragraph (f) of this Section.

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to the design specifications throughout the life of the monitoring program.

(f) **PE certification.** The owner or operator must obtain a certification from a qualified professional engineer stating that the groundwater monitoring system has been designed and constructed to meet the requirements of this Section. If the groundwater monitoring system includes the minimum number of monitoring wells specified in paragraph (c)(1) of this Section, the certification must document the basis supporting this determination.

(g) **DEQ approval required.** A plan meeting the requirements of this section must be submitted to DEQ for approval prior to installation of the groundwater monitoring system.

(h) **Recordkeeping.** The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in OAC 252:517-19-1(h), the notification requirements specified in OAC 252:517-19-2(~~h~~)(g), and the internet requirements specified in OAC 252:517-19-3(h).

252:517-9-6. Assessment monitoring program

(a) **Assessment monitoring required.** Assessment monitoring is required whenever a statistically significant increase over background levels has been detected for one or more of the constituents listed in Appendix A to this Chapter.

(b) **Initiation and number of samples.** Within 90 days of triggering an assessment monitoring program, and annually thereafter, the owner or operator of the CCR unit must sample and analyze the groundwater for all constituents listed in Appendix B to this Chapter. The number of samples collected and analyzed for each well during each sampling event must be consistent with OAC 252:517-9-4(~~e~~)(f), and must account for any unique characteristics of the site, but must be at least one sample from each well.

(c) **Alternative monitoring frequency.** The owner or operator of a CCR unit may demonstrate the need for an alternative monitoring frequency for repeated sampling and analysis for constituents listed in Appendix B to this Chapter during the active life and the post-closure care period based on the availability of groundwater. If there is not adequate groundwater flow to sample wells semiannually, the alternative frequency shall be no less than annual. The need to vary monitoring frequency must be evaluated on a site-specific basis and approved by the DEQ. The demonstration must be supported by, at a minimum, the information specified in paragraphs (c)(1) and (2) of this Section.

(1) The alternative sampling frequency must be based on consideration of the following factors:

(A) Lithology of the aquifer and unsaturated zone;

(B) Hydraulic conductivity of the aquifer and unsaturated zone; and

(C) Groundwater flow rates.

(2) Information documenting that the alternative frequency will be no less effective in ensuring that any leakage from the CCR unit will be discovered within a timeframe that will not materially delay the initiation of any necessary remediation measures.

(3) The owner or operator must obtain a certification from a qualified professional engineer stating that the demonstration for an alternative groundwater sampling and analysis frequency meets the requirements of this Section. The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by OAC 252:517-9-1(e).

(d) **Action required.** After obtaining the results from the initial and subsequent sampling events required in paragraph (b) of this Section, the owner or operator must:

(1) Within 90 days of obtaining the results, and on at least a semiannual basis thereafter, resample all wells that were installed pursuant to the requirements of OAC 252-517-9-2, conduct analyses for all parameters in Appendix A to this Chapter and for those constituents in Appendix B to this Chapter that are detected in response to paragraph (b) of this Section, and record their concentrations in the facility operating record. The number of samples collected and analyzed for each background well and downgradient well during subsequent semiannual sampling events must be consistent with OAC 252:517-9-4(e)(f), and must account for any unique characteristics of the site, but must be at least one sample from each background and downgradient well;

(2) Establish groundwater protection standards for all constituents detected pursuant to paragraph (b) or (d) of this Section. The groundwater protection standards must be established in accordance with paragraph (h) of this Section; and

(3) Include the recorded concentrations required by paragraph (d)(1) of this Section, identify the background concentrations established under OAC 252:517-9-5(b), and identify the groundwater protection standards established under paragraph (d)(2) of this Section in the annual groundwater monitoring and corrective action report required by OAC 252:517-9-1(e).

(e) **Concentrations below background.** If the concentrations of all constituents listed in Appendices A and B to this Chapter are shown to be at or below background values, using the statistical procedures in OAC 252:517-9-4(g), for two consecutive sampling events, the owner or operator may return to detection monitoring of the CCR unit, with DEQ approval. The owner or operator must prepare a notification stating that detection monitoring is resuming for the CCR unit. The owner or operator has completed the notification when the notification is placed in the facility's operating record as required by OAC 252:517-19-1(h)(7).

(f) **Concentrations above background.** If the concentrations of any constituent in Appendices A and B to this Chapter are above background values, but all concentrations are below the groundwater protection standard established under paragraph (h) of this Section, using the statistical procedures in OAC 252:517-9-4(g), the owner or operator must continue assessment monitoring in accordance with this Section.

(g) **Concentration above groundwater protection standard.** If one or more constituents in Appendix B to this Chapter are detected at statistically significant levels above the groundwater protection standard established under paragraph (h) of this Section in any sampling event, the owner or operator must prepare a notification identifying the constituents in Appendix B to this Chapter that have exceeded the groundwater protection standard and submit to DEQ, a proposed plan and schedule for analyzing the environmental release from the facility and for developing appropriate corrective action. The owner or operator has completed the notification when the notification is placed in the facility's operating record as required by OAC 252:517-19-1(h)(8).

The owner or operator of the CCR unit also must:

(1) Characterize the nature and extent of the release and any relevant site conditions that may affect the remedy ultimately selected. The characterization must be sufficient to support a complete and accurate assessment of the corrective measures necessary to effectively clean up all releases from the CCR unit pursuant to OAC 252:517-9-7. Characterization of the release includes the following minimum measures:

- (A) Install additional monitoring wells necessary to define the contaminant plume(s);
 - (B) Collect data on the nature and estimated quantity of material released including specific information on the constituents listed in Appendix B of this Chapter and the levels at which they are present in the material released;
 - (C) Install at least one additional monitoring well at the facility boundary in the direction of contaminant migration and sample this well in accordance with paragraph (d)(1) of this Section; and
 - (D) Sample all wells in accordance with paragraph (d)(1) of this Section to characterize the nature and extent of the release.
- (2) Notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off-site if indicated by sampling of wells in accordance with paragraph (g)(1) of this Section. The owner or operator has completed the notifications when they are placed in the facility's operating record as required by OAC 252:517-19-1(h)(8).
- (3) Within 90 days of finding that any of the constituents listed in Appendix B to this Chapter have been detected at a statistically significant level exceeding the groundwater protection standards the owner or operator must either:
- (A) Initiate an assessment of corrective measures as required by OAC 252:517-9-7; or
 - (B) Demonstrate that a source other than the CCR unit caused the contamination, or that the statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Any such demonstration must be supported by a report that includes the factual or evidentiary basis for any conclusions, must be certified to be accurate by a qualified professional engineer, and submitted to DEQ for approval. If a successful demonstration is made, the owner or operator must continue monitoring in accordance with the assessment monitoring program pursuant to this Section, and upon DEQ approval may return to detection monitoring if the constituents in Appendices A and B to this Chapter are at or below background as specified in paragraph (e) of this Section. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by OAC 252:517-9-1(e), in addition to the certification by a qualified professional engineer.
- (4) If a successful demonstration has not been made at the end of the 90 day period provided by paragraph (g)(3)(B) of this Section, the owner or operator of the CCR unit must initiate the assessment of corrective measures requirements under OAC 252:517-9-7.
- ~~(5) If an assessment of corrective measures is required under OAC 252:517-9-7 by either paragraph (g)(3)(i) or (g)(4) of this Section, and if the CCR unit is an existing unlined CCR surface impoundment as determined by OAC 252:517-11-2(a), then the CCR unit is subject to the closure requirements under OAC 252:517-15-6(a) to retrofit or close. In addition, †~~The owner or operator must prepare a notification stating that an assessment of corrective measures has been initiated.
- (h) Groundwater protection standard.** The owner or operator of the CCR unit must establish a groundwater protection standard for each constituent in Appendix B to this Chapter detected in the groundwater. The groundwater protection standard shall be:
- (1) For constituents for which a maximum contaminant level (MCL) has been established under 40 CFR 141.62 and 141.66, the MCL for that constituent;

(2) ~~For constituents for which an MCL has not been established, the background concentration for the constituent established from wells in accordance with OAC 252-517-9-2; or~~ For the following constituents:

(A) Cobalt: 6 micrograms per liter ($\mu\text{g/L}$);

(B) Lead: 15 $\mu\text{g/L}$;

(C) Lithium: 40 $\mu\text{g/L}$; and

(D) Molybdenum: 100 $\mu\text{g/L}$

(3) For constituents for which the background level is higher than the MCL levels identified under paragraphs (h)(1) and (h)(2) of this Section, the background concentration.

(i) **Recordkeeping.** The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in OAC 252:517-19-1(h), the notification requirements specified in OAC 252:517-19-2(~~h~~)(g), and the Internet requirements specified in OAC 252:517-19-3(h).

252:517-11-2. Liner design criteria for existing CCR surface impoundments

(a) Applicability.

(1) No later than October 17, 2016, the owner or operator of an existing CCR surface impoundment must document whether or not such unit was constructed with any one of the following:

(A) ~~[RESERVED] A liner consisting of a minimum of two feet of compacted soil with a hydraulic conductivity of no more than 1×10^{-7} cm/sec;~~

(B) A composite liner that meets the requirements of OAC 252:517-11-1(b); or

(C) An alternative composite liner that meets the requirements of OAC 252:517-11-1(c).

(2) The hydraulic conductivity of the compacted soil must be determined using recognized and generally accepted methods.

(3) An existing CCR surface impoundment is considered to be an existing unlined CCR surface impoundment if either:

(A) The owner or operator of the CCR unit determines that the CCR unit is not constructed with a liner that meets the requirements of paragraphs (a)(1)(~~A~~), (~~B~~), or (C) of this Section; or

(B) The owner or operator of the CCR unit fails to document whether the CCR unit was constructed with a liner that meets the requirements of paragraphs (a)(1)(~~A~~), (~~B~~), or (C) of this Section.

(4) All existing unlined CCR surface impoundments are subject to the requirements of OAC 252:517-15-6.

(b) **PE certification.** The owner or operator of the CCR unit must obtain a certification from a qualified professional engineer attesting that the documentation as to whether a CCR unit meets the requirements of paragraph (a) of this Section is accurate. Documentation and certification shall be submitted to the DEQ.

(c) **Recordkeeping.** The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in OAC 252:517-19-1(f), the notification requirements specified in OAC 252:517-19-2(~~f~~)(e), and the Internet requirements specified in OAC 252:517-19-3(f).

252:517-15-6. Closure or retrofit of CCR units

(a) **Existing unlined CCR surface impoundment.** The owner or operator of an existing unlined CCR surface impoundment, as determined under OAC 252:517-11-2(a), is subject to the requirements of paragraph (a)(1) of this Section.

(1) Except as provided by paragraph (a)(3) of this Section, as soon as technically feasible, but not later than April 11, 2021, if at any time after October 19, 2015 an owner or operator of an existing unlined CCR surface impoundment ~~determines in any sampling event that the concentrations of one or more constituents listed in Appendix B to this Chapter are detected at statistically significant levels above the ground water protection standard established under OAC 252:517-9-6(h) for such CCR unit, within six months of making such determination,~~ the owner or operator of the existing unlined CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR surface impoundment and either retrofit or close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(2) An owner or operator of an existing unlined CCR surface impoundment that closes in accordance with paragraph (a)(1) of this Section must include a statement in the notification required under OAC 252:517-15-7(g) or (k)(5) that the CCR surface impoundment is closing or retrofitting under the requirements of paragraph (a)(1) of this Section.

(3) The timeframe specified in paragraph (a)(1) of this Section does not apply if the owner or operator complies with the alternative closure procedures specified in OAC 252:517-15-8.

(4) At any time after the initiation of closure under paragraph (a)(1) of this Section, the owner or operator may cease closure activities and initiate a retrofit of the CCR unit in accordance with the requirements of OAC 252:517-15-7(k).

(b) **Existing CCR surface impoundment.** The owner or operator of an existing CCR surface impoundment is subject to the requirements of paragraph (b)(1) of this Section.

(1) Closure due to non-compliance with location restrictions:

(A) Except as provided by paragraph (b)(4) of this Section, the owner or operator of an existing CCR surface impoundment that has not demonstrated compliance with the location standard specified in OAC 252:517-5-1(a) must cease placing CCR and non-CCR wastestreams into such CCR unit as soon as technically feasible, but no later than April 11, 2021, and close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(B) Except as provided by paragraph (b)(4) of this Section, within six months of determining that an existing CCR surface impoundment has not demonstrated compliance with any location standard specified in ~~OAC 252:517-5-1(a)~~, OAC 252:517-5-2(a), OAC 252:517-5-3(a), OAC 252:517-5-4(a), and OAC 252:517-5-5(a), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(2) Within six months of either failing to complete the initial or any subsequent periodic safety factor assessment required by OAC 252:517-11-4(e) by the deadlines specified in OAC 252:517-11-4(f)(1) through (3) or failing to document that the calculated factors of safety for the existing CCR surface impoundment achieve the minimum safety factors specified in OAC 252:517-11-4(e)(1)(i) through (iv), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(3) An owner or operator of an existing CCR surface impoundment that closes in accordance with paragraphs (b)(1) or (2) of this Section must include a statement in the notification required under OAC 252:517-15-7(g) that the CCR surface impoundment is closing under the requirements of paragraphs (b)(1) or (2) of this Section.

(4) The timeframe specified in paragraph (b)(1) of this Section does not apply if the owner or operator complies with the alternative closure procedures specified in OAC 252:517-15-8.

(c) **New CCR surface impoundment.** The owner or operator of a new CCR surface impoundment is subject to the requirements of paragraph (c)(1) of this Section.

(1) Within six months of either failing to complete the initial or any subsequent periodic safety factor assessment required by OAC 252:517-11-5(e) by the deadlines specified in OAC 252:517-11-5(f)(1) through (3) or failing to document that the calculated factors of safety for the new CCR surface impoundment achieve the minimum safety factors specified in OAC 252:517-11-5(e)(1)(i) through (v), the owner or operator of the CCR surface impoundment must cease placing CCR and non-CCR wastestreams into such CCR unit and close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(2) An owner or operator of a new CCR surface impoundment that closes in accordance with paragraph (c)(1) of this Section must include a statement in the notification required under OAC 252:517-15-7(g) that the CCR surface impoundment is closing under the requirements of paragraph (c)(1) of this Section.

(d) **Existing CCR landfill.** The owner or operator of an existing CCR landfill is subject to the requirements of paragraph (d)(1) of this Section.

(1) Except as provided by paragraph (d)(3) of this Section, within six months of determining that an existing CCR landfill has not demonstrated compliance with the location restriction for unstable areas specified in OAC 252:517-5-5(a), the owner or operator of the CCR unit must cease placing CCR and non-CCR waste streams into such CCR landfill and close the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(2) An owner or operator of an existing CCR landfill that closes in accordance with paragraph (d)(1) of this Section must include a statement in the notification required under OAC 252:517-15-7(g) that the CCR landfill is closing under the requirements of paragraph (d)(1) of this Section.

(3) The timeframe specified in paragraph (d)(1) of this Section does not apply if the owner or operator complies with the alternative closure procedures specified in OAC 252:517-15-8.

252:517-15-7. Criteria for conducting the closure or retrofit of CCR units

(a) **Closure of CCR unit; retrofit of CCR surface impoundment.** Closure of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit must be completed either by leaving the CCR in place and installing a final cover system or through removal of the CCR and decontamination of the CCR unit, as described in paragraphs (b) through (j) of this Section.

Retrofit of a CCR surface impoundment must be completed in accordance with the requirements in paragraph (k) of this Section.

(b) **Written closure plan.**

(1) **Content of the plan.** The owner or operator of a CCR unit must prepare a written closure plan that describes the steps necessary to close the CCR unit at any point during the active life of the CCR unit consistent with recognized and generally accepted good

engineering practices. The written closure plan must include, at a minimum, the information specified in paragraphs (b)(1)(A) through (F) of this Section.

(A) A narrative description of how the CCR unit will be closed in accordance with this Section.

(B) If closure of the CCR unit will be accomplished through removal of CCR from the CCR unit, a description of the procedures to remove the CCR and decontaminate the CCR unit in accordance with paragraph (c) of this Section.

(C) If closure of the CCR unit will be accomplished by leaving CCR in place, a description of the final cover system, designed in accordance with paragraph (d) of this Section, and the methods and procedures to be used to install the final cover. The closure plan must also discuss how the final cover system will achieve the performance standards specified in paragraph (d) of this Section.

(D) An estimate of the maximum inventory of CCR ever on-site over the active life of the CCR unit.

(E) An estimate of the largest area of the CCR unit ever requiring a final cover as required by paragraph (d) of this Section at any time during the CCR unit's active life.

(F) A schedule for completing all activities necessary to satisfy the closure criteria in this Section, including an estimate of the year in which all closure activities for the CCR unit will be completed. The schedule should provide sufficient information to describe the sequential steps that will be taken to close the CCR unit, including identification of major milestones such as coordinating with and obtaining necessary approvals and permits from other agencies, the dewatering and stabilization phases of CCR surface impoundment closure, or installation of the final cover system, and the estimated timeframes to complete each step or phase of CCR unit closure. When preparing the written closure plan, if the owner or operator of a CCR unit estimates that the time required to complete closure will exceed the timeframes specified in paragraph (f)(1) of this Section, the written closure plan must include the site-specific information, factors and considerations that would support any time extension sought under paragraph (f)(2) of this Section.

(2) Timeframes for preparing the initial written closure plan.

(A) Existing CCR landfills and existing CCR surface impoundments. No later than October 17, 2016, the owner or operator of the CCR unit must prepare an initial written closure plan consistent with the requirements specified in paragraph (b)(1) of this Section.

(B) New CCR landfills and new CCR surface impoundments, and any lateral expansion of a CCR unit. No later than the date of the initial receipt of CCR in the CCR unit, the owner or operator must prepare an initial written closure plan consistent with the requirements specified in paragraph (b)(1) of this Section.

(C) The owner or operator has completed the written closure plan when the plan, including the certification required by paragraph (b)(4) of this Section, has been placed in the facility's operating record as required by OAC 252:517-19-1(i)(4).

(3) Amendment of a written closure plan.

(A) The owner or operator may amend the initial or any subsequent written closure plan developed pursuant to paragraph (b)(1) of this Section at any time.

(B) The owner or operator must amend the written closure plan whenever:

- (i) There is a change in the operation of the CCR unit that would substantially affect the written closure plan in effect; or
 - (ii) Before or after closure activities have commenced, unanticipated events necessitate a revision of the written closure plan;
- (C) The owner or operator must amend the closure plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the need to revise an existing written closure plan. If a written closure plan is revised after closure activities have commenced for a CCR unit, the owner or operator must amend the current closure plan no later than 30 days following the triggering event.
- (4) **PE certification.** The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written closure plan meets the requirements of this Section.
- (5) **DEQ approval required.** The owner or operator of the CCR unit must submit the initial closure plan and any amendment of the closure plan to the DEQ for approval.
- (c) **Closure by removal of CCR.** An owner or operator may elect to close a CCR unit by removing and decontaminating all areas affected by releases from the CCR unit. CCR removal and decontamination of the CCR unit are complete when constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to OAC 252:517-9-6(h) for constituents listed in Appendix B to this Chapter.
- (d) **Closure performance standard when leaving CCR in place.**
 - (1) **Closure standards.** The owner or operator of a CCR unit must ensure that, at a minimum, the CCR unit is closed in a manner that will:
 - (A) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated runoff to the ground or surface waters or to the atmosphere;
 - (B) Preclude the probability of future impoundment of water, sediment, or slurry;
 - (C) Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;
 - (D) Minimize the need for further maintenance of the CCR unit; and
 - (E) Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.
 - (2) **Drainage and stabilization of CCR surface impoundments.** The owner or operator of a CCR surface impoundment or any lateral expansion of a CCR surface impoundment must meet the requirements of paragraphs (d)(2)(A) and (B) of this Section prior to installing the final cover system required under paragraph (d)(3) of this Section.
 - (A) Free liquids must be eliminated by removing liquid wastes or solidifying the remaining wastes and waste residues.
 - (B) Remaining wastes must be stabilized sufficient to support the final cover system.
 - (3) **Final cover system.** If a CCR unit is closed by leaving CCR in place, the owner or operator must install a final cover system that is designed to minimize infiltration and erosion, and at a minimum, meets the requirements of paragraph (d)(3)(A) of this Section, or

the requirements of the alternative final cover system specified in paragraph (d)(3)(B) of this Section.

(A) The final cover system must be designed and constructed to meet the criteria in paragraphs (d)(3)(A)(i) through (iv) of this Section. The design of the final cover system must be included in the written closure plan required by paragraph (b) of this Section.

(i) The permeability of the final cover system must be less than or equal to the permeability of any bottom liner system or natural subsoils present, or a permeability no greater than 1×10^{-5} cm/sec, whichever is less.

(ii) The infiltration of liquids through the closed CCR unit must be minimized by the use of an infiltration layer that contains a minimum of 18 inches of earthen material.

(iii) The erosion of the final cover system must be minimized by the use of an erosion layer that contains a minimum of six inches of earthen material that is capable of sustaining native plant growth.

(iv) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(B) The owner or operator may select an alternative final cover system design, provided the alternative final cover system is designed and constructed to meet the criteria in paragraphs ~~(f)(3)(B)(i) through (iv)~~ (d)(3)(B)(i) through (iii) of this Section. The design of the final cover system must be included in the written closure plan required by paragraph (b) of this Section.

(i) The design of the final cover system must include an infiltration layer that achieves an equivalent reduction in infiltration as the infiltration layer specified in paragraphs (d)(3)(A)(i) and (ii) of this Section.

(ii) The design of the final cover system must include an erosion layer that provides equivalent protection from wind or water erosion as the erosion layer specified in paragraph (d)(3)(A)(iii) of this Section.

(iii) The disruption of the integrity of the final cover system must be minimized through a design that accommodates settling and subsidence.

(C) The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the design of the final cover system meets the requirements of this Section.

(e) **Initiation of closure activities.** Except as provided for in paragraph (e)(4) of this Section and OAC 252:517-15-8, the owner or operator of a CCR unit must commence closure of the CCR unit no later than the applicable timeframes specified in either paragraph (e)(1) or (2) of this Section.

(1) **Commencing closure.** The owner or operator must commence closure of the CCR unit no later than 30 days after the date on which the CCR unit either:

(A) Receives the known final receipt of waste, either CCR or any non-CCR waste stream; or

(B) Removes the known final volume of CCR from the CCR unit for the purpose of beneficial use of CCR.

(2) **Conditions.**

(A) Except as provided by paragraph (e)(2)(B) of this Section, the owner or operator must commence closure of a CCR unit that has not received CCR or any non-CCR waste stream or is no longer removing CCR for the purpose of beneficial use within two years

of the last receipt of waste or within two years of the last removal of CCR material for the purpose of beneficial use.

(B) Notwithstanding paragraph (e)(2)(A) of this Section, the owner or operator of the CCR unit may secure an additional two years to initiate closure of the idle unit provided the owner or operator provides written documentation that the CCR unit will continue to accept wastes or will start removing CCR for the purpose of beneficial use. The documentation must be supported by, at a minimum, the information specified in paragraphs (e)(2)(B)(i) and (ii) of this Section. The owner or operator may obtain two-year extensions provided the owner or operator continues to be able to demonstrate that there is reasonable likelihood that the CCR unit will accept wastes in the foreseeable future or will remove CCR from the unit for the purpose of beneficial use. The owner or operator must place each completed demonstration, if more than one time extension is sought, in the facility's operating record as required by OAC 252:517-19-1(i)(5) prior to the end of any two-year period.

(i) Information documenting that the CCR unit has remaining storage or disposal capacity or that the CCR unit can have CCR removed for the purpose of beneficial use; and

(ii) Information demonstrating that there is a reasonable likelihood that the CCR unit will resume receiving CCR or non-CCR waste streams in the foreseeable future or that CCR can be removed for the purpose of beneficial use. The narrative must include a best estimate as to when the CCR unit will resume receiving CCR or non-CCR waste streams. The situations listed in paragraphs (e)(2)(B)(ii)(I) through (IV) of this Section are examples of situations that would support a determination that the CCR unit will resume receiving CCR or non-CCR waste streams in the foreseeable future.

(I) Normal plant operations include periods during which the CCR unit does not receive CCR or non-CCR waste streams, such as the alternating use of two or more CCR units whereby at any point in time one CCR unit is receiving CCR while CCR is being removed from a second CCR unit after its dewatering.

(II) The CCR unit is dedicated to a coal-fired boiler unit that is temporarily idled (e.g., CCR is not being generated) and there is a reasonable likelihood that the coal-fired boiler will resume operations in the future.

(III) The CCR unit is dedicated to an operating coal-fired boiler (i.e., CCR is being generated); however, no CCR are being placed in the CCR unit because the CCR are being entirely diverted to beneficial uses, but there is a reasonable likelihood that the CCR unit will again be used in the foreseeable future.

(IV) The CCR unit currently receives only non-CCR waste streams and those non-CCR waste streams are not generated for an extended period of time, but there is a reasonable likelihood that the CCR unit will again receive non-CCR waste streams in the future.

(C) In order to obtain additional time extension(s) to initiate closure of a CCR unit beyond the two years provided by paragraph (e)(2)(A) of this Section, the owner or operator of the CCR unit must include with the demonstration required by paragraph (e)(2)(B) of this Section the following statement signed by the owner or operator or an authorized representative: I certify under penalty of law that I have personally examined

and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(3) **Commencement activities.** For purposes of this Chapter, closure of the CCR unit has commenced if the owner or operator has ceased placing waste and completes any of the following actions or activities:

(A) Taken any steps necessary to implement the written closure plan required by paragraph (b) of this Section; or

(B) Taken any steps necessary to comply with any standards that are a prerequisite, or are otherwise applicable, to initiating or completing the closure of a CCR unit.

(4) **Timeline exceptions.** The timeframes specified in paragraphs (e)(1) and (2) of this Section do not apply to any of the following owners or operators:

(A) An owner or operator of an existing unlined CCR surface impoundment closing the CCR unit as required by OAC 252:517-15-6(a);

(B) An owner or operator of an existing CCR surface impoundment closing the CCR unit as required by OAC 252:517-15-6(b);

(C) An owner or operator of a new CCR surface impoundment closing the CCR unit as required by OAC 252:517-15-6(c); or

(D) An owner or operator of an existing CCR landfill closing the CCR unit as required by OAC 252:517-15-6(d).

(f) **Completion of closure activities.**

(1) **Closure timeframes.** Except as provided for in paragraph (f)(2) of this Section, the owner or operator must complete closure of the CCR unit:

(A) For existing and new CCR landfills and any lateral expansion of a CCR landfill, within six months of commencing closure activities.

(B) For existing and new CCR surface impoundments and any lateral expansion of a CCR surface impoundment, within five years of commencing closure activities.

(2) **Extensions of closure timeframes.**

(A) **Applicability.** The timeframes for completing closure of a CCR unit specified under paragraphs (f)(1) of this Section may be extended if the owner or operator can demonstrate that it was not feasible to complete closure of the CCR unit within the required timeframes due to factors beyond the facility's control. If the owner or operator is seeking a time extension beyond the time specified in the written closure plan as required by paragraph (b)(1) of this Section, the demonstration must include a narrative discussion providing the basis for additional time beyond that specified in the closure plan. The owner or operator must place each completed demonstration, if more than one time extension is sought, in the facility's operating record as required by OAC 252:517-19-1(i)(6) prior to the end of any two-year period. Factors that may support such a demonstration include:

(i) Complications stemming from the climate and weather, such as unusual amounts of precipitation or a significantly shortened construction season;

(ii) Time required to dewater a surface impoundment due to the volume of CCR contained in the CCR unit or the characteristics of the CCR in the unit;

- (iii) The geology and terrain surrounding the CCR unit will affect the amount of material needed to close the CCR unit; or
- (iv) Time required or delays caused by the need to coordinate with and obtain necessary approvals and permits from a state or other agency.

(B) Maximum time extensions.

- (i) CCR surface impoundments of 40 acres or smaller may extend the time to complete closure by no longer than two years.
- (ii) CCR surface impoundments larger than 40 acres may extend the timeframe to complete closure of the CCR unit multiple times, in two-year increments. For each two-year extension sought, the owner or operator must substantiate the factual circumstances demonstrating the need for the extension. No more than a total of five two-year extensions may be obtained for any CCR surface impoundment.
- (iii) CCR landfills may extend the timeframe to complete closure of the CCR unit multiple times, in one-year increments. For each one-year extension sought, the owner or operator must substantiate the factual circumstances demonstrating the need for the extension. No more than a total of two one-year extensions may be obtained for any CCR landfill.

(C) Certification statement. In order to obtain additional time extension(s) to complete closure of a CCR unit beyond the times provided by paragraph (f)(1) of this Section, the owner or operator of the CCR unit must include with the demonstration required by paragraph (f)(2)(A) of this Section the following statement signed by the owner or operator or an authorized representative: I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(3) PE certification. Upon completion, the owner or operator of the CCR unit must obtain a certification from a qualified professional engineer verifying that closure has been completed in accordance with the closure plan specified in paragraph (b) of this Section and the requirements of this Section.

(g) Notification of intent to close. No later than the date the owner or operator initiates closure of a CCR unit, the owner or operator must prepare a notification of intent to close a CCR unit. The notification must include the certification by a qualified professional engineer for the design of the final cover system as required by ~~OAC 252:517-15-7~~ paragraph (d)(3)(iii)(C), if applicable. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by OAC 252:517-19-1(i)(7).

(h) Notification of closure. Within 30 days of completion of closure of the CCR unit, the owner or operator must prepare a notification of closure of a CCR unit. The notification must include the certification by a qualified professional engineer as required by OAC 252:517-15-7(f)(3). The owner or operator has completed the notification when it has been placed in the facility's operating record as required by OAC 252:517-19-1(i)(8).

(i) Deed notations.

- (1) Except as provided by paragraph (i)(4) of this Section, following closure of a CCR unit, the owner or operator must record a notation on the deed to the property, or some other instrument that is normally examined during title search.
- (2) The notation on the deed must in perpetuity notify any potential purchaser of the property that:
 - (A) The land has been used as a CCR unit; and
 - (B) Its use is restricted under the post-closure care requirements as provided by OAC 252:517-15-9(d)(1)(C).
- (3) Within 30 days of recording a notation on the deed to the property, the owner or operator must prepare a notification stating that the notation has been recorded. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by OAC 252:517-19-1(i)(9).
- (4) An owner or operator that closes a CCR unit in accordance with paragraph (c) of this Section is not subject to the requirements of paragraphs (i)(1) through (3) of this Section.
- (j) **Recordkeeping.** The owner or operator of the CCR unit must comply with the closure recordkeeping requirements specified in OAC 252:517-19-1(i), the closure notification requirements specified in OAC 252:517-19-2(i)(h), and the closure Internet requirements specified in OAC 252:517-19-3(i).
- (k) **Criteria to retrofit existing CCR surface impoundment.**
 - (1) **Retrofit existing CCR surface impoundment.** To retrofit an existing CCR surface impoundment, the owner or operator must:
 - (A) First remove all CCR, including any contaminated soils and sediments from the CCR unit; and
 - (B) Comply with the requirements in OAC 252:517-11-3.
 - (C) A CCR surface impoundment undergoing a retrofit remains subject to all other requirements of this Chapter, including the requirement to conduct any necessary corrective action.
 - (2) **Written retrofit plan.**
 - (A) **Content of the plan.** The owner or operator must prepare a written retrofit plan that describes the steps necessary to retrofit the CCR unit consistent with recognized and generally accepted good engineering practices. The written retrofit plan must include, at a minimum, all of the following information:
 - (i) A narrative description of the specific measures that will be taken to retrofit the CCR unit in accordance with this Section.
 - (ii) A description of the procedures to remove all CCR and contaminated soils and sediments from the CCR unit.
 - (iii) An estimate of the maximum amount of CCR that will be removed as part of the retrofit operation.
 - (iv) An estimate of the largest area of the CCR unit that will be affected by the retrofit operation.
 - (v) A schedule for completing all activities necessary to satisfy the retrofit criteria in this Section, including an estimate of the year in which retrofit activities of the CCR unit will be completed.
 - (B) **Timeframes for preparing the initial written retrofit plan.**

- (i) No later than 60 days prior to date of initiating retrofit activities, the owner or operator must prepare an initial written retrofit plan consistent with the requirements specified in paragraph (k)(2) of this Section. For purposes of this Chapter, initiation of retrofit activities has commenced if the owner or operator has ceased placing waste in the unit and completes any of the following actions or activities:
 - (I) Taken any steps necessary to implement the written retrofit plan;
 - (II) Submitted a completed application for any required state or agency permit or permit modification; or
 - (III) Taken any steps necessary to comply with any state or other agency standards that are a prerequisite, or are otherwise applicable, to initiating or completing the retrofit of a CCR unit.
 - (ii) The owner or operator has completed the written retrofit plan when the plan, including the certification required by paragraph (k)(2)(D) of this Section, has been placed in the facility's operating record as required by OAC 252:517-19-1~~(j)~~(k)(1).
- (C) Amendment of a written retrofit plan.**
- (i) The owner or operator may amend the initial or any subsequent written retrofit plan at any time.
 - (ii) The owner or operator must amend the written retrofit plan whenever:
 - (I) There is a change in the operation of the CCR unit that would substantially affect the written retrofit plan in effect; or
 - (II) Before or after retrofit activities have commenced, unanticipated events necessitate a revision of the written retrofit plan.
 - (iii) The owner or operator must amend the retrofit plan at least 60 days prior to a planned change in the operation of the facility or CCR unit, or no later than 60 days after an unanticipated event requires the revision of an existing written retrofit plan. If a written retrofit plan is revised after retrofit activities have commenced for a CCR unit, the owner or operator must amend the current retrofit plan no later than 30 days following the triggering event.
- (D) PE certification.** The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the activities outlined in the written retrofit plan, including any amendment of the plan, meet the requirements of this Section.
- (E) DEQ approval required.** The owner or operator of the CCR unit must submit the written retrofit plan, and any amendment of the plan, to the DEQ for approval.
- (3) Deadline for completion.** Deadline for completion of activities related to the retrofit of a CCR unit. Any CCR surface impoundment that is being retrofitted must complete all retrofit activities within the same time frames and procedures specified for the closure of a CCR surface impoundment in OAC 252:517-15-7(f) or, where applicable, OAC 252:517-15-8.
- (4) PE certification; DEQ approval required.** Upon completion, the owner or operator must obtain a certification from a qualified professional engineer verifying that the retrofit activities have been completed in accordance with the retrofit plan specified in paragraph

(k)(2) of this Section and the requirements of this Section. The certified report shall be submitted to DEQ for approval.

(5) **Notification of intent.** No later than the date the owner or operator initiates the retrofit of a CCR unit, the owner or operator must prepare a notification of intent to retrofit a CCR unit. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by OAC 252:517-19-1~~(j)~~(k)(5).

(6) **Notification of completion.** Within 30 days of completing the retrofit activities specified in paragraph (k)(1) of this Section, the owner or operator must prepare a notification of completion of retrofit activities. The notification must include the certification by a qualified professional engineer as required by paragraph (k)(4) of this Section. The owner or operator has completed the notification when it has been placed in the facility's operating record as required by OAC 252:517-19-1~~(j)~~(k)(6).

(7) **Retrofit cessation.** At any time after the initiation of a CCR unit retrofit, the owner or operator may cease the retrofit and initiate closure of the CCR unit in accordance with the requirements of OAC 252:517-15-7.

(8) **Recordkeeping.** The owner or operator of the CCR unit must comply with the retrofit recordkeeping requirements specified in OAC 252:517-19-1~~(j)~~(k), the retrofit notification requirements specified in OAC 252:517-19-2~~(j)~~(h), and the retrofit Internet requirements specified in OAC 252:517-19-3(j).

252:517-15-8. Alternative closure requirements

The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit that is subject to closure pursuant to OAC 252:517-15-6(a), (b)(1), or (d) may nevertheless continue to receive the wastes specified in either paragraph (a), (b), (f)(1), or (f)(2) of this Section in the unit provided the owner or operator meets all of the requirements contained in the respective paragraph.

(a) CCR landfills with no alternative disposal capacity.

(1) Notwithstanding the provisions of OAC 252:517-15-6(d), a CCR landfill may continue to receive CCR if the owner or operator of the CCR landfill certifies that the CCR must continue to be managed in that CCR land fill due to the absence of alternative disposal capacity both on and off-site of the facility. To qualify under this paragraph, the owner or operator of the CCR landfill must document that all of the following conditions have been met and approved by DEQ:

(A) No alternative disposal capacity is available on or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section;

(B) The owner or operator has made, and continues to make, efforts to obtain additional capacity. Qualification under paragraph (a) of this Section lasts only as long as no alternative capacity is available. Once alternative capacity is identified, the owner or operator must arrange to use such capacity as soon as feasible;

(C) The owner or operator must remain in compliance with all other requirements of this Chapter, including the requirement to conduct any necessary corrective action; and

(D) The owner or operator must prepare the annual progress report specified in paragraph (c) of this Section documenting the continued lack of alternative capacity and the progress towards the development of alternative CCR disposal capacity.

(2) Once alternative capacity is available, the CCR landfill must cease receiving CCR and initiate closure following the timeframes in OAC 252:517-15-7(e).

(3) If no alternative capacity is identified within five years after the initial certification, the CCR landfill must cease receiving CCR and close in accordance with the timeframes in OAC 252:517-15-7(e) and (f).

(b) CCR landfills undergoing permanent cessation of a coal-fired boiler(s) by a date certain.

(1) Notwithstanding the provisions of OAC 252:517-15-6(d), a CCR landfill may continue to receive CCR if the owner or operator certifies that the facility will cease operation of the coal-fired boilers within the timeframe specified in paragraph (b)(4) of this Section, but in the interim period (prior to closure of the coal-fired boiler), the facility must continue to use the CCR landfill due to the absence of alternative disposal capacity both on and off-site of the facility. To qualify under this paragraph, the owner or operator of the CCR landfill must document that all of the following conditions have been met and approved by DEQ:

(A) No alternative disposal capacity is available on or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section.

(B) The owner or operator must remain in compliance with all other requirements of this Chapter, including the requirement to conduct any necessary corrective action; and

(C) The owner or operator must prepare the annual progress report specified in paragraph (c) of this Section documenting the continued lack of alternative capacity and the progress towards the closure of the coal-fired boiler.

(2) [RESERVED]

(3) [RESERVED]

(4) For a CCR landfill, the coal-fired boiler must cease operation, and the CCR landfill must complete closure no later than April 19, 2021.

(c) Required notices and progress reports for CCR landfills. An owner or operator of a CCR landfill that closes in accordance with paragraph (a) or (b) of this Section must complete the notices and progress reports specified in paragraphs (c)(1) through (3) of this Section.

(1) Within six months of becoming subject to closure pursuant to OAC 252:517-15-6(d), the owner or operator must prepare and place in the facility's operating record a notification of intent to comply with the alternative closure requirements of this Section. The notification must describe why the CCR landfill qualifies for the alternative closure provisions under either paragraph (a) or (b) of this Section, in addition to providing the documentation and certifications required by paragraph (a) or (b) of this Section.

(2) The owner or operator must prepare the periodic progress reports required by paragraph (a)(1)(D) or (b)(1)(C) of this Section, in addition to describing any problems encountered and a description of the actions taken to resolve the problems. The annual progress reports must be completed according to the following schedule:

(A) The first annual progress report must be prepared no later than 13 months after completing the notification of intent to comply with the alternative closure requirements

required by paragraph (c)(1) of this Section.

(B) The second annual progress report must be prepared no later than 12 months after completing the first annual progress report. Subsequent annual progress reports must be prepared within 12 months of completing the previous annual progress report.

(C) The owner or operator has completed the progress reports specified in this paragraph (c)(2) when the reports are placed in the facility's operating record as required by OAC 252:517-19-1(i)(11).

(3) An owner or operator of a CCR landfill must also prepare the notification of intent to close a CCR landfill as required by OAC 252:517-15-7(g).

(d) **CCR landfill recordkeeping.** The owner or operator of the CCR landfill must comply with the recordkeeping requirements specified in OAC 252:517-19-1(i), the notification requirements specified in OAC 252:517-19-2(h), and the internet requirements specified in OAC 252:517-19-3(i).

(e) **[RESERVED]**

(f) **Site-specific alternative deadlines to initiate closure of CCR surface impoundments.** Notwithstanding the provisions of OAC 252:517-15-6(a) and (b)(1), a CCR surface impoundment may continue to receive the waste specified in paragraph (f)(1) or (2) of this Section, provided the owner or operator submits a demonstration that the criteria in either paragraph (f)(1) or (2) of this Section have been met. The demonstration must be submitted to DEQ no later than the relevant deadline in paragraph (f)(3) of this Section. DEQ will act on the submission in accordance with the procedures in paragraph (f)(3) of this Section.

(1) Development of alternative capacity is technically infeasible. Notwithstanding the provisions of OAC 252:517-15-6(a) and (b)(1), a CCR surface impoundment may continue to receive the waste specified in paragraph (f)(1)(B)(i) or (ii) of this Section, provided the owner or operator demonstrates the wastestream(s) must continue to be managed in that CCR surface impoundment because it was technically infeasible to complete the measures necessary to provide alternative disposal capacity on or off-site of the facility by April 11, 2021. To obtain approval under this paragraph all of the following criteria must be met:

(A) No alternative disposal capacity is available on or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section;

(B) Development of alternative capacity is technically infeasible.

(i) For units closing pursuant to OAC 252:517-15-6(a) and (b)(1)(A), CCR and/or non-CCR wastestreams must continue to be managed in that CCR surface impoundment because it was technically infeasible to complete the measures necessary to obtain alternative disposal capacity either on or off-site of the facility by April 11, 2021.

(ii) For units closing pursuant to OAC 252:517-15-6(b)(1)(B), CCR must continue to be managed in that CCR surface impoundment because it was technically infeasible to complete the measures necessary to obtain alternative disposal capacity either on or off-site of the facility by April 11, 2021.

(C) The facility is in compliance with all of the requirements of this Chapter.

(D) The owner or operator of the CCR surface impoundment must submit to DEQ documentation that the criteria in paragraphs (f)(1)(A) through (C) of this Section have

been met by submitting all of the following:

(i) To demonstrate that the criteria in paragraphs (f)(1)(A) and (B) of this Section have been met the owner or operator must submit a workplan that contains all of the following elements:

(I) A written narrative discussing the options considered both on and off-site to obtain alternative capacity for each CCR and/or non-CCR wastestreams, the technical infeasibility of obtaining alternative capacity prior to April 11, 2021, and the option selected and justification for the alternative capacity selected. The narrative must also include all of the following: an in-depth analysis of the site and any site-specific conditions that led to the decision to select the alternative capacity being developed; an analysis of the adverse impact to plant operations if the CCR surface impoundment in question were to no longer be available for use; and a detailed explanation and justification for the amount of time being requested and how it is the fastest technically feasible time to complete the development of the alternative capacity;

(II) A detailed schedule of the fastest technically feasible time to complete the measures necessary for alternative capacity to be available including a visual timeline representation. The visual timeline must clearly show all of the following: how each phase and the steps within that phase interact with or are dependent on each other and the other phases; all of the steps and phases that can be completed concurrently; the total time needed to obtain the alternative capacity and how long each phase and step within each phase will take; and at a minimum, the following phases: Engineering and design, contractor selection, equipment fabrication and delivery, construction, and start up and implementation.;

(III) A narrative discussion of the schedule and visual timeline representation, which must discuss all of the following: why the length of time for each phase and step is needed and a discussion of the tasks that occur during the specific step; why each phase and step shown on the chart must happen in the order it is occurring; the tasks that occur during each of the steps within the phase; and anticipated worker schedules; and

(IV) A narrative discussion of the progress the owner or operator has made to obtain alternative capacity for the CCR and/or non-CCR wastestreams. The narrative must discuss all the steps taken, starting from when the owner or operator initiated the design phase up to the steps occurring when the demonstration is being compiled. It must discuss where the facility currently is on the timeline and the efforts that are currently being undertaken to develop alternative capacity.

(ii) To demonstrate that the criteria in paragraph (f)(1)(C) of this Section have been met, the owner or operator must submit all of the following:

(I) A certification signed by the owner or operator that the facility is in compliance with all of the requirements of this Chapter;

(II) Visual representation of hydrogeologic information at and around the CCR unit(s) that supports the design, construction and installation of the groundwater

monitoring system. This includes all of the following: map(s) of groundwater monitoring well locations in relation to the CCR unit(s); well construction diagrams and drilling logs for all groundwater monitoring wells; and maps that characterize the direction of groundwater flow accounting for seasonal variations;

(III) Constituent concentrations, summarized in table form, at each groundwater monitoring well monitored during each sampling event;

(IV) A description of site hydrogeology including stratigraphic cross-sections;

(V) Any corrective measures assessment conducted as required at OAC 252:517-9-7;

(VI) Any progress reports on corrective action remedy selection and design and the report of final remedy selection required at OAC 252:517-9-8(a);

(VII) The most recent structural stability assessment required at OAC 252:517-11-4(d); and

(VIII) The most recent safety factor assessment required at OAC 252:517-11-4(e).

(E) As soon as alternative capacity for any CCR or non-CCR wastestream is available, the CCR surface impoundment must cease receiving that CCR or non-CCR wastestream. Once the CCR surface impoundment ceases receipt of all CCR and/or non-CCR wastestreams, the CCR surface impoundment must initiate closure following the timeframes in OAC 252:517-15-7(e) and (f).

(F) All CCR surface impoundments covered by paragraph (f)(1) of this Section must cease receiving waste by the deadlines specified in paragraphs (f)(1)(F)(i) and (ii) of this Section and close in accordance with the timeframes in OAC 252:517-15-7(e) and (f).

(i) Except as provided by paragraph (f)(1)(F)(ii) of this Section, no later than October 15, 2023.

(ii) An eligible unlined CCR surface impoundment must cease receiving CCR and/or non-CCR wastestreams no later than October 15, 2024. In order to continue to operate until October 15, 2024, the owner or operator must demonstrate that the unit meets the definition of an eligible unlined CCR surface impoundment.

(G) An owner or operator may seek additional time beyond the time granted in the initial approval by making the showing in paragraphs (f)(1)(A) through (D) of this Section, provided that no facility may be granted time to operate the impoundment beyond the maximum allowable time frames provided in (f)(1)(F) of this Section.

(H) The owner or operator at all times bears responsibility for demonstrating qualification under this Section. Failure to remain in compliance with any of the requirements of this Chapter will result in the automatic loss of authorization under this Section.

(I) The owner or operator must:

(i) Upon submission of the demonstration to DEQ, prepare and place in the facility's operating record a notification that it has submitted the demonstration, along with a copy of the demonstration. An owner or operator that claims CBI in the demonstration may post a redacted version of the demonstration to its publicly accessible CCR internet site provided that it contains sufficient detail so that the

public can meaningfully comment on the demonstration.

(ii) Upon receipt of a decision pursuant to paragraph (f)(3) of this Section, must prepare and place in the facility's operating record a copy of the decision.

(iii) If an extension of an approved deadline pursuant to paragraph (f)(1)(G) of this Section has been requested, place a copy of the request submitted to DEQ in the facility's operating record.

(J) The owner or operator must prepare semi-annual progress reports. The semi-annual progress reports must contain all of the following elements:

(i) Discussion of the progress made to date in obtaining alternative capacity, including:

(I) Discussion of the current stage of obtaining the capacity in reference to the timeline required under paragraph (f)(1)(D)(i) of this Section;

(II) Discussion of whether the owner or operator is on schedule for obtaining alternative capacity;

(III) If the owner or operator is not on or ahead of schedule for obtaining alternative capacity, the following must be included: discussion of any problems encountered, and a description of the actions taken or planned to resolve the problems and get back on schedule; and discussion of the goals for the next six months and major milestones to be achieved for obtaining alternative capacity; and

(ii) Discussion of any planned operational changes at the facility.

(K) The progress reports must be completed according to the following schedule:

(i) The semi-annual progress reports must be prepared no later than April 30 and October 31 of each year for the duration of the alternative cease receipt of waste deadline.

(ii) The first semi-annual progress report must be prepared by whichever date, April 30 or October 31, is soonest after receiving approval from DEQ; and

(iii) The owner or operator has completed the progress reports specified in paragraph (f)(1)(J) of this Section when the reports have been placed in the facility's operating record as required by OAC 252:517-19-1(i)(17).

(L) The owner or operator must prepare the notification of intent to close a CCR surface impoundment as required by OAC 252:517-15-7(g).

(M) The owner or operator must comply with the recordkeeping requirements specified in OAC 252:517-19-1(i), the notification requirements specified in OAC 252:517-19-2(h), and the internet posting requirements in OAC 252:517-19-3(i).

(2) Permanent cessation of a coal-fired boiler(s) by a date certain. Notwithstanding the provisions of OAC 252:517-15-6(a) and (b)(1), a CCR surface impoundment may continue to receive CCR and/or non-CCR wastestreams if the facility will cease operation of the coal-fired boiler(s) and complete closure of the impoundment within the timeframes specified in paragraph (f)(2)(D) of this Section, but in the interim period (prior to closure of the coal-fired boiler), the facility must continue to use the CCR surface impoundment due to the absence of alternative disposal capacity both on and off-site of the facility. To qualify under this paragraph all of the following criteria must be met:

(A) No alternative disposal capacity is available on or off-site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section.

(B) Potential risks to human health and the environment from the continued operation of the CCR surface impoundment have been adequately mitigated;

(C) The facility is in compliance with all other requirements of this Chapter, including the requirement to conduct any necessary corrective action; and

(D) The coal-fired boilers must cease operation and closure of the impoundment must be completed within the following timeframes:

(i) For a CCR surface impoundment that is 40 acres or smaller, the coal-fired boiler(s) must cease operation and the CCR surface impoundment must complete closure no later than October 17, 2023.

(ii) For a CCR surface impoundment that is larger than 40 acres, the coal-fired boiler(s) must cease operation, and the CCR surface impoundment must complete closure no later than October 17, 2028.

(E) The owner or operator of the CCR surface impoundment must submit the following documentation that the criteria in paragraphs (f)(2)(A) through (D) of this Section have been met as specified in paragraphs (f)(2)(E)(i) through (iv) of this Section.

(i) To demonstrate that the criteria in paragraph (f)(2)(A) of this Section have been met the owner or operator must submit a narrative that explains the options considered to obtain alternative capacity for CCR and/or non-CCR wastestreams both on and off-site.

(ii) To demonstrate that the criteria in paragraph (f)(2)(B) of this Section have been met the owner or operator must submit a risk mitigation plan describing the measures that will be taken to expedite any required corrective action, and that contains all of the following elements:

(I) A discussion of any physical or chemical measures a facility can take to limit any future releases to groundwater during operation.

(II) A discussion of the surface impoundment's groundwater monitoring data and any found exceedances; the delineation of the plume (if necessary based on the groundwater monitoring data); identification of any nearby receptors that might be exposed to current or future groundwater contamination; and how such exposures could be promptly mitigated.

(III) A plan to expedite and maintain the containment of any contaminant plume that is either present or identified during continued operation of the unit.

(iii) To demonstrate that the criteria in paragraph (f)(2)(C) of this Section have been met, the owner or operator must submit all of the following:

(I) A certification signed by the owner or operator that the facility is in compliance with all of the requirements of this Chapter;

(II) Visual representation of hydrogeologic information at and around the CCR unit(s) that supports the design, construction and installation of the groundwater monitoring system. This includes all of the following: map(s) of groundwater monitoring well locations in relation to the CCR unit; well construction diagrams and drilling logs for all groundwater monitoring wells; and maps that

characterize the direction of groundwater flow accounting for seasonal variations;

(III) Constituent concentrations, summarized in table form, at each groundwater monitoring well monitored during each sampling event;

(IV) Description of site hydrogeology including stratigraphic cross-sections;

(V) Any corrective measures assessment required at OAC 252:517-9-7;

(VI) Any progress reports on remedy selection and design and the report of final remedy selection required at OAC 252:517-9-8(a);

(VII) The most recent structural stability assessment required at OAC 252:517-11-4(d); and

(VIII) The most recent safety factor assessment required at OAC 252:517-11-4(e).

(iv) To demonstrate that the criteria in paragraph (f)(2)(D) of this Section have been met, the owner or operator must submit the closure plan required by OAC 252:517-15-7(b) and a narrative that specifies and justifies the date by which they intend to cease receipt of waste into the unit in order to meet the closure deadlines.

(F) The owner or operator at all times bears responsibility for demonstrating qualification for authorization under this Section. Failure to remain in compliance with any of the requirements of this Chapter will result in the automatic loss of authorization under this Section.

(G) The owner or operator must comply with the recordkeeping requirements specified in OAC 252:517-19-1(i), the notification requirements specified in OAC 252:517-19-2(h), and the internet posting requirements in OAC 252:517-19-3(i).

(H) Upon submission of the demonstration to DEQ the owner or operator must prepare and place in the facility's operating record and on its publicly accessible CCR internet site a notification that it has submitted a demonstration along with a copy of the demonstration.

(I) Upon receipt of a decision pursuant to paragraph (f)(3) of this Section, the owner or operator must place a copy of the decision in the facility's operating record and on the facility's publicly accessible CCR internet site.

(J) The owner or operator must prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the closure of the CCR surface impoundment. The owner or operator has completed the progress report when the report has been placed in the facility's operating record as required by OAC 252:517-19-1(i)(20).

(3) Process to Obtain Authorization.

(A) The owner or operator is subject to the following deadlines for submission:

(i) The owner or operator must submit the demonstration required under paragraph (f)(1)(D) of this Section, for an alternative cease receipt of waste deadline for a CCR surface impoundment pursuant to paragraph (f)(1) of this Section, to DEQ for approval no later than November 30, 2020.

(ii) An owner or operator may seek additional time beyond the time granted in the initial approval, in accordance with paragraph (f)(1)(G) of this Section, by

submitting a new demonstration, as required under paragraph (f)(1)(D) of this Section, to DEQ for approval, no later than fourteen days from determining that the cease receipt of waste deadline will not be met.

(iii) The owner or operator must submit the demonstration required under paragraph (f)(2)(E) of this Section to the DEQ for approval no later than November 30, 2020.

(B) DEQ will evaluate the demonstration and may request additional information to complete its review. Submission of a complete demonstration will toll the facility's deadline to cease receipt of waste until issuance of a decision under paragraph (f)(3)(D) of this Section. Incomplete submissions will not toll the facility's deadline and will be rejected without further process. All decisions issued under this paragraph or paragraph (f)(3)(D) of this Section will contain the facility's deadline to cease receipt of waste.

(C) DEQ will publish its proposed decision on a complete demonstration on its web site for a 30-day comment period.

(D) After consideration of the comments, DEQ will issue its decision on the alternative compliance deadline within four months of receiving a complete demonstration.

(4) Transfer between site-specific alternatives. An owner or operator authorized to continue operating a CCR surface impoundment under this Section may at any time request authorization to continue operating the impoundment pursuant to another paragraph of Subsection (f), by submitting the information in paragraph (f)(4)(A) or (B) of this Section.

(A) Transfer from (f)(1) to (f)(2) of this Section. The owner or operator of a surface impoundment authorized to operate pursuant to paragraph (f)(1) of this Section may request authorization to instead operate the surface impoundment in accordance with the requirements of paragraph (f)(2) of this Section, by submitting a new demonstration that meets the requirements of paragraph (f)(2)(E) of this Section to DEQ. DEQ will approve the request only upon determining that the criteria at paragraphs (f)(2)(A) through (D) have been met.

(B) Transfer from (f)(2) to (f)(1) of this Section. The owner or operator of a surface impoundment authorized to operate pursuant to paragraph (f)(2) of this Section may request authorization to instead operate the surface impoundment in accordance with the requirements of paragraph (f)(1) of this Section, by submitting a new demonstration that meets the requirements of paragraph (f)(1)(D) of this Section to DEQ. DEQ will approve the request only upon determining that the criteria at paragraphs (f)(1)(A) through (C) and (F) of this Section have been met.

(C) The procedures in paragraph (f)(3) of this Section will apply to all requests for transfer under this paragraph.

~~(a) The owner or operator of a CCR landfill, CCR surface impoundment, or any lateral expansion of a CCR unit that is subject to closure pursuant to OAC 252:517-15-6(a), (b)(1), or (d) may continue to receive CCR in the unit provided the owner or operator meets the requirements of either paragraph (a) or (b) of this Section.~~

~~(1) **No alternative CCR disposal capacity.**~~

~~(A) Notwithstanding the provisions of OAC 252:517-15-6(a), (b)(1), or (d), a CCR unit may continue to receive CCR if the owner or operator of the CCR unit certifies that the~~

~~CCR must continue to be managed in that CCR unit due to the absence of alternative disposal capacity both on site and off site of the facility. To qualify under this paragraph (a)(1), the owner or operator of the CCR unit must document that all of the following conditions have been met and approved by the DEQ:~~

~~(B) No alternative disposal capacity is available on site or off site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section;~~

~~(C) The owner or operator has made, and continues to make, efforts to obtain additional capacity. Qualification under this Subsection lasts only as long as no alternative capacity is available. Once alternative capacity is identified, the owner or operator must arrange to use such capacity as soon as feasible;~~

~~(D) The owner or operator must remain in compliance with all other requirements of this Chapter, including the requirement to conduct any necessary corrective action; and~~

~~(E) The owner or operator must prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the development of alternative CCR disposal capacity.~~

~~(2) Once alternative capacity is available, the CCR unit must cease receiving CCR and initiate closure following the timeframes in OAC 252:517-15-7(e) and (f).~~

~~(3) If no alternative capacity is identified within five years after the initial certification, the CCR unit must cease receiving CCR and close in accordance with the timeframes in OAC 252:517-15-7(e) and (f).~~

~~(b) Permanent cessation of a coal fired boiler(s) by a date certain.~~

~~(1) Notwithstanding the provisions of OAC 252:517-15-6(a), (b)(1), and (d), a CCR unit may continue to receive CCR if the owner or operator certifies that the facility will cease operation of the coal fired boilers within the timeframes specified in paragraphs (b)(2) through (4) of this Section, but in the interim period (prior to closure of the coal fired boiler), the facility must continue to use the CCR unit due to the absence of alternative disposal capacity both on site and off site of the facility. To qualify under this paragraph (b)(1), the owner or operator of the CCR unit must document that all of the following conditions have been met and approved by the DEQ:~~

~~(A) No alternative disposal capacity is available on site or off site. An increase in costs or the inconvenience of existing capacity is not sufficient to support qualification under this Section.~~

~~(B) The owner or operator must remain in compliance with all other requirements of this Chapter, including the requirement to conduct any necessary corrective action; and~~

~~(C) The owner or operator must prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the closure of the coal fired boiler.~~

~~(2) For a CCR surface impoundment that is 40 acres or smaller, the coal fired boiler must cease operation and the CCR surface impoundment must have completed closure no later than October 17, 2023.~~

~~(3) For a CCR surface impoundment that is larger than 40 acres, the coal fired boiler must cease operation, and the CCR surface impoundment must complete closure no later than October 17, 2028.~~

~~(4) For a CCR landfill, the coal fired boiler must cease operation, and the CCR landfill must complete closure no later than April 19, 2021.~~

~~(c) **Required notices and progress reports.** An owner or operator of a CCR unit that closes in accordance with paragraphs (a) or (b) of this Section must complete the notices and progress reports specified in paragraphs (c)(1) through (3) of this Section.~~

~~(1) Within six months of becoming subject to closure pursuant to OAC 252:517-15-6(a), (b)(1), or (d), the owner or operator must prepare, submit to DEQ and place in the facility's operating record a notification of intent to comply with the alternative closure requirements of this Section. The notification must describe why the CCR unit qualifies for the alternative closure provisions under either paragraph (a) or (b) of this Section, in addition to providing the documentation and certifications required by paragraph (a) or (b) of this Section.~~

~~(2) The owner or operator must prepare the periodic progress reports required by paragraphs (a)(1)(D) or (b)(1)(C), in addition to describing any problems encountered and a description of the actions taken to resolve the problems. The annual progress reports must be completed according to the following schedule:~~

~~(A) The first annual progress report must be prepared no later than 13 months after completing the notification of intent to comply with the alternative closure requirements required by paragraph (c)(1) of this Section.~~

~~(B) The second annual progress report must be prepared no later than 12 months after completing the first annual progress report. Additional annual progress reports must be prepared within 12 months of completing the previous annual progress report.~~

~~(C) The owner or operator must submit the progress reports required in (A) and (B) above to the DEQ for approval.~~

~~(D) The owner or operator has completed the progress reports specified in paragraph (c)(2) of this Section when the reports are placed in the facility's operating record as required by OAC 252:517-19-1(i)(10).~~

~~(3) An owner or operator of a CCR unit must also prepare the notification of intent to close a CCR unit as required by OAC 252:517-15-7(g).~~

~~(d) **Recordkeeping.** The owner or operator of the CCR unit must comply with the recordkeeping requirements specified in OAC 252:517-19-1(i), the notification requirements specified in OAC 252:517-19-2(i), and the Internet requirements specified in OAC 252:517-19-3(i).~~

252:517-19-1. Recordkeeping requirements

(a) **Applicability.** Each owner or operator of a CCR unit subject to the requirements of this Chapter must maintain files of all information required by this Section in a written operating record at their facility.

(b) **Records retention.** Unless specified otherwise, each file must be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, record, or study.

(c) **Recordkeeping methods.** An owner or operator of more than one CCR unit subject to the provisions of this Chapter may comply with the requirements of this Section in one recordkeeping system provided the system identifies each file by the name of each CCR unit.

The files may be maintained on microfilm, on a computer, on computer disks, on a storage system accessible by a computer, on magnetic tape disks, or on microfiche.

(d) **DEQ submittal.** The owner or operator of a CCR unit must submit to the DEQ any demonstration or documentation required by this Chapter, if requested, when such information is not otherwise available on the owner or operator's publicly accessible Internet site.

(e) **Location restrictions.** The owner or operator of a CCR unit subject to this Chapter must place the demonstrations documenting whether or not the CCR unit is in compliance with the requirements under OAC 252:517-5-1(a), OAC 252:517-5-2(a), OAC 252:517-5-3(a), OAC 252:517-5-4(a), and OAC 252:517-5-5(a), as it becomes available, in the facility's operating record.

(f) **Design criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information, as it becomes available, in the facility's operating record:

- (1) The design and construction certifications as required by OAC 252:517-11-1(e) and (f).
- (2) The documentation of liner type as required by OAC 252:517-11-2(a).
- (3) The design and construction certifications as required by OAC 252:517-11-3(c) and (d).
- (4) Documentation prepared by the owner or operator stating that the permanent identification marker was installed as required by OAC 252:517-11-4(a)(1) and OAC 252:517-11-5(a)(1).
- (5) The initial and periodic hazard potential classification assessments as required by OAC 252:517-11-4(a)(2) and OAC 252:517-11-5(a)(2).
- (6) The emergency action plan (EAP), and any amendment of the EAP, as required by OAC 252:517-11-4(a)(3) and OAC 252:517-11-5(a)(3), except that only the most recent EAP must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this Section.
- (7) Documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders as required by OAC 252:517-11-4(a)(3)(A)(v) and OAC 252:517-11-5(a)(3)(A)(v).
- (8) Documentation prepared by the owner or operator recording all activations of the emergency action plan as required by OAC 252:517-11-4(a)(3)(F) and OAC 252:517-11-5(a)(3)(F).
- (9) The history of construction, and any revisions of it, as required by OAC 252:517-11-4(c), except that these files must be maintained until the CCR unit completes closure of the unit in accordance with OAC 252:517-15-7.
- (10) The initial and periodic structural stability assessments as required by OAC 252:517-11-4(d) and OAC 252:517-11-5(d).
- (11) Documentation detailing the corrective measures taken to remedy the deficiency or release as required by OAC 252:517-11-4(d)(2) and OAC 252:517-11-5(d)(2).
- (12) The initial and periodic safety factor assessments as required by OAC 252:517-11-4(e) and OAC 252:517-11-5(e).
- (13) The design and construction plans, and any revisions of it, as required by OAC 252:517-11-5(c), except that these files must be maintained until the CCR unit completes closure of the unit in accordance with OAC 252:517-15-7.

(g) **Operating criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information, as it becomes available, in the facility's operating record:

- (1) The CCR fugitive dust control plan, and any subsequent amendment of the plan, required by OAC 252:517-13-1(b), except that only the most recent control plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this Section.
 - (2) The annual CCR fugitive dust control report required by OAC 252:517-13-1(c).
 - (3) The initial and periodic run-on and run-off control system plans as required by OAC 252:517-13-2(c).
 - (4) The initial and periodic inflow design flood control system plan as required by OAC 252:517-13-3(c).
 - (5) Documentation recording the results of each inspection and instrumentation monitoring by a qualified person as required by OAC 252:517-13-4(a).
 - (6) The periodic inspection report as required by OAC 252:517-13-4(b)(2).
 - (7) Documentation detailing the corrective measures taken to remedy the deficiency or release as required by OAC 252:517-13-4(b)(5) and OAC 252:517-13-5(b)(5).
 - (8) Documentation recording the results of the weekly inspection by a qualified person as required by OAC 252:517-13-5(a).
 - (9) The periodic inspection report as required by OAC 252:517-13-5(b)(2).
- (h) **Groundwater monitoring and corrective action.** The owner or operator of a CCR unit subject to this Chapter must place the following information, as it becomes available, in the facility's operating record:
- (1) The annual groundwater monitoring and corrective action report as required by OAC 252:517-9-1(e).
 - (2) Documentation of the design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices as required by OAC 252-517-9-2(e)(1).
 - (3) The groundwater monitoring system certification as required by OAC 252-517-9-2(f).
 - (4) The selection of a statistical method certification as required by OAC 252:517-9-4(f)(6).
 - (5) Within 30 days of establishing an assessment monitoring program, the notification as required by OAC 252:517-9-5(e)(3).
 - (6) The results of Appendices A and B to this Chapter constituent concentrations as required by OAC 252:517-9-6(d)(1).
 - (7) Within 30 days of returning to a detection monitoring program, the notification as required by OAC 252:517-9-6(e).
 - (8) Within 30 days of detecting one or more constituents in Appendix B to this Chapter at statistically significant levels above the groundwater protection standard, the notifications as required by OAC 252:517-9-6(g).
 - (9) Within 30 days of initiating the assessment of corrective measures requirements, the notification as required by OAC 252:517-9-6(g)(5).
 - (10) The completed assessment of corrective measures as required by OAC 252:517-9-7(d).
 - (11) Documentation prepared by the owner or operator recording the public meeting for the corrective measures assessment as required by OAC 252:517-9-7(e).
 - (12) The semiannual report describing the progress in selecting and designing the remedy and the selection of remedy report as required by OAC 252:517-9-8(a), except that the selection of remedy report must be maintained until the remedy has been completed.

(13) Within 30 days of completing the remedy, the notification as required by OAC 252:517-9-9(e).

(i) **Closure and post-closure care.** The owner or operator of a CCR unit subject to this Chapter must place the following information, as it becomes available, in the facility's operating record:

(1) The notification of intent to initiate closure of the CCR unit as required by OAC 252:517-15-5(c)(1).

(2) The annual progress reports of closure implementation as required by OAC 252:517-15-5(c)(2)(A) and (B).

(3) The notification of closure completion as required by OAC 252:517-15-5(c)(3).

(4) The written closure plan, and any amendment of the plan, as required by OAC 252:517-15-7(b), except that only the most recent closure plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this Section.

(5) The written demonstration(s), including the certification required by OAC 252:517-15-7(e)(2)(C), for a time extension for initiating closure as required by OAC 252:517-15-7(e)(2)(B).

(6) The written demonstration(s), including the certification required by OAC 252:517-15-7(f)(2)(C), for a time extension for completing closure as required by OAC 252:517-15-7(f)(2)(A).

(7) The notification of intent to close a CCR unit as required by OAC 252:517-15-7(g).

(8) The notification of completion of closure of a CCR unit as required by OAC 252:517-15-7(h).

(9) The notification recording a notation on the deed as required by OAC 252:517-15-7(i).

(10) The notification of intent to comply with the alternative closure requirements as required by OAC 252:517-15-8(c)(1).

(11) The annual progress reports under the alternative closure requirements as required by OAC 252:517-15-8(c)(2).

(12) The written post-closure plan, and any amendment of the plan, as required by OAC 252:517-15-9(d), except that only the most recent closure plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this Section.

(13) The notification of completion of post-closure care period as required by OAC 252:517-15-9(e).

(14) The notification of intent to comply with the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as required by OAC 252:517-15-8(f)(1)(I)(i).

(15) The approved or denied demonstration for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as required by OAC 252:517-15-8(f)(1)(I)(ii).

(16) The notification for requesting additional time to the alternative cease receipt of waste deadline as required by OAC 252:517-15-8(f)(1)(I)(iii).

(17) The semi-annual progress reports for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as required by OAC 252:517-15-8(f)(1)(K).

(18) The notification of intent to comply with the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-15-8(f)(2)(H).

(19) The approved or denied demonstration for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-15-8(f)(2)(I).

(20) The annual progress report for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-15-8(f)(2)(J).

(j) **Financial assurance.** The owner or operator of a CCR unit subject to this Chapter must follow the recordkeeping requirements of Subchapter 17 of this Chapter, as applicable to the facility.

(k) **Retrofit criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information, as it becomes available, in the facility's operating record:

(1) The written retrofit plan, and any amendment of the plan, as required by OAC 252:517-15-7(k)(2), except that only the most recent retrofit plan must be maintained in the facility's operating record irrespective of the time requirement specified in paragraph (b) of this Section.

(2) The notification of intent that the retrofit activities will proceed in accordance with the alternative procedures in OAC 252:517-15-8.

(3) The annual progress reports required under the alternative requirements as required by OAC 252:517-15-8.

(4) The written demonstration(s), including the certification in OAC 252:517-15-7(f)(2)(C), for a time extension for completing retrofit activities as required by OAC 252:517-15-7(k)(3).

(5) The notification of intent to initiate retrofit of a CCR unit as required by OAC 252:517-15-7(k)(5).

(6) The notification of completion of retrofit activities as required by OAC 252:517-15-7(k)(6).

252:517-19-2. Notification requirements

(a) **DEQ notification.** The notifications required under paragraphs (e) through (i) of this Section must be sent to the DEQ before the close of business on the day the notification is required to be completed. For purposes of this Section, before the close of business means the notification must be postmarked or sent by electronic mail (email). If a notification deadline falls on a weekend or federal holiday, the notification deadline is automatically extended to the next business day. For those plans requiring approval by DEQ, submittal of the plan constitutes notification.

(b) **Combining notifications.** Notifications may be combined as long as the deadline requirement for each notification is met.

(c) **Notification required.** Unless otherwise required in this Section, the notifications specified in this Section must be sent to the DEQ within 30 days of placing in the operating record the information required by OAC 252:517-19-1.

(d) **Location restrictions.** The owner or operator of a CCR unit subject to the requirements of this Chapter must notify the DEQ that each demonstration specified under OAC 252:517-19-1(e)

has been placed in the operating record and on the owner or operator's publicly accessible internet site.

(e) **Design criteria.** The owner or operator of a CCR unit subject to this Chapter must notify the DEQ when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

(1) Within 60 days of commencing construction of a new CCR unit, provide notification of the availability of the design certification specified under OAC 252:517-19-1(f)(1) or (3). If the owner or operator of the CCR unit elects to install an alternative composite liner, the owner or operator must also submit to the DEQ a copy of the alternative composite liner design.

(2) No later than the date of initial receipt of CCR by a new CCR unit, provide notification of the availability of the construction certification specified under OAC 252:517-19-1(f)(1) or (3).

(3) Provide notification of the availability of the documentation of liner type specified under OAC 252:517-19-1(f)(2).

(4) Provide notification of the availability of the initial and periodic hazard potential classification assessments specified under OAC 252:517-19-1(f)(5).

(5) Provide notification of the availability of emergency action plan (EAP), and any revisions of the EAP, specified under OAC 252:517-19-1(f)(6).

(6) Provide notification of the availability of documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders specified under OAC 252:517-19-1(f)(7).

(7) Provide notification of documentation prepared by the owner or operator recording all activations of the emergency action plan specified under OAC 252:517-19-1(f)(8).

(8) Provide notification of the availability of the history of construction, and any revision of it, specified under OAC 252:517-19-1(f)(9).

(9) Provide notification of the availability of the initial and periodic structural stability assessments specified under OAC 252:517-19-1(f)(10).

(10) Provide notification of the availability of the documentation detailing the corrective measures taken to remedy the deficiency or release specified under OAC 252:517-19-1(f)(11).

(11) Provide notification of the availability of the initial and periodic safety factor assessments specified under OAC 252:517-19-1(f)(12).

(12) Provide notification of the availability of the design and construction plans, and any revision of them, specified under OAC 252:517-19-1(f)(13).

(f) **Operating criteria.** The owner or operator of a CCR unit subject to this Chapter must notify the DEQ when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

(1) Provide notification of the availability of the CCR fugitive dust control plan, or any subsequent amendment of the plan, specified under OAC 252:517-19-1(g)(1).

(2) Provide notification of the availability of the annual CCR fugitive dust control report specified under OAC 252:517-19-1(g)(2).

(3) Provide notification of the availability of the initial and periodic run-on and run-off control system plans specified under OAC 252:517-19-1(g)(3).

- (4) Provide notification of the availability of the initial and periodic inflow design flood control system plans specified under OAC 252:517-19-1(g)(4).
- (5) Provide notification of the availability of the periodic inspection reports specified under OAC 252:517-19-1(g)(6).
- (6) Provide notification of the availability of the documentation detailing the corrective measures taken to remedy the deficiency or release specified under OAC 252:517-19-1(g)(7).
- (7) Provide notification of the availability of the periodic inspection reports specified under OAC 252:517-19-1(g)(9).

(g) **Groundwater monitoring and corrective action.** The owner or operator of a CCR unit subject to this Chapter must notify the DEQ when information has been placed in the operating record and on the owner or operator's publicly accessible internet site. The owner or operator must:

- (1) Provide notification of the availability of the annual groundwater monitoring and corrective action report specified under OAC 252:517-19-1(h)(1).
- (2) Provide notification of the availability of the groundwater monitoring system certification specified under OAC 252:517-19-1(h)(3).
- (3) Provide notification of the availability of the selection of a statistical method certification specified under OAC 252:517-19-1(h)(4).
- (4) Provide notification that an assessment monitoring programs has been established specified under OAC 252:517-19-1(h)(5).
- (5) Provide notification that the CCR unit is returning to a detection monitoring program specified under OAC 252:517-19-1(h)(7).
- (6) Provide notification that one or more constituents in Appendix B to this Chapter have been detected at statistically significant levels above the groundwater protection standard and the notifications to land owners specified under OAC 252:517-19-1(h)(8).
- (7) Provide notification that an assessment of corrective measures has been initiated specified under OAC 252:517-19-1(h)(9).
- (8) Provide notification of the availability of assessment of corrective measures specified under OAC 252:517-19-1(h)(10).
- (9) Provide notification of the availability of the semiannual report describing the progress in selecting and designing the remedy and the selection of remedy report specified under OAC 252:517-19-1(h)(12).
- (10) Provide notification of the completion of the remedy specified under OAC 252:517-19-1(h)(13).

(h) **Closure and post-closure care.** The owner or operator of a CCR unit subject to this Chapter must notify the DEQ when information has been placed in the operating record and on the owner or operator's publicly accessible Internet site. The owner or operator must:

- (1) Provide notification of the intent to initiate closure of the CCR unit specified under OAC 252:517-19-1(i)(1).
- (2) Provide notification of the availability of the annual progress reports of closure implementation specified under OAC 252:517-19-1(i)(2).
- (3) Provide notification of closure completion specified under OAC 252:517-19-1(i)(3).
- (4) Provide notification of the availability of the written closure plan, and any amendment of the plan, specified under OAC 252:517-19-1(i)(4).

- (5) Provide notification of the availability of the demonstration(s) for a time extension for initiating closure specified under OAC 252:517-19-1(i)(5).
 - (6) Provide notification of the availability of the demonstration(s) for a time extension for completing closure specified under OAC 252:517-19-1(i)(6).
 - (7) Provide notification of intent to close a CCR unit specified under OAC 252:517-19-1(i)(7).
 - (8) Provide notification of completion of closure of a CCR unit specified under OAC 252:517-19-1(i)(8).
 - (9) Provide notification of the deed notation as required by OAC 252:517-19-1(i)(9).
 - (10) Provide notification of intent to comply with the alternative closure requirements specified under OAC 252:517-19-1(i)(10).
 - (11) The annual progress reports under the alternative closure requirements as required by OAC 252:517-19-1(i)(11).
 - (12) Provide notification of the availability of the written post-closure plan, and any amendment of the plan, specified under OAC 252:517-19-1(i)(12).
 - (13) Provide notification of completion of post-closure care specified under OAC 252:517-19-1(i)(13).
 - (14) Provide the notification of intent to comply with the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as specified under OAC 252:517-19-1(i)(14).
 - (15) Provide the approved or denied demonstration for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible specified under OAC 252:517-19-1(i)(15).
 - (16) Provide the notification for requesting additional time to the alternative cease receipt of waste deadline as required by OAC 252:517-19-1(i)(16).
 - (17) The semi-annual progress reports for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as specified under OAC 252:517-19-1(i)(17).
 - (18) Provide the notification of intent to comply with the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as specified under OAC 252:517-19-1(i)(18).
 - (19) Provide the approved or denied demonstration for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-19-1(i)(19).
 - (20) The annual progress report for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-19-1(i)(20).
- (i) **Retrofit criteria.** The owner or operator of a CCR unit subject to this Chapter must notify the DEQ when information has been placed in the operating record and on the owner or operator's publicly accessible Internet site. The owner or operator must:
- (1) Provide notification of the availability of the written retrofit plan, and any amendment of the plan, specified under OAC 252:517-19-1(~~j~~)(k)(1).
 - (2) Provide notification of intent to comply with the alternative retrofit requirements specified under OAC 252:517-19-1(~~j~~)(k)(2).

- (3) The annual progress reports under the alternative retrofit requirements as required by OAC 252:517-19-1(j)(k)(3).
- (4) Provide notification of the availability of the demonstration(s) for a time extension for completing retrofit activities specified under OAC 252:517-19-1(j)(k)(4).
- (5) Provide notification of intent to initiate retrofit of a CCR unit specified under OAC 252:517-19-1(j)(k)(5).
- (6) Provide notification of completion of retrofit activities specified under OAC 252:517-19-1(j)(k)(6).

252:517-19-3. Publicly accessible internet site requirements

- (a) **Applicability.** Each owner or operator of a CCR unit subject to the requirements of this Chapter must maintain a publicly accessible Internet site (CCR Web site) containing the information specified in this Section. The owner or operator's Web site must be titled "CCR Rule Compliance Data and Information." The website must ensure that all information required to be posted is immediately available to anyone visiting the site, without requiring any prerequisite, such as registration or a requirement to submit a document request. All required information must be clearly identifiable and must be able to be immediately printed and downloaded by anyone accessing the site. If the owner/operator changes the web address (i.e., Uniform Resource Locator (URL)) at any point, they must notify DEQ within 14 days of making the change. The facility's CCR website must also have a "contact us" form or a specific email address posted on the website for the public to use to submit questions and issues relating to the availability of information on the website.
- (b) **Multiple CCR units.** An owner or operator of more than one CCR unit subject to the provisions of this Chapter may comply with the requirements of this Section by using the same Internet site for multiple CCR units provided the CCR Web site clearly delineates information by the name or identification number of each unit.
- (c) **Website records retention.** Unless otherwise required in this Section, the information required to be posted to the CCR Web site must be made available to the public for at least five years following the date on which the information was first posted to the CCR Web site.
- (d) **Timeline for posting to website.** Unless otherwise required in this Section, the information must be posted to the CCR Web site within 30 days of placing the pertinent information required by OAC 252:517-19-1 in the operating record.
- (e) **Location restrictions.** The owner or operator of a CCR unit subject to this Chapter must place each demonstration specified under OAC 252:517-19-1(e) on the owner or operator's CCR Web site.
- (f) **Design criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information on the owner or operator's CCR Web site:
 - (1) Within 60 days of commencing construction of a new unit, the design certification specified under OAC 252:517-19-1(f)(1) or (3).
 - (2) No later than the date of initial receipt of CCR by a new CCR unit, the construction certification specified under OAC 252:517-19-1(f)(1) or (3).
 - (3) The documentation of liner type specified under OAC 252:517-19-1(f)(2).
 - (4) The initial and periodic hazard potential classification assessments specified under OAC 252:517-19-1(f)(5).

(5) The emergency action plan (EAP) specified under OAC 252:517-19-1(f)(6), except that only the most recent EAP must be maintained on the CCR Web site irrespective of the time requirement specified in paragraph (c) of this Section.

(6) Documentation prepared by the owner or operator recording the annual face-to-face meeting or exercise between representatives of the owner or operator of the CCR unit and the local emergency responders specified under OAC 252:517-19-1(f)(7).

(7) Documentation prepared by the owner or operator recording any activation of the emergency action plan specified under OAC 252:517-19-1(f)(8).

(8) The history of construction, and any revisions of it, specified under OAC 252:517-19-1(f)(9).

(9) The initial and periodic structural stability assessments specified under OAC 252:517-19-1(f)(10).

(10) The documentation detailing the corrective measures taken to remedy the deficiency or release specified under OAC 252:517-19-1(f)(11).

(11) The initial and periodic safety factor assessments specified under OAC 252:517-19-1(f)(12).

(12) The design and construction plans, and any revisions of them, specified under OAC 252:517-19-1(f)(13).

(g) **Operating criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information on the owner or operator's CCR Web site:

(1) The CCR fugitive dust control plan, or any subsequent amendment of the plan, specified under OAC 252:517-19-1(g)(1) except that only the most recent plan must be maintained on the CCR Web site irrespective of the time requirement specified in paragraph (c) of this Section.

(2) The annual CCR fugitive dust control report specified under OAC 252:517-19-1(g)(2).

(3) The initial and periodic run-on and run-off control system plans specified under OAC 252:517-19-1(g)(3).

(4) The initial and periodic inflow design flood control system plans specified under OAC 252:517-19-1(g)(4).

(5) The periodic inspection reports specified under OAC 252:517-19-1(g)(6).

(6) The documentation detailing the corrective measures taken to remedy the deficiency or release specified under OAC 252:517-19-1(g)(7).

(7) The periodic inspection reports specified under OAC 252:517-19-1(g)(9).

(h) **Groundwater monitoring and corrective action.** The owner or operator of a CCR unit subject to this Chapter must place the following information on the owner or operator's CCR Web site:

(1) The annual groundwater monitoring and corrective action report specified under OAC 252:517-19-1(h)(1).

(2) The groundwater monitoring system certification specified under OAC 252:517-19-1(h)(3).

(3) The selection of a statistical method certification specified under OAC 252:517-19-1(h)(4).

(4) The notification that an assessment monitoring programs has been established specified under OAC 252:517-19-1(h)(5).

- (5) The notification that the CCR unit is returning to a detection monitoring program specified under OAC 252:517-19-1(h)(7).
 - (6) The notification that one or more constituents in Appendix B to this Chapter have been detected at statistically significant levels above the groundwater protection standard and the notifications to land owners specified under OAC 252:517-19-1(h)(8).
 - (7) The notification that an assessment of corrective measures has been initiated specified under OAC 252:517-19-1(h)(9).
 - (8) The assessment of corrective measures specified under OAC 252:517-19-1(h)(10).
 - (9) The semiannual reports describing the progress in selecting and designing remedy and the selection of remedy report specified under OAC 252:517-19-1(h)(12), except that the selection of the remedy report must be maintained until the remedy has been completed.
 - (10) The notification that the remedy has been completed specified under OAC 252:517-19-1(h)(13).
- (i) **Closure and post-closure care.** The owner or operator of a CCR unit subject to this Chapter must place the following information on the owner or operator's CCR Web site:
- (1) The notification of intent to initiate closure of the CCR unit specified under OAC 252:517-19-1(i)(1).
 - (2) The annual progress reports of closure implementation specified under OAC 252:517-19-1(i)(2).
 - (3) The notification of closure completion specified under OAC 252:517-19-1(i)(3).
 - (4) The written closure plan, and any amendment of the plan, specified under OAC 252:517-19-1(i)(4).
 - (5) The demonstration(s) for a time extension for initiating closure specified under OAC 252:517-19-1(i)(5).
 - (6) The demonstration(s) for a time extension for completing closure specified under OAC 252:517-19-1(i)(6).
 - (7) The notification of intent to close a CCR unit specified under OAC 252:517-19-1(i)(7).
 - (8) The notification of completion of closure of a CCR unit specified under OAC 252:517-19-1(i)(8).
 - (9) The notification recording a notation on the deed as required by OAC 252:517-19-1(i)(9).
 - (10) The notification of intent to comply with the alternative closure requirements as required by OAC 252:517-19-1(i)(10).
 - (11) The annual progress reports under the alternative closure requirements as required by OAC 252:517-19-1(i)(11).
 - (12) The written post-closure plan, and any amendment of the plan, specified under OAC 252:517-19-1(i)(12).
 - (13) The notification of completion of post-closure care specified under OAC 252:517-19-1(i)(13).
 - (14) The notification of intent to comply with the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as specified under OAC 252:517-19-1(i)(14).
 - (15) The approved or denied demonstration for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible specified under OAC 252:517-19-1(i)(15).

(16) The notification for requesting additional time to the alternative cease receipt of waste deadline as required by OAC 252:517-19-1(i)(16).

(17) The semi-annual progress reports for the site-specific alternative to initiation of closure due to development of alternative capacity infeasible as specified under OAC 252:517-19-1(i)(17).

(18) The notification of intent to comply with the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as specified under OAC 252:517-19-1(i)(18).

(19) The approved or denied demonstration for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-19-1(i)(19).

(20) The annual progress report for the site-specific alternative to initiation of closure due to permanent cessation of a coal-fired boiler(s) by a date certain as required by OAC 252:517-19-1(i)(20).

(j) **Retrofit criteria.** The owner or operator of a CCR unit subject to this Chapter must place the following information on the owner or operator's CCR Web site:

(1) The written retrofit plan, and any amendment of the plan, specified under OAC 252:517-19-1~~(j)~~(k)(1).

(2) The notification of intent to comply with the alternative retrofit requirements as required by OAC 252:517-19-1~~(j)~~(k)(2).

(3) The annual progress reports under the alternative retrofit requirements as required by OAC 252:517-19-1~~(j)~~(k)(3).

(4) The demonstration(s) for a time extension for completing retrofit activities specified under OAC 252:517-19-1~~(j)~~(k)(4).

(5) The notification of intent to retrofit a CCR unit specified under OAC 252:517-19-1~~(j)~~(k)(5).

(6) The notification of completion of retrofit activities specified under OAC 252:517-19-1~~(j)~~(k)(6).