

AUSLEY MCMULLEN

ATTORNEYS AND COUNSELORS AT LAW

123 SOUTH CALHOUN STREET
P.O. BOX 391 (ZIP 32302)
TALLAHASSEE, FLORIDA 32301
(850) 224-9115 FAX (850) 222-7560

October 15, 2015

VIA: ELECTRONIC FILING

Ms. Carlotta S. Stauffer
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Petition of Tampa Electric Company for Approval of a New Environmental Program for Cost Recovery through the Environmental Cost Recovery Clause.

Dear Ms. Stauffer:

Attached for filing in the above-styled matter is the Petition of Tampa Electric Company for Approval of a New Environmental Program for Cost Recovery through the Environmental Cost Recovery Clause.

Thank you for your assistance in connection with this matter.

Sincerely,



James D. Beasley

JDB/pp
Attachment

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Tampa Electric Company)
for approval of a new environmental)
program for cost recovery through)
the Environmental Cost Recovery Clause.)
_____)

DOCKET NO. _____

FILED: October 15, 2015

**PETITION OF TAMPA ELECTRIC COMPANY FOR APPROVAL OF
A NEW ENVIRONMENTAL PROGRAM FOR COST RECOVERY
THROUGH THE ENVIRONMENTAL COST RECOVERY CLAUSE**

Tampa Electric Company ("Tampa Electric" or "the company"), by and through its undersigned counsel, and pursuant to Section 366.8255, Florida Statutes, and Florida Public Service Commission ("Commission") Order Nos. PSC-94-0044-FOF-EI and PSC-94-1207-FOF-EI, hereby petitions the Commission for approval of the company's proposed environmental compliance program - Coal Combustion Residuals Compliance Program ("CCR Program") – for cost recovery through the Environmental Cost Recovery Clause. In support of its Petition, the company states:

1. Tampa Electric is an investor-owned electric utility subject to the Commission's jurisdiction pursuant to Chapter 366, Florida Statutes. Tampa Electric serves retail customers in Hillsborough and portions of Polk, Pinellas and Pasco Counties in Florida. The Company's principal offices are located at 702 North Franklin Street, Tampa, Florida 33602.

2. The persons to whom all notices and other documents should be sent in connection with this docket are:

James D. Beasley
jbeasley@ausley.com
J. Jeffrey Wahlen
jwahlen@ausley.com
Ashley M. Daniels

Paula K. Brown
regdept@tecoenergy.com
Manager, Regulatory Coordination
Tampa Electric Company
Post Office Box 111

adaniels@ausley.com
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302
(850) 224-9115
(850) 222-7560 (fax)

Tampa, FL 33601
(813) 228-1444
(813) 228-1770 (fax)

3. On April 17, 2015 the Environmental Protection Agency ("EPA") published the Coal Combustion Residuals ("CCR") Rule. The effective date of the rule is October 19, 2015, by which time Tampa Electric Company's Big Bend Power Station will be required to begin compliance with the rule's requirements. Attached hereto as Exhibit "A" is the Summary and Executive Summary from 40 CFR Parts 257 and 261 of the *Federal Register* publication of the EPA's final CCR Rule. The rule establishes minimum criteria for the safe disposal of CCR in landfills and surface impoundments. The rule is self-implementing with an effective date of October 19, 2015.

4. In 2015 and 2016, Tampa Electric's CCR Rule compliance activities at Big Bend Station will include placing fugitive emissions dust control plans in place, increasing the frequency of inspections, installing signage, assessing dike integrity and installing new groundwater monitoring wells at regulated CCR management units. These activities will cause Tampa Electric to incur incremental O&M expenses beginning in the fourth quarter of 2015 and continuing for the remaining operational life of Big Bend Station.

5. Several engineering evaluations are required for the purpose of demonstrating the structural and environmental integrity of the existing regulated surface impoundments at Big Bend Station. These efforts will cause the company to incur additional O&M expenses in 2016.

6. Other engineering efforts will be required to evaluate alternatives for design of new or modified facilities to ensure future compliance with the CCR Rule. These efforts will begin in early 2016. All of these evaluations must be certified by a Qualified Engineer.

7. The other significant expense which the company expects to incur in 2016 is related to two existing CCR units at Big Bend Station which are regulated under the rule, as follows:

(a) The former Slag Fines Settling Pond was partially remediated and converted into a stormwater management pond in 2009. Some slag fines were left in the pond by Tampa Electric under an agreement with the Florida Department of Environmental Protection ("FDEP"). However, because the pond still contains slag residuals and continues to impound water, this pond is defined as an "Inactive Impoundment" and is subject to the requirements of the CCR Rule, according to EPA. The rule exempts such impoundments from future regulation if they are cleaned out and closed within three years of the publication date of the rule, or prior to April 17, 2018. Tampa Electric must declare its intent to perform this work by December 17, 2015. Therefore, the company is proposing to remove all residual CCRs (slag) from the pond and install a liner to prevent future infiltration of stormwater. The work will be performed in 2016 and 2017, after which the stormwater pond will no longer be regulated under the rule.

(b) The second CCR unit for which capital improvements are needed is the North Gypsum Stackout area adjacent to the flue gas desulfurization ("FGD") process at Big Bend Station. This area will need to be modified to meet the CCR Rule's requirements for secondary containment of CCR products and runoff controls. Otherwise, the area will be regulated as a landfill. The improvements will include addition of containment walls and a sump pump and piping to convey water to the existing FGD transfer sump. The water will then be pumped from the FGD sump directly to the existing Solids Separation Unit to be clarified and recycled so as to eliminate contact of runoff or gypsum product with the environment. These modifications are planned for 2016 and 2017 as well.

8. Future construction of new CCR units or corrective action and modification of existing CCR management facilities will also be evaluated to ensure compliance with the CCR Rule and could begin as early as 2017. Engineering activities for these projects will also begin in 2016, causing Tampa Electric to incur project-related capital expenses, which are included in this request, and the resulting corrective active and/or construction estimates for future projects will be submitted for approval upon completion of these efforts. In summary, Tampa Electric will begin incurring O&M expenses related to the CCR Rule at Big Bend Station in the fourth quarter of 2015 and continuing for the life of the facility. Capital expenses will also begin in 2016 and then continue for several years as the projects are constructed. Tampa Electric is requesting approval at this time for the following expenses for 2015-2017, with the understanding that expense estimates for the listed projects may be adjusted upon receipt of the detailed engineering and construction bids and that estimates for future projects will be submitted when available:

TAMPA ELECTRIC BIG BEND STATION COAL COMBUSTION RESIDUALS (CCR) RULE ECRC CAPITAL/O&M ESTIMATE						
	2015		2016		2017	
PROJECT	Capital	O&M	Capital	O&M	Capital	O&M
1 Groundwater Monitoring Plan, Inspections, Signage	0	\$75,000	0	\$150,000	0	\$100,000
2 Impoundment & Liner Evaluations	0	0	0	250,000	0	150,000
3 Slag Fines Pond Closure and Lining	0	0	1,500,000	0	1,500,000	50,000
4 North Gypsum Stackout Enhancements	0	0	500,000	0	500,000	50,000
5 Future Impoundment & CCR Facility Improvements (Engineering)	0	0	300,000	0	300,000	0
6 Future Impoundment & CCR Facility Improvements (Construction & Remediation)	0	0	0	0	TBD	TBD
Total	0	\$75,000	\$2,300,000	\$400,000	\$2,300,000	\$350,000

9. The Commission's policy for initial cost recovery approval of an ECRC eligible project is set forth in Order No. PSC-94-0044-FOF-EI issued January 12, 1994 in Docket No. 930613-EI, In re: Gulf Power Company, ("the Gulf Order") as follows:

Upon petition, we shall allow the recovery of costs associated with an environmental compliance activity through the environmental cost recovery factor if:

1. such costs were prudently incurred after April 13, 1993;
2. the activity is legally required to comply with a governmentally imposed environmental regulation enacted, became effective, or whose effect was triggered after the company's last test year upon which rates are based; and,
3. such costs are not recovered through some other cost recovery mechanism or through base rates.

10. Tampa Electric's proposed CCR Program qualifies for ECRC cost recovery under the Gulf Order. The costs of the program will be prudently incurred after April 13, 1993. The company's planned activity under the CCR Program is legally required to comply with the EPA's CCR Rule which was adopted and became effective after the company's last test year upon which rates are based. None of the costs proposed under the CCR program are recovered through some other cost recovery mechanism or through base rates.

11. This program is a compliance activity associated with safe disposal of coal combustion by-products in landfills and surface impoundments. As such, expenditures to implement the CCR program should be allocated to rate classes on an energy basis.

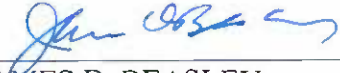
12. Tampa Electric is not aware of any disputed issues of material fact relative to the matters set forth in this Petition or any relief requested.

WHEREFORE, Tampa Electric Company respectfully requests the Commission to approve the company's proposed Coal Combustion Residuals Compliance Program and the

company's recovery of the capital costs and O&M expenses of the program through the ECRC in the manner described herein.

DATED this 15th day of October 2015.

Respectfully submitted,



JAMES D. BEASLEY
J. JEFFRY WAHLEN
ASHLEY M. DANIELS
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302
(850) 224-9115

ATTORNEYS FOR TAMPA ELECTRIC COMPANY



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Part II

Environmental Protection Agency

40 CFR Parts 257 and 261
Hazardous and Solid Waste Management System; Disposal of Coal
Combustion Residuals From Electric Utilities; Final Rule

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Parts 257 and 261**

[EPA-HQ-RCRA-2009-0640; FRL-9919-44-OSWER]

RIN-2050-AE81

Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA or the Agency) is publishing a final rule to regulate the disposal of coal combustion residuals (CCR) as solid waste under subtitle D of the Resource Conservation and Recovery Act (RCRA). The available information demonstrates that the risks posed to human health and the environment by certain CCR management units warrant regulatory controls. EPA is finalizing national minimum criteria for existing and new CCR landfills and existing and new CCR surface impoundments and all lateral expansions consisting of location restrictions, design and operating criteria, groundwater monitoring and corrective action, closure requirements and post closure care, and recordkeeping, notification, and internet posting requirements. The rule requires any existing unlined CCR surface impoundment that is contaminating groundwater above a regulated constituent's groundwater protection standard to stop receiving CCR and either retrofit or close, except in limited circumstances. It also requires the closure of any CCR landfill or CCR surface impoundment that cannot meet the applicable performance criteria for location restrictions or structural integrity. Finally, those CCR surface impoundments that do not receive CCR after the effective date of the rule, but still contain water and CCR will be subject to all applicable regulatory requirements, unless the owner or operator of the facility dewater and installs a final cover system on these inactive units no later than three years from publication of the rule. EPA is deferring its final decision on the Bevill Regulatory Determination because of regulatory and technical uncertainties that cannot be resolved at this time.

DATES: This final rule is effective on October 14, 2015.

ADDRESSES: EPA has established three dockets for this regulatory action under

Docket ID No. EPA-HQ-RCRA-2009-0640, Docket ID No. EPA-HQ-RCRA-2011-0392, and Docket ID No. EPA-HQ-RCRA-2012-0028. All documents in these dockets are available at <http://www.regulations.gov>. Although listed in the index, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the OSWER Docket, EPA/DC, WJC West Building, Room 3334, 1301 Constitution Ave. NW., Washington, DC 20460. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the OSWER Docket is 202-566-0276.

FOR FURTHER INFORMATION CONTACT: For questions on technical issues: Alexander Livnat, Office of Resource Conservation and Recovery, Environmental Protection Agency, 5304P; telephone number: (703) 308-7251; fax number: (703) 605-0595; email address: livnat.alexander@epa.gov, or Steve Souders, Office of Resource Conservation and Recovery, Environmental Protection Agency, 5304P; telephone number: (703) 308-8431; fax number: (703) 605-0595; email address: souders.steve@epa.gov. For questions on the regulatory impact analysis: Richard Benware, Office of Resource Conservation and Recovery, Environmental Protection Agency, 5305P; telephone number: (703) 308-0436; fax number: (703) 308-7904; email address: benware.richard@epa.gov. For questions on the risk assessment: Jason Mills, Office of Resource Conservation and Recovery, Environmental Protection Agency, 5305P; telephone number: (703) 305-9091; fax number: (703) 308-7904; email address: mills.jason@epa.gov. For more information on this rulemaking please visit <http://www.epa.gov/epawaste/nonhaz/industrial/special/fossil/index.htm>.

SUPPLEMENTARY INFORMATION:**A. Does this action apply to me?**

This rule applies to all coal combustion residuals (CCR) generated by electric utilities and independent power producers that fall within the North American Industry Classification

System (NAICS) code 221112 and may affect the following entities: Electric utility facilities and independent power producers that fall under the NAICS code 221112. The industry sector(s) identified above may not be exhaustive; other types of entities not listed could also be affected. The Agency's aim is to provide a guide for readers regarding those entities that potentially could be affected by this action. To determine whether your facility, company, business, organization, etc., is affected by this action, you should refer to the applicability criteria discussed in Unit VI.A. of this document. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What actions are not addressed in this rule?

This rule does not address the placement of CCR in coal mines. The U.S. Department of Interior (DOI) and, as necessary, EPA will address the management of CCR in minefills in separate regulatory action(s), consistent with the approach recommended by the National Academy of Sciences, recognizing the expertise of DOI's Office of Surface Mining Reclamation and Enforcement in this area. See Unit VI of this document for further details. This rule does not regulate practices that meet the definition of a beneficial use of CCR. Beneficial uses that occur after the effective date of the rule need to determine if they comply with the criteria contained in the definition of "beneficial use of CCRs." This rule does not affect past beneficial uses (i.e., uses completed before the effective date of the rule.) See Unit VI of this document for further details on proposed clarifications of beneficial use. Furthermore, CCR from non-utility boilers burning coal are also not addressed in this final rule. EPA will decide on an appropriate action for these wastes through a separate rulemaking effort. See Unit IV of this document for further details. Finally, this rule does not apply to municipal solid waste landfills (MSWLFs) that receive CCR for disposal or use as daily cover.

C. The Contents of This Preamble Are Listed in the Following Outline

- I. Executive Summary
- II. Statutory Authority
- III. Background
- IV. Bevill Regulatory Determination Relating to CCR From Electric Utilities and Independent Power Producers
- V. Development of the Final Rule—RCRA Subtitle D Regulatory Approach

- VI. Development of the Final Rule—
Technical Requirements
- VII. Summary of Major Differences Between
the Proposed and Final Rules
- VIII. Implementation Timeframes for
Minimum National Criteria and
Coordination With Steam Electric ELG
Rule
- IX. Implementation of the Minimum Federal
Criteria and State Solid Waste
Management Plans
- X. Risk Assessment
- XI. Summary of Damage Cases
- XII. Summary of Regulatory Impact Analysis
- XIII. Uniquely Associated Wastes
- XIV. Statutory and Executive Order Reviews

I. Executive Summary

This rule establishes nationally applicable minimum criteria for the safe disposal of coal combustion residuals in landfills and surface impoundments. This section summarizes these criteria. Detailed discussions of the criteria and the Agency's rationale for finalizing these requirements are provided in Unit VI of this document.

A. What are coal combustion residuals?

Coal combustion residuals (CCR) are generated from the combustion of coal, including solid fuels classified as anthracite, bituminous, subbituminous, and lignite, for the purpose of generating steam for the purpose of powering a generator to produce electricity or electricity and other thermal energy by electric utilities and independent power producers. CCR includes fly ash, bottom ash, boiler slag, and flue gas desulfurization materials. A description of the types of CCR can be found in the proposed rule (see 75 FR 35137).

CCR is one of the largest industrial waste streams generated in the U.S. In 2012, over 470 coal-fired electric utilities burned over 800 million tons of coal, generating approximately 110 million tons of CCR in 47 states and Puerto Rico. CCR may be generated wet or dry; however, this composition may change after generation. Some CCR is dewatered while other CCR is mixed with water to facilitate transport (*i.e.*, sluiced). CCR can be sent off-site for disposal or beneficial use or disposed in on-site landfills or surface impoundments. In 2012, approximately 40 percent of the CCR generated was beneficially used, with the remaining 60 percent disposed in surface impoundments and landfills. Of that 60 percent, approximately 80 percent was disposed in on-site disposal units. CCR disposal currently occurs at over 310 active on-site landfills, averaging over 120 acres in size with an average depth of over 40 feet, and at over 735 active on-site surface impoundments,

averaging over 50 acres in size with an average depth of 20 feet.

B. Background

The Agency first solicited comments on the regulation of CCR in a proposed rule published in the *Federal Register* on June 21, 2010. This proposal, under the Resource Conservation and Recovery Act (RCRA), addressed the risks from disposal of CCR generated from the combustion of coal at electric utilities and from independent power producers. Two regulatory options were proposed. Under the first option, EPA proposed to list CCR as special waste subject to regulation under subtitle C of RCRA, when destined for disposal in landfills or surface impoundments. Under this option, CCR would require "cradle-to-grave" management and would be subject to requirements for, among other things, composite liners, groundwater monitoring, structural stability requirements, corrective action, closure/post closure care and financial assurance. States would be required to adopt the rule before it went into effect and a permitting program would be established with direct federal oversight. The subtitle C option, as proposed, would also effectively result in the closure of all CCR surface impoundments.

Under the second option, EPA proposed to regulate the disposal of CCR under subtitle D of RCRA by issuing minimum national criteria. Similar to the subtitle C option, this option would require composite liners, groundwater monitoring, structural stability requirements, corrective action, and closure/post closure care. However, consistent with the available statutory authority under subtitle D, EPA proposed this option to be a self-implementing rule with no direct federal oversight, with an effective date six months after publication in the *Federal Register*. This option required all unlined surface impoundments to either retrofit to a composite liner or close within five years.

After reviewing all the comments and additional data received, EPA is promulgating this final rule to regulate the disposal of CCR as solid waste under subtitle D of RCRA. This rule addresses the risks from structural failures of CCR surface impoundments, groundwater contamination from the improper management of CCR in landfills and surface impoundments and fugitive dust emissions. The rule has also been designed to provide electric utilities and independent power producers generating CCR with a practical approach for implementation of the requirements and has established

implementation timelines that take into account, among other things, other upcoming regulatory actions affecting electric utilities and site specific practical realities. In order to ease implementation of the regulatory requirements for CCR units with state programs, EPA is also providing the opportunity for states to secure approval of its CCR program through the State Solid Waste Management Plan ("SWMP"). EPA strongly recommends that states take advantage of this process by revising their SWMPs to address the issuance of the revised federal requirements in this final rule, and to submit revisions of these plans to EPA for review. EPA would then review and approve the revised SWMPs provided they demonstrate that the minimum federal requirements in this final rule will be met. In this way, EPA's approval of a revised SWMP signals EPA's opinion that the state SWMP meets the minimum federal criteria.

C. What types of CCR units are covered by this rule?

The final rule applies to owners and operators of new and existing landfills and new and existing surface impoundments, including all lateral expansions of landfills and surface impoundments that dispose or otherwise engage in solid waste management of CCR generated from the combustion of coal at electric utilities and independent power producers. The requirements of the rule also apply to CCR units located off-site of the electric utilities' or independent power producers' facilities that receive CCR for disposal. In addition, the rule applies to certain inactive CCR surface impoundments (*i.e.*, units not receiving CCR after the effective date of the rule) at active electric utilities' or independent power producers' facilities, regardless of the fuel currently used at the facility to produce electricity (*e.g.* coal, natural gas, oil), if the CCR unit still contains CCR and liquids.

The requirements do not apply to: (1) CCR landfills that ceased receiving CCR prior to the effective date of the rule; (2) CCR units at facilities that have ceased producing electricity (or electricity and other thermal energy) prior to the effective date of the rule; (3) CCR generated at facilities that are not part of an electric utility or independent power producer, such as manufacturing facilities, universities, and hospitals; (4) fly ash, bottom ash, boiler slag, and flue gas desulfurization materials, generated primarily from the combustion of fuels (including other fossil fuels) other than coal, for the purpose of generating electricity unless the fuel burned

consists of more than fifty percent coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal; (5) CCR that is beneficially used; (6) CCR placement at active or abandoned underground or surface coal mines; or (7) municipal solid waste landfills (MSWLF) that receive CCR.

D. What minimum national criteria are being established for CCR landfills and CCR surface impoundments?

This final rule establishes minimum national criteria for CCR landfills, CCR surface impoundments, and all lateral expansions of CCR units including location restrictions, liner design criteria, structural integrity requirements, operating criteria, groundwater monitoring and corrective action requirements, closure and post-closure care requirements, and recordkeeping, notification, and internet posting requirements.

1. Location Restrictions. To ensure there will be no reasonable probability of adverse effects on health or the environment from the disposal of CCR in CCR landfills, CCR surface impoundments, and all lateral expansions of CCR landfills and CCR surface impoundments (together "CCR units"), this final rule establishes five location restrictions. The location criteria include restrictions relating to placement of CCR above the uppermost aquifer, in wetlands, within fault areas, in seismic impact zones, and in unstable areas. All of these location restrictions require the owner or operator of a CCR unit to demonstrate that they meet the specific criteria. As discussed elsewhere in this preamble, the five location restrictions apply to all new CCR landfills, all new and existing CCR surface impoundments, and all lateral expansions of CCR units; however, existing CCR landfills are only subject to the location restriction for unstable areas. Units that do not meet these restrictions can retrofit or make appropriate engineering demonstrations to meet this criteria. This final rule requires owner or operators of existing CCR units that cannot make the required demonstrations to close, while owners or operators of new CCR units and all lateral expansions who fail to make the required demonstrations are prohibited from placing CCR in the CCR unit.

2. Liner Design Criteria. The final rule also establishes liner design criteria to help prevent contaminants in CCR from leaching from the CCR unit and contaminating groundwater. All new CCR landfills, new CCR surface impoundments, and lateral expansions of CCR units must be lined with

composite liner, which is a liner system consisting of two components—a geomembrane and a two-foot layer of compacted soil—installed in direct and uniform contact with one another. The final rule allows an owner or operator to construct a new CCR unit with an alternative composite liner, provided the alternative composite liner performs no less effectively than the composite liner. In addition, new landfills are required to operate with a leachate collection and removal system which is designed to remove excess leachate that may accumulate on top of the composite (or alternative composite) liner. Existing CCR landfills are not required to close or retrofit with a composite (or alternative composite) liner and a leachate collection and removal system. These existing CCR units can continue to receive CCR after this rule is in effect; however, the CCR units must meet all applicable groundwater monitoring and corrective action criteria to address any groundwater releases promptly. Existing CCR surface impoundments can also continue to operate as designed. However, if the existing CCR surface impoundment was not constructed with a composite (or alternative composite) liner or with at least two feet of compacted soil with a specified hydraulic conductivity, the rule would require the unit to retrofit or close if the CCR surface impoundment detects concentrations of one or more constituents listed in appendix IV at statistically significant levels above the groundwater protection standard established by the rule.

3. Structural Integrity Requirements. To help prevent the damages associated with structural failures of CCR surface impoundments, the final rule establishes structural integrity criteria for new and existing surface impoundments (and all lateral expansions) as part of the design criteria. While the applicability of the structural integrity requirements to individual CCR surface impoundments vary depending on factors such as dike heights and the potential for loss of life, environmental damage and economic loss if there is a dike failure, the final rule establishes requirements for owner or operators to conduct a number of structural integrity-related assessments regularly. These include: (1) Conducting periodic hazard potential classification assessments to assess the potential adverse incremental consequences that would occur if there was a failure of the CCR surface impoundment; (2) conducting periodic structural stability assessments by a qualified professional engineer to document whether the

design, construction, operation and maintenance is consistent with recognized and generally accepted good engineering practices; and (3) conducting periodic safety factor assessments to document whether the CCR unit achieves minimum factors of safety for slope stability. If a CCR unit required to conduct a safety factor assessment fails to demonstrate that the unit achieves the specified factors of safety, the owner or operator must close the unit. In addition, certain CCR surface impoundments are required to develop an emergency action plan which defines the events and circumstances involving the CCR unit that represent an emergency and identifies the actions that will be taken in the event of a safety emergency.

4. Operating Criteria. The operating criteria include air criteria for all CCR units, run-on and run-off controls for CCR landfills, hydrologic and hydraulic capacity requirements for CCR surface impoundments, and periodic inspection requirements for all CCR units. These criteria address the day-to-day operations of CCR units and are established to prevent health and environmental impacts from CCR units. The air criteria address the pollution caused by windblown dust from CCR units, and require owners and operators to minimize CCR from becoming airborne at the facility. The run-on controls for CCR landfills minimize the amount of surface water entering the unit that will help prevent erosion, surface discharges of CCR in solution or suspension, and will mitigate the generation of landfill leachate, while run-off controls help prevent erosion, protect downstream surface water from releases from the unit, and minimize storm water run-off volume and velocity. CCR surface impoundments are subject to hydrologic and hydraulic capacity requirements to ensure the unit can safely handle flood flows, which will help prevent uncontrolled overtopping of the unit or erosion of the materials used to construct the surface impoundment. The final rule also requires periodic inspections of CCR units to identify any appearance of structural weakness or other conditions that are not consistent with recognized and generally accepted good engineering standards.

5. Groundwater Monitoring and Corrective Action. The groundwater monitoring and corrective action criteria require an owner or operator of a CCR unit to install a system of monitoring wells and specify procedures for sampling these wells, in addition to methods for analyzing the groundwater data collected, to detect the presence of

hazardous constituents (e.g., toxic metals) and other monitoring parameters (e.g., pH, total dissolved solids) released from the units. The final rule establishes a groundwater monitoring program consisting of detection monitoring, assessment monitoring and corrective action. Once a groundwater monitoring system and groundwater monitoring program has been established for a CCR unit, the owner or operator must conduct groundwater monitoring and, if the monitoring demonstrates an exceedance of a groundwater protection standard for any of the identified constituents in CCR, must initiate corrective action.

6. Closure and Post-Closure Requirements. The closure and post-closure care criteria require all CCR units to close in accordance with specified standards and to monitor and maintain the units for a period of time after closure, including the groundwater monitoring and corrective action programs. These criteria are essential to

ensuring the long-term safety of closed CCR units. Closure 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. The final rule establishes timeframes to initiate and complete closure activities, and authorize owners or operators to obtain time extensions due to circumstances beyond the facility's control. As discussed elsewhere in this preamble, the rule also establishes alternative closure procedures in situations where an owner or operator is closing a CCR unit, but has no alternative CCR disposal capacity or is permanently closing the coal-fired boiler unit in the foreseeable future. Finally, owners and operators are required to prepare closure and post-closure care plans describing these activities.

7. Record Keeping, Notification, and Internet Posting Requirements. The final rule requires owners or operators of CCR

units to record certain information in the facility's operating record. In addition, owners and operators are required to provide notification to States and/or appropriate Tribal authorities when the owner or operator places information in the operating record, as well as to maintain a publicly accessible internet site for this information.

8. Severability. EPA intends that the provisions of this rule be severable. In the event that any individual provision or part of this rule is invalidated, EPA intends that this would not render the entire rule invalid, and that any individual provisions that can continue to operate will be left in place. The following tables provide a summary of the specific technical requirements applicable to existing and new CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units.