

Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item

SUBJECT:

Request adoption of Board Order WA-17-18, proposed rules affecting chapters NR 500 to 520 related to coal combustion residual landfills.

FOR: January 2022 Board meeting

PRESENTER'S NAME AND TITLE: Kate Strom Hiorns, Recycling and Solid Waste Section Chief

SUMMARY:

The proposed rule will amend portions of chs. NR 500 to 520, Wis. Adm. Code, to incorporate new federal rules for the regulation of coal combustion residual (CCR) landfills. CCR, often called coal ash, is created when coal is burned by power plants to produce electricity. Specifically, the proposed rule would incorporate federal requirements for CCR landfills, such as: design and operating criteria, groundwater monitoring and corrective action criteria, post-closure care, and recordkeeping. The proposed rule would also include requirements for initial permitting, public participation in plan review, and review fees. The proposed rule would allow Wisconsin to seek approval of a state CCR permit program from the U.S. Environmental Protection Agency (EPA). This would allow CCR landfills to comply with a single consolidated rule rather than both state and federal rules. Where federal rules and Wisconsin rules differ, Wisconsin rules are required by EPA to be at least as protective as the federal rules.

The proposed rule would make the following changes to existing practices:

- Require current new and existing CCR landfills to submit a plan of operation modification for initial permitting once the proposed rules are in effect.
Designate specific CCR wells to monitor groundwater quality.
Increase public participation during the plan review and approval process.
Implement fees specific to CCR landfills for initial permitting and annual reports.

Commenters requested the regulation of CCR surface impoundments, which is not included in the proposed rule because of ongoing rule revisions related to surface impoundments at the federal level and the complexities of creating a new permit program for surface impoundments under Wisconsin's existing solid waste rules. Most CCR surface impoundments are expected to be removed over the next few years, leaving only two closed CCR surface impoundments in place that would be subject to long term care and monitoring requirements under the federal rule.

The rule is not expected to have an economic impact on small businesses.

The Board last acted on this rule on February 26, 2020 when it approved the scope statement. The department has completed the external review process for Board Order WA-17-18, which includes holding a public hearing and review by the Legislative Council Rules Clearinghouse. Comments received have been considered in the draft final rule. If the final rule language of WA-17-18 is approved, the rule will be submitted to the Governor and, if the Governor approves, to the legislature for review and approval. The 30-month time frame for submission of a final rule to the legislature for approval expires on May 4, 2022.

RECOMMENDATION: That the Board adopt Board Order WA-17-18.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- Background Memo
Fiscal estimate and economic impact analysis (EIA) form
Response summary
Attachments to background memo
Board order/rule
(insert document name)

Table with 3 columns: Approved by, Signature, Date. Rows include George B. Wolbert, Darsi J. Foss, and Preston D. Cole.

by Todd Ambs

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**CORRESPONDENCE/MEMORANDUM**

DATE: December 13, 2021

TO: All Members of the Natural Resources Board

FROM: Preston D. Cole, Secretary

SUBJECT: Background memo on Board Order WA-17-18, proposed rules affecting chapters NR 500 to 520 related to coal combustion residual landfills.

**1. Subject of Proposed Rule:**

Revisions to chs. NR 500 to 520, Wis. Adm. Code, related to coal combustion residual (CCR) landfills. The proposed rule would allow Wisconsin to seek approval of a state CCR permit program from the U.S. Environmental Protection Agency (EPA). This would allow CCR landfills to comply with a single consolidated rule rather than both state and federal rules. Where federal rules and Wisconsin rules differ, Wisconsin rules are required by EPA to be at least as protective as the federal rules.

**2. Background:**

The proposed rule will amend portions of chs. NR 500 to 520, Wis. Adm. Code, to incorporate new federal rules for the regulation of CCR landfills. CCR, often called coal ash, is created when coal is burned by power plants to produce electricity. Specifically, the proposed rule would incorporate federal requirements for CCR landfills, such as: location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action criteria, closure and post-closure care and recordkeeping, notification, and posting of information.

Public outreach and input opportunities were conducted throughout the rulemaking process as follows:

- A preliminary public hearing on the statement of scope was held by DNR on January 7, 2020. No members of the public attended. Written comments were accepted and two sets of comments were received, one from Wisconsin Utilities Association (WUA) and Dairyland Power Cooperative (DPC) and one from Milwaukee Riverkeeper.
- A public informational meeting was held by DNR on December 1, 2020 to share preliminary rule concepts, including DNR's decision to not include surface impoundments in the rule. Written comments were accepted and two sets of comments were received from WUA/DPC and a group of organizations (listed below) referring to themselves as Conservation and Environmental Health Organizations (CEHO).
- A public comment period was provided for the economic impact analysis between June 25 and July 25, 2021. Written comments were received from the following: WUA/DPC and CEHO [Sierra Club, Action for the Climate Emergency, Clean Power Coalition of Southeast Wisconsin, Midwest Environmental Advocates, Milwaukee Riverkeeper, Physicians for Social Responsibility Wisconsin, Wisconsin Advocates for Public Health, Wisconsin Conservation Voters, Wisconsin Environment, Wisconsin Environmental Health Network, Wisconsin Health Professionals for Climate Action, Wisconsin Interfaith Power & Light, and 350 Madison]. One hundred and sixty (160) individuals commented on the proposed rule, of which 159 individuals provided the same or similar comments.
- A public hearing was held by the DNR on October 28, 2021. Ten individuals participated in the public hearing in addition to DNR staff. Three individuals registered in support, of which two provided testimony during the hearing. No individuals registered in opposition of the rule and

seven registered for information only or no position, of which two provided testimony during the hearing.

- DNR met with WUA and DPC prior to the rulemaking process to discuss their concerns and the impact of the federal rule on the electric utilities' activities. DNR had phone calls or met with WUA and DPC during the rulemaking process to gather comments on rule language. Meetings were held on August 2, 2021, and September 14, 2021.
- Examples where DNR coordinated with WUA/DPC during the rule drafting process include:
  - Alliant Energy provided a groundwater standards comparison for a CCR landfill in Wisconsin on November 2, 2020.
  - WUA/DPC provided a table of CCR units subject to the federal rule and responses to permitting questions posed by DNR on May 28, 2020.
  - WUA/DPC provided comments on the draft rule language, specifically suggesting language for incorporating surface impoundments into the proposed rule, on August 12, 2021.
- DNR met with representatives of CEHO, specifically the Sierra Club, Milwaukee River Keepers and Midwest Environmental Advocates, on November 10, 2021, to discuss and seek clarification regarding CEHO comments on the proposed rule. DNR made changes to the proposed rule based on CEHO comments on plan review timeframes in ch. NR 508, Wis. Adm. Code. Specific responses to all CEHO comments are provided in the DNR's response to comments.
- Throughout the rule drafting process, DNR met with representatives of EPA, approximately monthly, to discuss draft rule language and a potential permit program. EPA provided feedback and informal written comments on Wisconsin's existing rules and proposed rule language, including whether Wisconsin's rules could be considered as protective as the federal rule. EPA specifically requested additional information and clarifications on the rule's requirements for groundwater monitoring and analysis, requirements for remediation of contaminant releases, enforcement provisions, and enhanced public participation during the permitting process and for major modifications to permits. EPA provided comments on the full rule package during the public hearing comment period that was directly related to ensuring elements would be as protective as the federal rule. If the draft rule is adopted, the DNR must submit the rule and narrative justification to the EPA for final review and authorization of a state permit program.

### 3. Why is the rule being proposed?

CCR landfills in Wisconsin are currently regulated under both federal rules and existing Wisconsin rules. Where rules differ, CCR landfills must meet both federal and state laws. These proposed rules would allow Wisconsin to seek approval for a state CCR permit program from the EPA. EPA approval of a Wisconsin CCR permit program would allow CCR landfill operators to apply a single set of consolidated rules and interact with one regulatory agency.

### 4. Summary of the rule.

The federal requirements for CCR landfills include location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action, closure and post-closure care and recordkeeping, notification, and posting of information. Wisconsin proposes using both existing rules to meet these requirements and incorporating the new federal requirements for CCR landfills into Wisconsin rules where required. The proposed rule would also include requirements for initial permitting, public participation in plan review, and review fees.

Specific elements of the proposed rule include:

- A. NR 500 General Solid Waste Management Requirements: The rule creates new definitions in ch. NR 500, Wis. Adm. Code, specific to coal combustion residual landfills to correspond with federal definitions. Other revisions to ch. NR 500, Wis. Adm. Code, clarify that exemptions may not be granted if they cause noncompliance with the minimum federal requirements and that plan modifications are also required to follow the general submittal

requirements.

- B. NR 504 Landfill Location, Performance, Design and Construction Criteria: The rule creates a new section, s. NR 504.12, Wis. Adm. Code, for minimum design and construction criteria for CCR landfills related to run-on and run-off controls, liner design, and final cover systems consistent with federal requirements. CCR landfills will need to be designed, constructed and operated in accordance with existing rule requirements and the additional criteria for CCR landfills under the proposed rule. A federal requirement that substantially differs from current rule is that new CCR landfills and lateral expansions of a CCR landfill are required to be designed and constructed with a subbase grade that is located no less than five feet above the upper limit of the uppermost aquifer, or provide a demonstration that there will not be a hydraulic connection between any portion of the base of the CCR landfill and the uppermost aquifer. The federal definition of uppermost aquifer for a CCR landfill has been incorporated under ch. NR 500, Wis. Adm. Code, of the proposed rule. Any alternate liner proposals for CCR landfills must also demonstrate that the design meets the minimum federal requirements.
- C. NR 506 Landfill Operational Criteria: The rule creates closure, long-term care, record keeping, inspection and reporting requirements for CCR landfills consistent with federal requirements. The closure requirements include procedures for notification, timeframes for initiation and completion of closure, deed notation, closure by removal of CCR and alternative closure requirements. Consistent with federal requirements, CCR landfills will be required to maintain a written operating record, but for some documents the rule requires the documents be maintained during the operating life and for at least 40 years after closure. Specific records will be required to be posted on a publicly accessible internet site maintained by the landfill owner or operator. Inspection requirements include periodic inspections by the owner or operator for dust control and stability and annual inspections by a licensed professional engineer related to the condition of the CCR landfill. An annual report will be required by January 31 of each year addressing fugitive dust control, the annual inspection, groundwater monitoring and corrective action, and leachate pipe cleaning and inspection.
- D. NR 507 Environmental Monitoring: The rule creates a new subsection establishing a groundwater monitoring well network for CCR landfills that is consistent with federal requirements. These monitoring well networks, which are already installed at CCR landfills, will be designated “CCR wells” and are in addition to the groundwater monitoring network already required under existing state regulations. CCR wells will monitor groundwater quality in the uppermost aquifer beneath the CCR landfill while the other groundwater monitoring wells already required under existing ch. NR 507, Wis. Adm. Code will monitor groundwater quality within all water-bearing soil layers, even if they do not qualify as being within the uppermost aquifer. The CCR wells and existing wells will be sampled for the parameters and frequencies as indicated in the revised ch. NR 507, Wis. Adm. Code, Appendix tables. Both sets of monitoring wells will be subject to the groundwater quality standards under ch. NR 140, Wis. Adm. Code, including provisions for setting preventive action limits (PALs) for indicator parameters and alternate concentration limits (ACLs) for contaminant concentrations that are naturally elevated above the groundwater quality standards. The rule includes requirements for establishing a groundwater detection monitoring system, notification requirements, and recordkeeping. It also creates a design management zone (the distance from the waste boundary at which some monitoring systems must be placed) of 0 feet for CCR wells, which may not be expanded.
- E. NR 508 Responses when a Groundwater Standard is Attained or Exceeded: The rule creates a new subsection outlining remedial actions that are required when a groundwater standard is

attained or exceeded at a CCR monitoring well at a CCR landfill. These procedures are similar to existing groundwater quality exceedance requirements for any landfill, but explicitly apply to CCR landfills in order to be equally protective as the federal CCR landfill regulations. Differences include the addition of an informational hearing to discuss the findings of the remedial action options report and the preparation of a remedial action options report immediately after confirmation of a potential release from the landfill rather than waiting until completion of the site investigation.

Once an exceedance has been detected, the owner or operator would be required to notify the DNR within 60 days from the end of the sampling period and respond by beginning an assessment of the cause and significance of the exceedance. The owner or operator would also have to begin "assessment monitoring," which consists of sampling all the CCR wells for the ch. NR 507, Wis. Adm. Code, Appendix I, Table 3 parameters, within 90 days of the verified exceedance. If a groundwater quality exceedance is detected during the assessment monitoring, the owner or operator would have to define the degree and extent of the contaminant, install at least one additional monitoring well, notify the potentially affected neighbors and submit a site investigation workplan to the DNR within 60 days unless the owner or operator could demonstrate that the exceedance was caused by natural or off-site sources. The owner or operator would then initiate a site investigation within 90 days of submittal of the workplan and prepare a site investigation report to the DNR within 60 days after completing the site investigation.

Upon confirmation of a release from a CCR landfill or verification of a groundwater standard exceedance during assessment monitoring that was not caused by off-site or natural sources, the owner or operator would also have 90 days to prepare and submit an initial remedial action options report that will assess possible corrective actions. The DNR will review and respond to the remedial action options report and any addendums and hold an informational public meeting to discuss the results of the remedial action options report prior to selection of a remedial action. The owner or operator would select a remedy that, at a minimum, meets the standards listed in s. NR 508.06(4) and ch. NR 722, Wis. Adm. Code. The owner or operator must describe the selected remedy in the revision of the remedial action options report and include a section indicating how the selected remedy meets the remedial action standards. The DNR would review and approve an appropriate remedial action for implementation by the owner or operator.

Within 90 days after the DNR approves a remedy from the remedial action report, the owner or operator would have to initiate remedial activities. Assessment monitoring would continue with semiannual sampling until there are at least two consecutive sampling rounds without any exceedance of a groundwater standard.

- F. NR 512 Feasibility Report for Landfills: The rule includes additional requirements for feasibility reports for CCR landfills, consistent with federal requirements, when a new landfill is being proposed. The feasibility report would need to include a demonstration that addresses specific factors when determining whether an area is unstable. An "unstable area" is already defined in s. NR 500.03(246), Wis. Adm. Code, and can include poor foundation conditions, areas susceptible to mass movements, and karst terrains. The rule also includes additional limits on facilities or practices near floodplains.
- G. NR 514 Plan of Operation and Closure Plans for Landfills: The rule includes procedural requirements for initial permitting of CCR landfills. A new or existing CCR landfill will be required to submit a plan of operation modification to include new plans or modifications required by the rule. The rule provides timeframes for review, notification of completeness



and a public comment period. Existing landfills that fail to comply with the locational criteria for unstable areas will be required to cease placing CCR waste and close the landfill.

Also consistent with federal requirements, this chapter includes additional plan of operation requirements for CCR landfills, including a fugitive dust control plan, a run-on and run-off control plan, a closure plan and a long-term care plan. The rule language includes opportunities for public participation prior to and during the review process for various plans, including the plan modification for initial permitting. The rule removes a reference in s. NR 514.09(1)(b), Wis. Adm. Code, related to changes that are less stringent than a federally mandated requirement, because DNR approvals would need to comply with all federal requirements.

- H. NR 520 Solid Waste Management Fees and Financial Responsibility Requirements: The rule proposes new fees for CCR landfills for annual reports and the plan of operation modification for initial permitting. The fees cover the estimated cost for DNR staff to provide plan review and approval services. This rule does not change other applicable fees.

**5. How does this proposal affect existing policy?**

CCR landfills in Wisconsin are currently regulated under both federal rules and existing Wisconsin rules. Where rules differ, CCR landfills must meet both federal and state laws. This proposed rule would allow Wisconsin to seek approval for a state CCR permit program from the EPA. EPA approval of a Wisconsin CCR permit program would allow CCR landfill operators to apply a single set of consolidated rules and interact with one regulatory agency.

Once the proposed rule becomes effective, new and existing CCR landfills would be required to go through an initial permitting process to comply with the proposed rule even though the landfills are already licensed under existing solid waste regulations. Because of federal regulations, the requirements for CCR landfills differ from other solid waste landfills in Wisconsin. The proposed rule relies on existing rules to the extent Wisconsin can demonstrate the rules are at least as protective as the federal rule.

**6. Has the Board dealt with these issues before?**

Yes. The Board approved the scope statement and conditionally authorized hearings for WA-17-18 at its February 2020 meeting.

**7. Who will be impacted by the proposed rule? How?**

The proposed rule will affect four electric utility companies that are CCR landfill owners and operators. There are approximately 18 existing and new CCR landfill units under federal regulation, which when combined represent six solid waste landfill facilities under Wisconsin regulation. None of the electric utility companies meet the definition of a small business under s. 227.114(1), Wis. Stats.

The CCR landfill owners and operators have already been required to comply with the federal rule and Wisconsin's existing rules. Any additional requirements as a result of the proposed rule are procedural requirements for initial permitting, public participation or related to the consolidation of state and federal requirements. Any additional cost as a result of this proposed rule will be related to a facility's plan preparation for initial permitting and DNR review of plans or annual reports.

**8. Soliciting public input on economic impact synopsis**

Comments on the economic impact of the rule were solicited from June 25 through July 25, 2021. In addition to general notice of the comment period in the Wisconsin Administrative Register and

through web postings, the DNR directly contacted the following entities when requesting economic impact comments:

- Wisconsin Towns Association and League of Wisconsin Municipalities
- Wisconsin Utilities Association
- Electric utility companies currently operating CCR landfills
- Milwaukee Riverkeeper
- Sierra Club – Wisconsin Chapter
- Clean Wisconsin

Two sets of comments were received:

- Midwest Environmental Advocates, Sierra Club-Wisconsin and Milwaukee Riverkeeper
- Wisconsin Utilities Association & Dairyland Power Cooperative

As a result of comments and further review, the following changes were made to the economic impact analysis:

- Implementation costs include annual review fees for the annual report (6 landfills at \$2,000 = \$12,000)
- Clarification that CCR landfill owners would continue to incur compliance costs of \$100,000 annually for groundwater monitoring for each of the 6 landfills.

#### **9. Small Business Analysis**

The rule is not likely to have an impact on small businesses. CCR landfills are operated by electric utilities that do not meet the definition of a small business under s. 227.114(1), Wis. Stats. The proposed rule would modify Wisconsin regulations to incorporate requirements of the federal rule into Wisconsin's existing rules to allow Wisconsin to apply for a CCR state permit program. Most of the changes in the proposed rule have already been implemented by the federal government and facilities have already complied with the federal rule. Any additional requirements as a result of the proposed rule are procedural requirements for initial permitting or related to the consolidation of state and federal requirements. Any additional cost as a result of this proposed rule will be related to a facility's plan preparation for initial permitting and DNR review of plans or annual reports.

**Drafter:** Valerie Joosten



## **Comments and DNR Responses Natural Resources Board Order WA-17-18**

**December 10, 2021**

This document presents a summary of public comments received on proposed rules affecting chapters NR 500 to 520 related to coal combustion residual landfills and surface impoundments.

### **OVERVIEW**

The proposed rule will amend portions of chs. NR 500 to 520, Wis. Adm. Code, to incorporate new federal rules for the regulation of coal combustion residual (CCR) landfills. CCR, often called coal ash, is created when coal is burned by power plants to produce electricity. Specifically, the proposed rule would incorporate federal requirements for CCR landfills, such as: location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action criteria, closure and post-closure care and recordkeeping, notification, and posting of information. The proposed rule would also include requirements for initial permitting, public participation in plan review, and review fees. The proposed rule would allow Wisconsin to seek approval of a state CCR permit program from the U.S. Environmental Protection Agency (EPA). This would allow CCR landfills to comply with a single consolidated rule rather than both state and federal rules. Where federal rules and Wisconsin rules differ, Wisconsin rules are required by EPA to be at least as protective as the federal rules.

Public outreach and input opportunities were conducted throughout the rulemaking process as follows:

- A preliminary public hearing on the statement of scope was held by DNR on January 7, 2020. No members of the public attended. Written comments were accepted and two sets of comments were received, one from Wisconsin Utilities Association (WUA) and Dairyland Power Cooperative (DPC) and one from Milwaukee Riverkeeper.
- A public informational meeting was held by DNR on December 1, 2020 to share preliminary rule concepts, including DNR's decision to not include surface impoundments in the rule. Written comments were accepted and two sets of comments were received from WUA/DPC and a group of organizations referring to themselves as Conservation and Environmental Health Organizations (CEHO) [Sierra Club, Action for the Climate Emergency, Clean Power Coalition of Southeast Wisconsin, Midwest Environmental Advocates, Milwaukee Riverkeeper, Physicians for Social Responsibility Wisconsin, Wisconsin Advocates for Public Health, Wisconsin Conservation Voters, Wisconsin Environment, Wisconsin Environmental Health Network, Wisconsin Health Professionals for Climate Action, Wisconsin Interfaith Power & Light, and 350 Madison].
- A public comment period was provided for the economic impact analysis between June 25 and July 25, 2021, as discussed further below.
- A public hearing was held by the DNR on October 28, 2021, as discussed further below.
- DNR met with WUA and DPC prior to the rulemaking process to discuss their concerns and the impact of the federal rule on the electric utilities' activities. DNR had phone calls or met with WUA and DPC during the rulemaking process to gather comments on rule language. Recent meetings were held on August 2, 2021 and September 14, 2021.
- Examples where DNR coordinated with WUA/DPC during the rule drafting process include:
  - WUA/DPC provided a table of CCR units subject to the federal rule and responses to permitting questions posed by DNR on May 28, 2020.
  - Alliant Energy provided a groundwater standards comparison for a CCR landfill in Wisconsin on November 2, 2020.
  - WUA/DPC provided comments on the draft rule language, specifically suggesting language for incorporating surface impoundments into the proposed rule, on August 12, 2021.

- DNR met with representatives of CEHO, specifically the Sierra Club, Milwaukee River Keepers and Midwest Environmental Advocates, on November 10, 2021 to discuss and seek clarification regarding CEHO comments on the proposed rule. DNR made changes to the proposed rule related to CEHO comments on plan review timeframes in ch. NR 508, Wis. Adm. Code. Specific responses to all CEHO comments are provided below.
- Throughout the rule drafting process, DNR met with representatives of the U.S. Environmental Protection Agency, approximately monthly, to discuss draft rule language and a potential permit program. EPA provided feedback and informal written comments on Wisconsin's existing rules and proposed rule language. EPA specifically requested additional information and clarifications on the rule's requirements for groundwater monitoring and analysis, requirements for remediation of contaminant releases, enforcement provisions, and enhanced public participation during the permitting process and for major modifications to permits. EPA provided comments on the full rule package during the public hearing comment period that was directly related to ensuring elements would be as protective as the federal rule. If the draft rule is adopted, the DNR must submit the rule and narrative justification to the EPA for final review and authorization of a state permit program.

### **ECONOMIC IMPACT ANALYSIS**

A public comment period on the draft EIA occurred from June 25 to July 25, 2021. The DNR received two sets of comments from organizations (WUA/DPC and Midwest Environmental Advocates, Sierra Club, and Milwaukee Riverkeeper) on the EIA during this period. WUA/DPC commented on higher plan review fees, estimated number of CCR landfills and requested DNR include CCR surface impoundments within the proposed rule. WUA/DPC commented that overall there would be a neutral economic impact and that ongoing environmental monitoring and reporting costs would continue under the proposed rule. The Midwest Environmental Advocates, Sierra Club and Milwaukee Riverkeeper commented in support of rules that are equally or more stringent than the federal rule, requested DNR regulate surface impoundments due to concerns over changing federal rules, requested DNR carefully assess staffing needs to take on the program and requested an analysis of the economic impact of regulating both CCR landfills and impoundments.

### **LEGISLATIVE COUNCIL RULES CLEARINGHOUSE**

The Legislative Council Rules Clearinghouse submitted comments on form, style and placement; and clarity, grammar, punctuation and the use of plain language. Changes to the proposed rule were made to address all recommendations by the Legislative Council Rules Clearinghouse.

### **PUBLIC COMMENTS ON DRAFT RULE**

A public comment period for the draft rule occurred from October 4 to November 4, 2021, with a public hearing held on October 28, 2021. Ten individuals participated in the public hearing in addition to DNR staff. Three individuals registered in support, of which two provided testimony during the hearing. No individuals registered in opposition of the rule and seven registered for information only or no position, of which two provided testimony during the hearing.

Written comments were received from the following organizations: Wisconsin Utilities Association and Dairyland Power Cooperative and Conservation and Health Organizations. One hundred and sixty (160) individuals commented on the proposed rule, of which 159 individuals provided the same or similar comments.

The following is a summary of comments received during the public comment period and the DNR's responses.

**Comment:** WUA and DPC commented they agree with DNR’s approach to the proposed rule. Specifically, the approach to rely on framework in the NR 500 series that is currently used to regulate CCR landfills, which will provide compliance certainty and consistency that is important to the regulated community. WUA/DPC had no concerns or objections with the majority of specific requirements in the proposed rule. WUA/DPC applauded the DNR for its work to identify existing rules that are at least as stringent as federal rules, and for proposing commonsense approaches to addressing differences in the programs. WUA Director William Skewes also spoke at the public hearing on November 4, 2021.

**Response:** Comment is in support of proposed rule. No action required.

**Comment:** WUA and DPC commented that the Scope Statement for this rulemaking effort indicates that “the proposed rule may include portions of 40 CFR 257, Subpart D in order for Wisconsin to seek approval from EPA for a partial state CCR permit program for CCR surface impoundments.” However, DNR has elected not to seek approval of rules regulating groundwater monitoring, corrective action, post-closure care, and recordkeeping for closed CCR surface impoundments at this time. WUA/DPC expressed disappointment in this decision, but appreciate the DNR’s continued consideration of this issue and look forward to additional discussions. Regulation of closed CCR surface impoundments remains an important issue to WUA members and DPC, and would be consistent with efforts to allow CCR unit operators to apply a single set of consolidated rules and interact with one regulatory agency.

**Response:** The DNR will continue to consider and discuss the regulation of closed surface impoundments in Wisconsin, but not in this rule. When the DNR began this rulemaking process, a number of the federal CCR surface impoundment regulations were undergoing review or modification. EPA is currently in the rule making process for further rule revisions. The DNR made a decision early on, as presented to stakeholders in December 2020, to focus its efforts on CCR landfills, which DNR already regulates under its solid waste rules. The inclusion of CCR surface impoundments would have added another level of complexity to DNR's ongoing discussions with EPA regarding Wisconsin's rule drafting and use of existing rules. DNR does not currently regulate CCR surface impoundments under solid waste rules, but many are regulated under a Wisconsin Pollutant Discharge Elimination System (WPDES) permit. Furthermore, based on information received from utility operators, DNR expects all surface impoundments to close over the next few years and only a small number to close with CCR in place (approximately two facilities). While DNR will continue to evaluate and discuss the regulation of CCR surface impoundments in Wisconsin, they will continue to be regulated under WPDES permits and federal CCR rules. EPA's review of Wisconsin’s proposed rule for CCR landfills would also inform further discussions regarding the inclusion of CCR surface impoundments.

**Comment:** WUA and DPC commented that the proposed requirement at s. NR 506.20(1)(a)2. to conduct a visual inspection to assess the effectiveness of fugitive dust control measures is not currently a federal CCR Rule requirement, is not a state requirement, and is redundant with s. NR 506.07(1)(n). WUA/DPC requested deletion of this requirement. If this is kept, WUA/DPC requested clarification of the required frequency of “at least weekly” which they interpret to be different from the inspection that is required by s. NR 506.20(1)(a)1. “at intervals not exceeding 7 days.”

**Response:** The federal rule requires the CCR fugitive dust control plan include a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan. The frequency of periodic and the specific procedures are not specified in the federal rule. DNR reviewed dust control plans posted on the publicly accessible internet sites and found that inspections are the predominant method selected for evaluating dust conditions. DNR found that the

frequency varied widely, ranging from weekly to annual. Because "periodic" is difficult to define and regulate, DNR established a minimum frequency. Dust conditions can change frequently based on weather and other factors. A minimum frequency of weekly ensures that dust is being evaluated on a regular basis. The frequency for inspections for structural stability is set by the federal CCR rule "at intervals not exceeding 7 days." DNR has modified the proposed rule to require dust control inspections at this same frequency as the structural stability inspections so the language is consistent.

**Comment:** WUA and DPC concur with the proposed rule at s. NR 508.06(2)(c) to establish a Design Management Zone of zero feet for CCR units, which is more stringent than current state rules, but is appropriate because it matches the current federal requirement. WUA/DPC agreed with the proposal to distinguish between "Subtitle D" wells and other monitoring wells that may be used to supplement the monitoring network. This is an approach used by Wisconsin for municipal solid waste landfills for decades, with EPA approval, that yields helpful information about groundwater quality and promotes productive conversations about groundwater conditions.

**Response:** Comment is in support of proposed rule. No action required. Note that although the proposed rule uses the term "CCR wells" rather than "Subtitle D well" to differentiate them from "Subtitle D" wells for municipal solid waste landfills, the regulatory approach is similar.

**Comment:** WUA and DPC commented that the proposed rule s. NR 508.06(2)(g)1. requires the owner / operator of a CCR landfill to "develop a site investigation workplan and a site investigation report" within 60 days of confirming an exceedance of a PAL, ACL, or ES, unless the owner / operator demonstrates that an alternative source is the cause of the exceedance. They stated it is not realistic to complete the workplan, the investigation, and the investigation report within the same 60-day timeframe. Further, the current CCR Rule allows for an owner / operator to demonstrate that an alternative source is the cause of the exceedance before the requirement to develop an assessment of corrective measures goes into effect. WUA/DPC suggested that sections be revised to be consistent with NR 716 and 40 CFR 257.96. Specific suggestions were provided with the comment.

**Response:** The DNR has reviewed the process and timeframes in the proposed rule for response when a groundwater standard is attained or exceeded and made changes in response to these comments. The revisions to the proposed rule are consistent with timeframes in NR 716 and 722, Wis. Adm. Code, for site investigations of possible contamination and selecting remedial actions. The changes clarified submission and review timeframes, which include submitting a site investigation workplan within 60 days, a 30-day DNR review, and implementation of the site investigation within 90 days of approval of the workplan. Language from chs. NR 716 and 722 was also added by the DNR to clarify the submittal timeframes and DNR review process for both the site investigation report and the remedial action options reports. To match up with the federal CCR rule timelines, the DNR also included language recommended by WUA that a remedial action options report be submitted to the DNR within 90 days of a confirmed release from the CCR landfill with the option of submitting a revised remedial action options report within 60 days of submission of the site investigation report. The DNR maintained the requirement to submit a report that demonstrates that a source, other than the CCR landfill, caused the contamination within 60 days to be consistent with the existing timeframe for an alternate submittal of a site investigation work plan. The DNR added language stating the DNR shall review the report within 30 days.

**Comment:** WUA and DPC commented that the proposed rule s. NR 514.04(7) includes requirements for a public meeting "at least 30 days prior to the submittal of a plan of operation modification that may substantially affect the plan of operation, such as affecting the closure plan, groundwater monitoring plan, liner system, or leachate system ...". WUA/DPC support public involvement in changes to the plan of operation but this requirement is vague as currently drafted. To avoid unnecessary hearings on routine

changes, WUA/DPC request two revisions to this requirement: mirroring the public participation procedures in ch. NR 203, Wis. Adm. Code and that this requirement only apply to substantial changes in the closure plan, liner system, or leachate system, and changes that reduce the stringency of groundwater monitoring requirements.

**Response:**

In addition to already required public comment periods and public meetings for the state permitting of sites during feasibility of new/proposed landfills, the rule proposes discretionary pre-plan of operation submittal public meetings. The landfill owner would need to notify the department at least 30 days prior to the submittal of a plan of operation and post on its publicly accessible internet site. The department would also post online and hold a public meeting if within 30 days after posting the draft plan of operation on the department's internet site any county, city, village or town, the applicant or any 6 or more persons file a written request for a public meeting with the department. This is similar to public meeting request guidelines in existing statutes.

Similar with pre-plan of operation modification submittals, a landfill owner would need to notify the department at least 30 days prior to the submittal of a plan of operation modification affecting the closure plan, liner system, leachate system, or changes that reduce the stringency of groundwater monitoring requirements to the department and post the draft plan of operation modification on its publicly accessible internet site. The department would also post online and hold a public meeting if within 30 days after posting the draft plan of operation on the department's internet site any county, city, village or town, the applicant or any 6 or more persons file a written request for a public meeting with the department.

While this language does not match ch. NR 203, Wis. Adm. Code, the rule language changes address both of the suggestions made by WUA/DPC.

**Comment:** CEHO provided general comments regarding the toxic nature of CCR and the need for proper safeguards to protect the environment. CEHO commented that Wisconsin needs to address the decades-long legacy of coal-fired power generation and that DNR adopt a careful and cautious state-administered program that regulates CCR materials where they are found, including not only the substantive structures of the program but also procedural components, such as transparency of application and approval processes, and robustness of public participation rights.

**Response:** CEHO provided more specific comments related to this general comment and the responses are provided below.

**Comment:** CEHO commented that DNR should preserve improvements its draft rule contains over the federal CCR rule, and add additional improvements. CEHOs have noted and appreciate the DNR's improvements on the federal CCR Rule. However, CEHO commented that the proposed rule does not resolve certain closure requirements for existing landfills. CEHO explained, the closure of coal ash disposal units in place (rather than by excavation and removal), often described as "capping in place," is not protective of the environment if the coal ash in question is in contact with groundwater, because such a closure does nothing to prevent the lateral infiltration of groundwater.

**Response:** All of the CCR landfills that would be covered under the proposed rule are engineered and approved landfills with liners and leachate collection systems so that waste is not in contact with groundwater. In addition under the proposed rule, any new CCR landfill would be required to maintain the 5-foot separation from the uppermost aquifer. DNR believes its existing rules and



proposed rule are protective of the environment and incorporate the necessary federal requirements to be at least as protective as the federal rule. Any additional requirements beyond what is necessary to comply with the federal rule and which are not already in existing rules would be considered outside of the scope of this rulemaking.

**Comment:** CEHO commented that the DNR should further tighten the review schedule contained in ss. NR 500.07 and 508.06, Wis. Adm. Code. CEHO appreciates the DNR decision to impose a clear step-by-step process owners and operators of CCR Landfills must follow to remediate any contamination that is discovered through monitoring; and to impose reasonable time restrictions throughout most of the process. However, CEHO commented that the deadlines listed leave open the possibility for long term delay of a site remediation process, in a few key areas. CEHO commented that the proposed rule does not make explicit that the 65-business-day deadline on DNR for action on "plan approvals or exemptions" applies to a site operator's presentation and proposed selection of remedial action options under s. NR 508.06(3) and (4). CEHO commented that the proposed rule also references a requirement under s. NR 508.06(2)(f) that a site owner or operator determine the nature and extent of contamination that shows up in monitoring, but provides no timeline for when that would be prepared. CEHO commented that the existing set of deadlines leaves a giant hole in the schedule in the event that the DNR "deems incomplete" any submission by a site owner or operator under the Draft Rule; CEHOs are not aware of any deadline imposed either on the DNR or on the site owner or operator to complete any given plan or selection so as to ensure that progress continues in a reasonably timely manner toward site remediation. CEHO commented that the DNR should address the potential loopholes in the otherwise-timely process, to eliminate the possibility of unreasonable delay where CCR Landfills are found to be contaminating nearby environments.

**Response:** The DNR has reviewed the process and timeframes in the proposed rule for response when a groundwater standard is attained or exceeded and made changes in response to these comments. The revisions to the proposed rule are consistent with the DNR's existing remedial action process under chs. NR 716 and 722 (described in the response to WUA comments on page 4), and federal requirements such as submittal of a remedial action options report within 90 days of a proven release from the CCR landfill. The DNR has added the DNR's review timeframe where appropriate, such as the 30-day review timeframe for the site investigation work plan.

**Comment:** CEHO commented that DNR should require immediate progress toward corrective action at coal ash disposal units that are known to be contaminating groundwater. Although CEHOs appreciate the controlled timeline that has been established for rapid remediation of detected contamination, this process need not wait for monitoring to commence at all sites. Extensive testing at numerous sites has already been conducted under the CCR rule as part of a series of stages that include baseline monitoring, detection monitoring, and in some cases assessment monitoring. In such areas, the DNR should immediately start those sites on the remediation pathway described in s. NR 507.15(3)(m). DNR should add a section enabling those sites to move more expeditiously toward corrective actions.

**Response:** Currently, and even without this rulemaking, CCR landfills in Wisconsin are required to comply with ch. NR 508, Wis. Adm. Code, which establishes procedures for responding when a groundwater standard is attained or exceeded. All active CCR landfills have groundwater monitoring networks that have been monitoring groundwater quality at these sites for decades prior to promulgation of the federal CCR rule. DNR reviews data collected from these monitoring networks at CCR landfills and regularly inspects CCR landfills for compliance with Wisconsin's existing rules.



**Comment:** CEHO commented that DNR should regulate all coal ash landfills and other CCR deposit locations outside of ash ponds. CEHOs respect that DNR apparently does not intend to regulate non-landfills as part of this rulemaking process. However, non-landfill ash impoundments represent a significant portion of the CCR storage facilities currently operating or closed in the state of Wisconsin.

**Response:** DNR believes its existing regulations already cover the regulation of all coal ash landfills and other CCR deposit locations. Solid waste disposal facilities are regulated under ch. 289, Wis. Stats., and chs. NR 500 to 538, Wis. Adm. Code. Chapters NR 700 to 758, Wis. Adm. Code, further regulate the investigation and remediation of environmental contamination. Any proposed regulation not related to CCR landfills or surface impoundments would be outside of the scope of this rule making effort.

**Comment:** CEHO commented that the DNR should clearly demonstrate holistic anti-erosion protections in its regulation of CCR landfills. DNR should either a) clarify that the "final cover" includes not just the containment equipment above the CCR material, but also addresses the containment equipment below and around the CCR material; b) add an explicit requirement that the long-term stability of the entire CCR containment system (including the existing landfills) be ensured in the written closure and long-term care plans; or c) explicitly incorporate by reference existing regulations that the DNR believes are sufficient to ensure the long-term stability of CCR landfills in their entirety.

**Response:** The federal CCR rule requirements for closure and post closure care have been addressed in the proposed rule. However, Wisconsin's existing rules also have more specific requirements for final cover design, construction, slope stability, and storm water management. For example, Wisconsin limits final cover and waste slopes to no more than 4:1 unless otherwise approved, which has been effective at preventing subsidence and erosion after closure. For added clarity, changes have been made in the final version of the proposed rule. Closure performance standards have been added to s. NR 506.083, which includes slope stability. The performance standards were previously only referenced under the closure plan requirements in ch. NR 514.

**Comment:** CEHO commented that the DNR must include a citizen suit provision to ensure avenues are available for enforcement of its permits: CEHO commented that DNR should modify the existing enforcement provision located at s. NR 500.11, Wis. Adm. Code, to add avenues for public citizens to assist with enforcement of the final version of the Draft Rule.

**Response:** Based on discussions with EPA, no further modifications are required with respect to the citizen suit provision. Federal provisions for citizen suits would still be applicable, even if Wisconsin receives approval from EPA for a state permit program. Additionally, under existing state law, a person wishing to contest a DNR action would be able to establish the right to do so under s. 227.42, Wis. Stats.

**Comment:** An individual's comment was written in favor of the proposed rule. The comment stated reasons for support including:

- The draft rule would allow Wisconsin to get the CCR state permit for CCR landfills to be guided by one set of rules and provide more direct oversight by DNR.
- Along with more clarification on rules, CCR facilities will be able to eliminate the need for separate groundwater monitoring systems to fulfill different state and federal requirements and have a clear plan on how to manage their impoundments and landfills.

- This new set of rules and permits will be saving money for CCR owners and operators and be the most effective way to protect our society's health and environmental well-being by holding them to the highest standard.

The comment also stated that a description for contaminants and groundwater testing such as one on the Earthjustice website should be required.

**Response:** Comment is in support of proposed rule. No action required. Section NR 507.15(3)(m), Wis. Adm. Code, includes a list of minimum information that is required to be included in the annual groundwater monitoring and corrective action report. This includes a list of any groundwater quality exceedances at a landfill during the monitoring period.

**Comment:** One hundred and fifty-nine individuals provided a general comment on the toxic nature of coal ash and the importance of storing it properly to protect health and the environment, and commented more specifically on the following:

- DNR should also regulate CCR surface impoundments not just landfills: having them under different regimes makes no sense, and adds regulatory confusion especially for the public that may want to weigh in on the proper assessment, treatment, and closure of all remaining surface impoundments.
- If exceedances are detected, deadlines are needed for every step of the process. Also, deadlines should also be imposed on the WI DNR. These deadlines are needed to ensure that all parties are held accountable to the public and that any contamination is addressed and resolved as quickly as possible. Specifically: the draft rule states that any exceedance triggers a nature and extent determination, but does not provide any time deadline for when it must be completed; it requires the owner or operator of a site where exceedances are detected to submit a site investigation work plan and investigation report to DNR within 60 days, and to respond to DNR approval of that report by submitting site cleanup options again within 60 days - but it doesn't impose a deadline on DNR to respond to either of these submissions within any set period of time. For the process to move quickly to resolution, DNR must hold itself to the same timely standards it imposes on landfill owners and operators.
- The draft rule does not make fully clear that closure and long-term care plans must ensure that any coal ash deposits must be protected from the type of catastrophic erosion that has caused major contamination in Wisconsin before. The rule only references erosion control when it talks about "final covers" for landfills, which are not fully defined. In the final rule, the DNR should be more explicit that erosion protections must protect the entirety of any remaining coal ash impoundments, and that this must be a top priority for any long-term care or closure plan.

**Response:** Similar comments were received from WUA/DPC or CEHO related to regulation of surface impoundments and review timeframes. Responses were provided above.

The DNR understands catastrophic events relating to erosion have occurred at disposal sites that were not considered approved landfills meeting current design and construction standards.

In Wisconsin, the requirements for final covers are addressed under s. NR 504.07, Wis. Adm. Code, of existing state rules and under s. NR 504.12(4) of the proposed rule. In addition, closure performance standards have been added to s. NR 506.083 in the final version of the proposed rule. The performance standards require that the CCR landfills be closed in a manner that provides slope stability to prevent the sloughing or movement of the final cover system during the closure and long term care period. Long term care activities are specified under ss. NR 514.06(11) and 514.07(1)(d).

Under the long term care requirements, an owner or operator of a CCR landfill would be responsible for inspecting and maintaining the landfill including repair of any erosion damage. Because the final cover is placed over the waste and is several feet thick, if erosion were to occur it would first need to impact the final cover. However, any erosion affecting both the final cover and waste would require maintenance, repair and cleanup if needed.

**Comment:** An individual provided oral comments at the public hearing in support of consolidating rules under one regulatory authority and noted that Wisconsin should work towards making coal use safer and increase use of renewable energy sources.

**Response:** Comment in support of proposed rule. No action required.

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STATE OF WISCONSIN  
DEPARTMENT OF ADMINISTRATION  
DOA-2049 (R09/2016)

DIVISION OF EXECUTIVE BUDGET AND FINANCE  
101 EAST WILSON STREET, 10TH FLOOR  
P.O. BOX 7864  
MADISON, WI 53707-7864  
FAX: (608) 267-0372

## ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

<p>1. Type of Estimate and Analysis  <input checked="" type="checkbox"/> Original   <input type="checkbox"/> Updated   <input type="checkbox"/> Corrected</p>	<p>2. Date 8/5/21</p>
<p>3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable)  NR 500-520, Environmental Protection – Solid Waste Management  (CR 21-076)</p>	
<p>4. Subject  Revisions to chs. NR 500 to 520 related to coal combustion residual landfills; WA-17-18</p>	
<p>5. Fund Sources Affected  <input type="checkbox"/> GPR   <input type="checkbox"/> FED   <input type="checkbox"/> PRO   <input type="checkbox"/> PRS   <input type="checkbox"/> SEG   <input type="checkbox"/> SEG-S</p>	<p>6. Chapter 20, Stats. Appropriations Affected  s. 20.370(4)(dg)</p>
<p>7. Fiscal Effect of Implementing the Rule  <input type="checkbox"/> No Fiscal Effect   <input checked="" type="checkbox"/> Increase Existing Revenues   <input type="checkbox"/> Increase Costs   <input type="checkbox"/> Decrease Costs  <input type="checkbox"/> Indeterminate   <input type="checkbox"/> Decrease Existing Revenues   <input checked="" type="checkbox"/> Could Absorb Within Agency's Budget</p>	
<p>8. The Rule Will Impact the Following (Check All That Apply)  <input type="checkbox"/> State's Economy   <input checked="" type="checkbox"/> Specific Businesses/Sectors  <input type="checkbox"/> Local Government Units   <input type="checkbox"/> Public Utility Rate Payers  <input type="checkbox"/> Small Businesses <b>(if checked, complete Attachment A)</b></p>	
<p>9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1).  One-time costs for plan of operation modification development and review: \$783,000. [Approximately \$600,000 paid among four electric utility companies to private consultants to prepare plan of operation modifications, and approximately \$183,000 paid by utilities to the department for plan review fees.]</p> <p>New annual costs for annual report submittals: \$162,000. [Approximately \$150,000 paid annually among four electric utility companies to private consultants to conduct inspections and prepare reports, and approximately \$12,000 paid annually to the department for annual report review fees.]</p> <p>Ongoing costs for groundwater monitoring: \$100,000 per landfill. [Estimated amount paid to private consultants for annual groundwater monitoring in accordance with current federal rule. The cost is expected to be the same under the proposed rule.]</p>	
<p>10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be \$10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)?  <input type="checkbox"/> Yes   <input checked="" type="checkbox"/> No</p>	
<p>11. Policy Problem Addressed by the Rule  The proposed rule will amend portions of chs. NR 500 to 520, Wis. Adm. Code, to incorporate new federal rules for the regulation of coal combustion residual (CCR) landfills. CCR, often called coal ash, is created when coal is burned by power plants to produce electricity. Specifically, the proposed rule would incorporate federal requirements for CCR landfills, such as: location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action criteria, closure and post-closure care and recordkeeping, notification, and posting of information. The proposed rule would allow Wisconsin to seek approval of a state CCR permit program from the U.S. Environmental Protection Agency (EPA). This would allow CCR landfills to comply with a single consolidated rule rather than both state and federal rules. Where federal rules and Wisconsin rules differ, Wisconsin rules are required by EPA to be at least as protective as the federal rules.</p>	
<p>12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals</p>	

## ADMINISTRATIVE RULES

### Fiscal Estimate & Economic Impact Analysis

that may be Affected by the Proposed Rule that were Contacted for Comments.

In addition to general notice of the comment period in the Administrative Register and through web postings, the department directly contacted the following entities when requesting economic impact comments:

- Wisconsin Towns Association and League of Wisconsin Municipalities
- Wisconsin Utilities Association
- Electric utility companies currently operating CCR landfills
- Milwaukee Riverkeeper
- Sierra Club – Wisconsin Chapter
- Clean Wisconsin

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

No governmental units submitted comments on the EIA.

14. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

Impact on businesses/business sectors: Businesses directly affected by this rule are four electric utility companies that own and operate six CCR landfills. However, because the CCR landfill facilities implemented federally required rules prior to this rulemaking, the impact would be minimal to moderate. Implementation and compliance costs for utility companies would likely include:

- One-time fees to implement plan of operation modifications that incorporate the requirements of new CCR rules:  
6 landfills \* \$30,500 plan review fees = \$183,000
- Consultant costs to prepare the plan of operation modifications for initial permitting:  
6 landfills \* \$100,000 consultant fees = \$600,000
- Annual fees for Department review of the annual report:  
6 landfills \* \$2,000 = \$12,000 annually
- Consultant costs to conduct an annual inspection and prepare an annual report submittal (professional engineer inspection and report, dust control report, groundwater monitoring and corrective action report):  
6 landfills \* \$25,000 consultant fees = \$150,000/year
- Indeterminant cost savings because of reduction in duplicate state and federal regulations (consolidated inspections, reporting, and plan approvals process).

Existing annual licensing fees and landfill tipping fees (currently \$0.50/ton) for CCR landfills would not be affected by this rule. CCR landfills are currently exempt from or have reduced tipping fees for disposal of ash. Overall total fees per ton of ash are \$0.497/ton, compared to total tipping fees for municipal solid waste of \$12.997/ton.

The Wisconsin Utilities Association indicated during the EIA public comment period that CCR landfills incur additional compliance costs of approximately \$100,000 annually, in particular for groundwater monitoring. The compliance costs are ongoing costs for impacted businesses and are not triggered by this rule because the monitoring is already conducted to comply with federal rules. The Association also commented that the rule will result in lower compliance, inspection, and reporting costs that are expected to be approximately equal to the ongoing state compliance costs. They estimated that the net economic impact of the proposed rule implementation and compliance costs will be neutral.

Impact on public utility rate payers: Because the CCR landfill facilities have implemented federally required rules prior to this rulemaking, which incorporates federal requirements into state laws, the department does not expect any implementation and compliance costs of this rule to impact public utility rate payers. The department is unable to



## ADMINISTRATIVE RULES

### Fiscal Estimate & Economic Impact Analysis

determine if costs were previously passed on to utility rate payers.

Impact on local governmental units: The department does not expect any implementation and compliance costs of this rule to impact local governmental units.

Fiscal Impact and Impact on the State's economy: The rule would require additional staff to implement the proposed rule, at least initially. The department is preparing a request for a temporary hydrogeologist project position for approximately one year to review plan submittals resulting from this rule. The hydrogeologist would review CCR landfill plan of operation modifications associated with the new CCR state program, along with existing engineer staff and plan review experts. This one-time additional project position cost (spread over approximately 12 months) would be approximately \$100,000 for salary and fringe benefits. However, the department does not expect any fiscal impact to the state because all costs are expected to be covered by plan review fees paid by impacted utility companies. The department does not expect any implementation and compliance costs of this rule to impact the state's economy adversely.

#### 15. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

Benefits: As the state's CCR landfill operators have indicated to the department, implementing the rule would allow CCR landfill operators to apply one set of consolidated rules and interact with one regulatory agency. Currently, where federal and state rules differ, operators must comply with both sets of rules and work with both state and federal regulators for compliance with codes. Under this rule, the department will inspect all aspects of the landfills relative to a single code that encompasses both state and federal requirements to ensure proper management to protect human health and the environment.

Alternatives: The department evaluated an option to not pursue including federal requirements in Wisconsin rules because seeking approval of a state CCR permit program is optional. However, this option would continue to mean that CCR landfills in Wisconsin would be regulated under both federal rules and current Wisconsin rules. Where rules differ, CCR landfills must meet both federal and state laws. This results in duplicate regulation, inefficient oversight of these sites and additional compliance costs for the facility operators.

#### 16. Long Range Implications of Implementing the Rule

Similar to the benefits noted above, the department will continue to regulate CCR landfills and, under this rule, incorporate all requirements that meet nationwide CCR landfill management standards for protection of human health and the environment. CCR materials contain contaminants like mercury, cadmium and arsenic. Without proper management, these contaminants can pollute waterways, ground water, drinking water, and the air. By creating Wisconsin rules that are at least as protective as the federal rule, the department will continue to address risks from improper disposal of CCR.

#### 17. Compare With Approaches Being Used by Federal Government

The proposed rule revisions will be consistent with federal CCR rules (40 CFR 257, Subpart D) in order for Wisconsin to seek approval of a state CCR permit program. Currently, some portions of chs. NR 500 to 520, Wis. Adm. Code, are already consistent with federal rules or may be considered at least as protective as federal rule for CCR landfills.

#### 18. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

States have the option to seek approval from the EPA of a state CCR permit program that contains rules at least as protective as the federal rule. If a state chooses not to create its own permit program or to create a partial program, regulatory authority will continue under the EPA for all or a portion of CCR disposal activity. Note: Wisconsin is

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DOA-2049 (R09/2016)

DIVISION OF EXECUTIVE BUDGET AND FINANCE  
101 EAST WILSON STREET, 10TH FLOOR  
P.O. BOX 7864  
MADISON, WI 53707-7864  
FAX: (608) 267-0372

## ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

seeking a partial permit program, for CCR landfills only (i.e., not for CCR surface impoundments) because utilities in Wisconsin have already discontinued using impoundments for disposal of CCR or have plans to discontinue utilizing their impoundments in the next few years, and no new impoundments are planned. Wisconsin does not currently regulate CCR surface impoundments under its solid waste management rules.

- Illinois will be seeking approval for a state permit program for CCR surface impoundments only, not landfills.
- Iowa is undecided if or when it will seek approval for a state permit program.
- Michigan is seeking approval for both surface impoundments and landfills and submitted an application to EPA in April 2020 for permit program approval.
- Minnesota will not be seeking permit program approval.
- Other states in EPA Region 5 are doing the following: Ohio is in the preliminary stages of rulemaking and will be seeking approval for both surface impoundments and landfills. Indiana recently indicated to EPA that it would be seeking approval.

19. Contact Name Valerie Joosten	20. Contact Phone Number (920) 366-4158
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This document can be made available in alternate formats to individuals with disabilities upon request.

November 23, 2021

The statement of scope for this rule, SS 109-19 was approved by the Governor on October 31, 2019, published in Register No. 767A1 on November 4, 2019, and approved by the Natural Resources Board on February 26, 2020. This rule was approved by the Governor on insert date.

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD  
REPEALING, RENUMBERING, RENUMBERING AND AMENDING, AMENDING, REPEALING  
AND RECREATING AND CREATING RULES**

The Wisconsin Natural Resources Board adopts an order to **repeal** NR 514.09 (1) (b) 7.; to **renumber** NR 506.17; to **renumber and amend** NR 500.02 (1), 504.02 (1), 506.02 (1), 507.02 (1), 508.02 (1), 512.02 (1), 512.13 (1), 514.02 (1), 516.02 (1) and 520.02 (1); to **amend** NR 500.03(96), 500.05 (intro.), 500.08 (4), 504.10 (intro.), 506.08 (intro.), 507.18 (1) (a) and (3) (a), 507.19 (2) and (3), 507.27 (1) and (2), 507.28 (2), 508.01, and 520 Table 5; to **repeal and recreate** NR 507 Appendix I Table 3 and Table 4; and to **create** NR 500.03 (2m), (19m), (26b), (26f), (26k), (26p), (26s), (26w), (26y), (60m), (76m), (106m), (121m), (152m), (189m), (197) (Note), (246m), (254g) and (254r), 500.035, 504.10 (3) (g), 504.12, 506.083, 506.084, 506.17 (1) (title), (2), (3), and (4), 506.20, 507.15 (3), 507.18 (5), 507 Appendix I Table 1A and Table 2 Footnote 1, 508.06, 512.13 (1) (a), (b), and (c), 514.04 (7) and (8), 514.045 and 514.07 (10) relating to coal combustion residual landfills.

**WA-17-18**

**Analysis Prepared by the Department of Natural Resources**

**1. Statutes Interpreted:** Section 289.05(1), Wis. Stats., requires the department to promulgate rules establishing minimum standards for solid waste facilities. Sections 289.06(1) and 227.11(2)(a), Wis. Stats., confer rule making authority to the department to promulgate rules implementing ch. 289, Wis. Stats.

**2. Statutory Authority:** Sections 289.05(1), 289.06(1) and 227.11(2)(a), Wis. Stats.

**3. Explanation of Agency Authority:** Coal combustion residual (CCR) landfills are regulated in Wisconsin under ch. 289, Wis. Stats., chs. NR 500 to 520, Wis. Adm. Code, and federal rules. The proposed rule would incorporate federal requirements from 40 CFR 257, Subpart D in order for Wisconsin to seek approval from the U.S. Environmental Protection Agency (EPA) for a state CCR permit program for CCR landfills.

CCR is a “solid waste” within the meaning of s. 289.01(33), Wis. Stats. Section 289.05(1), Wis. Stats., requires the department to promulgate rules establishing minimum standards for solid waste facilities. Sections 289.06(1) and 227.11(2)(a), Wis. Stats., also confer rule making authority to the department to promulgate rules implementing ch. 289, Wis. Stats. These provisions supply the department with explicit authority to regulate disposal facilities handling CCR.

On April 17, 2015, the EPA published a final rule to regulate the disposal of CCR as solid waste under subtitle D of the Resource Conservation and Recovery Act (RCRA), 40 CFR Parts 257 and 261. The final rule was effective on October 14, 2015. The 2016 Water Infrastructure Improvements for the Nation (WIIN) Act, Section 2301 allowed states to develop and submit a CCR permit program to EPA for approval. On July 17, 2018, EPA signed additional rule amendments (Phase One, Part One) with additional action pending to address other proposed rule amendments. These changes have allowed the State of Wisconsin to propose the creation of a CCR permit program.

**4. Related Statutes or Rules:** Portions of chs. NR 500 to 520, Wis. Adm. Code.

November 23, 2021

**5. Plain Language Analysis:** CCR, often called coal ash, is created when coal is burned by power plants to produce electricity. CCR may be disposed of in landfills or treated, stored or disposed of in impoundments designed to hold an accumulation of CCR and liquids. All CCR surface impoundments in Wisconsin will be closed within the next several years and no new impoundments are planned. The department does not currently regulate CCR surface impoundments under solid waste rules so the department is not proposing to incorporate federal requirements into its proposed CCR permitting program at this time. EPA will continue to regulate surface impoundments. CCR landfills in Wisconsin are currently regulated under both federal rules and existing Wisconsin rules. Where rules differ, CCR landfills must meet both federal and state laws. These proposed rules would allow Wisconsin to seek approval for a state CCR permit program from the EPA. EPA approval of a Wisconsin CCR permit program would allow CCR landfill operators to apply a single set of consolidated rules and interact with one regulatory agency.

The federal requirements for CCR landfills include location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action, closure and post-closure care and recordkeeping, notification, and posting of information. Wisconsin proposes using both existing rules to meet these requirements and incorporating the new federal requirements for CCR landfills into Wisconsin rules where required. The proposed rule would also include requirements for initial permitting, public participation in plan review, and review fees.

Specific elements of the proposed rule include:

- A. NR 500 General Solid Waste Management Requirements: The rule creates new definitions in ch. NR 500, Wis. Adm. Code, specific to coal combustion residual landfills to correspond with federal definitions. Other revisions to ch. NR 500, Wis. Adm. Code, clarify that exemptions may not be granted if they cause noncompliance with the minimum federal requirements and that plan modifications are also required to follow the general submittal requirements.
- B. NR 504 Landfill Location, Performance, Design and Construction Criteria: The rule creates a new section, s. NR 504.12, Wis. Adm. Code, for minimum design and construction criteria for CCR landfills related to run-on and run-off controls, liner design, and final cover systems consistent with federal requirements. CCR landfills will need to be designed, constructed and operated in accordance with existing rule requirements and the additional criteria for CCR landfills under the proposed rule. A federal requirement that substantially differs from current rule is that new CCR landfills and lateral expansions of a CCR landfill are required to be designed and constructed with a subbase grade that is located no less than five feet above the upper limit of the uppermost aquifer or provide a demonstration that there will not be a hydraulic connection between any portion of the base of the CCR landfill and the uppermost aquifer. The federal definition of uppermost aquifer for a CCR landfills has been incorporated under ch. NR 500, Wis. Adm. Code, of the proposed rule. Any alternate liner proposals for CCR landfills must also demonstrate that the design meets the minimum federal requirements.
- C. NR 506 Landfill Operational Criteria: The rule creates closure, long-term care, record keeping, inspection and reporting requirements for CCR landfills consistent with federal requirements. The closure requirements include procedures for notification, timeframes for initiation and completion of closure, deed notation, closure by removal of CCR and alternative closure requirements. Consistent with federal requirements, CCR landfills will be required to maintain a written operating record, but for some documents the rule requires the documents be maintained during the operating life and for at least 40 years after closure. Specific records will be required to be posted on a publicly accessible internet site maintained by the landfill owner or operator.

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Inspection requirements include periodic inspections by the owner or operator for dust control and stability and annual inspections by a licensed professional engineer related to the condition of the CCR landfill. An annual report will be required by January 31 of each year addressing fugitive dust control, the annual inspection, groundwater monitoring and corrective action, and leachate pipe cleaning and inspection.

- D. NR 507 Environmental Monitoring: The rule creates a new subsection establishing a groundwater monitoring well network for CCR landfills that is consistent with federal requirements. These monitoring well networks, which are already installed at CCR landfills, will be designated “CCR wells” and are in addition to the groundwater monitoring network already required under existing state regulations. CCR wells will monitor groundwater quality in the uppermost aquifer beneath the CCR landfill while the other groundwater monitoring wells already required under existing ch. NR 507, Wis. Adm. Code, will monitor groundwater quality within all water-bearing soil layers, even if they do not qualify as being within the uppermost aquifer. The CCR wells and existing wells will be sampled for the parameters and frequencies as indicated in the revised ch. NR 507, Wis. Adm. Code, Appendix tables. Both sets of monitoring wells will be subject to the groundwater quality standards under ch. NR 140, Wis. Adm. Code, including provisions for setting preventive action limits (PALs) for indicator parameters and alternate concentration limits (ACLs) for contaminant concentrations that are naturally elevated above the groundwater quality standards. The rule includes requirements for establishing a groundwater detection monitoring system, notification requirements, and recordkeeping. It also creates a design management zone (the distance from the waste boundary at which some monitoring systems must be placed) of 0 feet for CCR wells, which may not be expanded.
- E. NR 508 Responses when a Groundwater Standard is Attained or Exceeded: The rule creates a new subsection outlining remedial actions that are required when a groundwater standard is attained or exceeded at a CCR monitoring well at a CCR landfill. These procedures are similar to existing groundwater quality exceedance requirements for any landfill, but explicitly apply to CCR landfills in order to be equally protective as the federal CCR landfill regulations. Differences include the addition of an informational hearing to discuss the findings of the remedial action options report and the preparation of a remedial action options report immediately after confirmation of a potential release from the landfill rather than waiting until completion of the site investigation.

Once an exceedance has been detected, the owner or operator would be required to notify the DNR within 60 days from the end of the sampling period and respond by beginning an assessment of the cause and significance of the exceedance. The owner or operator would also have to begin “assessment monitoring,” which consists of sampling all the CCR wells for the ch. NR 507, Wis. Adm. Code, Appendix I, Table 3 parameters, within 90 days of the verified exceedance. If a groundwater quality exceedance is detected during the assessment monitoring, the owner or operator would have to define the degree and extent of the contaminant, install at least one additional monitoring well, notify the potentially affected neighbors and submit a site investigation workplan to the DNR within 60 days unless the owner or operator could demonstrate that the exceedance was caused by natural or off-site sources. The owner or operator would then initiate a site investigation within 90 days of submittal of the workplan and prepare a site investigation report to the DNR within 60 days after completing the site investigation.

Upon confirmation of a release from a CCR landfill or verification of a groundwater standard exceedance during assessment monitoring that was not caused by off-site or natural sources, the owner or operator would also have 90 days to prepare and submit an initial remedial action

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options report that will assess possible corrective actions. The DNR will review and respond to the remedial action options report and any addendums and hold an informational public meeting to discuss the results of the remedial action options report prior to selection of a remedial action. The owner or operator would select a remedy that, at a minimum, meets the standards listed in s. NR 508.06(4) and ch. NR 722, Wis. Adm. Code. The owner or operator must describe the selected remedy in the revision of the remedial action options report and include a section indicating how the selected remedy meets the remedial action standards. The DNR would review and approve an appropriate remedial action for implementation by the owner or operator.

Within 90 days after the DNR approves a remedy from the remedial action report, the owner or operator would have to initiate remedial activities. Assessment monitoring would continue with semiannual sampling until there are at least two consecutive sampling rounds without any exceedance of a groundwater standard.

- F. NR 512 Feasibility Report for Landfills: The rule includes additional requirements for feasibility reports for CCR landfills, consistent with federal requirements, when a new landfill is being proposed. The feasibility report would need to include a demonstration that addresses specific factors when determining whether an area is unstable. An “unstable area” is already defined in s. NR 500.03(246), Wis. Adm. Code, and can include poor foundation conditions, areas susceptible to mass movements, and karst terrains. The rule also includes additional limits on facilities or practices near floodplains.
- G. NR 514 Plan of Operation and Closure Plans for Landfills: The rule includes procedural requirements for initial permitting of CCR landfills. CCR landfills will be required to submit a plan of operation modification to include new plans or modifications required by the rule. The rule provides timeframes for review, notification of completeness and a public comment period. Existing landfills that fail to comply with the locational criteria for unstable areas will be required to cease placing CCR waste and close the landfill.

Also consistent with federal requirements, this chapter includes additional plan of operation requirements for CCR landfills, including a fugitive dust control plan, a run-on and run-off control plan, a closure plan and a long-term care plan. The rule language includes opportunities for public participation prior to and during the review process for various plans, including the plan modification for initial permitting. The rule removes a reference in s. NR 514.09(1)(b), Wis. Adm. Code, related to changes that are less stringent than a federally mandated requirement, because DNR approvals would need to comply with all federal requirements.

- H. NR 520 Solid Waste Management Fees and Financial Responsibility Requirements: The rule proposes new fees for CCR landfills for annual reports and the plan of operation modification for initial permitting. The fees cover the estimated cost for DNR staff to provide plan review and approval services. This rule does not change other applicable fees.

**6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations:** The proposed rule revisions will be consistent with federal CCR rules (40 CFR 257, Subpart D) in order for Wisconsin to seek approval of a state CCR permit program. Current portions of chs. NR 500 to 520, Wis. Adm. Code, are already consistent with federal rules or may be considered no less protective than the federal rule for CCR landfills. Final implementation of this rulemaking will include approval of the rule language and overall program by the EPA.

## **7. Summary of Comments Received on the Statement of Scope and How the Agency Took Those**



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**Comments into Account in Drafting the Proposed Rule:** The DNR held a preliminary public hearing on the statement of scope on January 7, 2020, at the Waukesha State Office Building, 141 NW Barstow, Waukesha, WI. No members of the public attended the hearing.

The public comment period on the scope statement ended on January 14, 2020. The DNR received two written comments. One indicated support for the proposed statement of scope and the other expressed concerns regarding Wisconsin's ability to perform better than the EPA in regulating these sites given the lack of funding and staff. Those concerns included the need to ensure environmental protections and financial assurance and providing opportunities for public input in the permitting and enforcement processes.

All comments were incorporated into rule development. Originally, the scope statement also considered creating a state permit program for managing CCR in surface impoundments, in addition to landfills. The DNR decided that surface impoundments should continue to be regulated by the EPA and did not include those provisions in this rulemaking. General information provided by industry representatives prior to scope statement development indicated that all surface impoundments will be closed within the next several years and no new surface impoundments are currently planned for Wisconsin.

#### **8. Comparison with Similar Rules in Adjacent States:**

States have the option to seek approval from the EPA of a state CCR permit program that contains rules at least as protective as the federal rule. If a state chooses not to create its own permit program or to create a partial program, regulatory authority will continue under the EPA for all or a portion of CCR disposal activity.

- Illinois will be seeking approval for a state permit program for CCR surface impoundments only, not landfills.
- Iowa is undecided if or when it will seek approval for a state permit program.
- Michigan is seeking approval for both surface impoundments and landfills and submitted an application to EPA in April 2020 for permit program approval.
- Minnesota will not be seeking permit program approval.
- Other states in EPA Region 5 are doing the following: Ohio is in the preliminary stages of rulemaking and will be seeking approval for both surface impoundments and landfills. Indiana recently indicated to EPA that it would be seeking approval for both surface impoundments and landfills.

#### **9. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen:**

The proposed rule would include federal requirements from 40 CFR 257, Subpart D in order for Wisconsin to seek approval from EPA for a state CCR permit program for CCR landfills. This regulatory approach was chosen so that CCR landfill operators may apply one set of rules and interact with one regulatory agency. CCR landfills were regulated under Wisconsin law prior to the creation of the federal CCR rule in 2015. In coordination with all stakeholders and under review by the EPA, these rules were developed to ensure Wisconsin rules applied to CCR landfills are as protective as the federal rules.

The DNR will continue to inspect CCR landfills and, under this rule, incorporate all requirements that meet nationwide landfill management standards for protection of human health and the environment. CCR materials contain contaminants like mercury, cadmium and arsenic. Without proper management, these contaminants can pollute waterways, groundwater, drinking water, and the air. By creating Wisconsin rules that are as protective as the federal rule, the DNR will continue to address risks from improper disposal of CCR.

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**10. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report:** The proposed rule will affect four electric utility companies that are CCR landfill owners and operators. There are approximately 18 existing and new CCR landfill units under federal regulation, which when combined represent six solid waste landfill facilities under Wisconsin regulation. None of the electric utility companies meet the definition of a small business under s. 227.114(1), Wis. Stats.

**11. Effect on Small Business (initial regulatory flexibility analysis):** The rule is not likely to have an impact on small businesses. CCR landfills are operated by electric utilities that do not meet the definition of a small business under s. 227.114(1), Wis. Stats. The proposed rule would modify Wisconsin regulations to incorporate requirements of the federal rule into Wisconsin's existing rules to allow Wisconsin to apply for a CCR state permit program. Most of the changes in the proposed rule have already been implemented by the federal government and facilities have already complied with the federal rule. Any additional requirements as a result of the proposed rule are procedural requirements for initial permitting or related to the consolidation of state and federal requirements. Any additional cost as a result of this proposed rule will be related to a facility's plan preparation for initial permitting and DNR review of plans or annual reports.

**12. Agency Contact Person:** Valerie Joosten, Department of Natural Resources, Northeast Region Headquarters, 2984 Shawano Ave., Green Bay, WI 54313; Valerie.Joosten@wisconsin.gov; (920) 366-4158

**13. Place where comments are to be submitted and deadline for submission:** A public comment period for the rule occurred from October 4 to November 4, 2021, with a public hearing held on October 28, 2021.

The consent of the Attorney General will be requested for the incorporation by reference of alternative design requirements. Under the proposed rule, requests for alternative designs for CCR landfills must include a demonstration that the alternative design meets the federal requirements located under 40 CFR part 257 Subpart D dated April 17, 2015.

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## RULE TEXT

**SECTION 1. NR 500.02 (1) is renumbered NR 500.02 (1) (a) and amended to read:**

**NR 500.02 Applicability. (1) (a)** Except as provided under par. (b) and except as otherwise provided, this chapter governs all solid waste facilities as defined ~~in~~under s. 289.01 (35), Stats., ~~except hazardous~~ including all CCR landfills and expansions.

(b) This chapter does not govern any of the following:

1. Hazardous waste facilities as defined in ~~under~~ s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallic.~~

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2. Metallic mining operations for nonferrous minerals as defined ~~in~~ under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallic.~~

3. Metallic mining operations for ferrous minerals as defined ~~in~~ under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~ under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 2. NR 500.03 (2m), (19m), (26b), (26f), (26k), (26p), (26s), (26w), (26y), (60m), (76m) are created to read:**

**NR 500.03 (2m)** “Active portion” means that part of a CCR landfill that has received or is receiving CCR or non-CCR waste and that has not completed closure in accordance with ch. NR 506.

**(19m)** “Beneficial use of CCR” means the utilization of a solid waste or an industrial by-product in a “productive manner,” which has the meaning given in s. NR 538.03 (10).

**(26b)** “CCR” means coal combustion residuals, including 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.

**(26f)** “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.

**(26k) (a)** “CCR landfill” means a landfill that receives CCR, including nonmetallic mining sites under s. 295.11 (6), Stats., that receive CCR, and any area of land or excavation that receives CCR, including 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 under s. NR 500.03 (19m).

**(b)** “CCR landfill” does not include a CCR surface impoundment or municipal solid waste landfill that receives CCR.

**(26p) (a)** “CCR pile” means any non-containerized accumulation of solid, nonflowing CCR that is placed on the land.

**(b)** “CCR pile” does not include CCR that is stored for beneficial use of CCR or beneficially used under ch. NR 538.

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**(26s)** “CCR surface impoundment” means a natural topographic depression, man-made excavation, or diked area that is designed to hold an accumulation of CCR and liquids, and the unit treats, stores or disposes of CCR.

**(26w)** (a) “CCR unit” means any CCR landfill, CCR surface impoundment, lateral expansion of a CCR landfill, or a combination of more than one of these units.

(b) “CCR unit” includes both new and existing units, unless otherwise specified.

**(26y)** “CCR well” means a designated well installed at a CCR landfill whose location and depth have been approved by the department specifically for monitoring purposes under Subtitle D.

**(60m)** “Destruction or adverse modification” means a direct or indirect alteration of critical habitat that appreciably diminishes the likelihood of the survival and recovery of threatened or endangered species using that habitat.

**(76m)** (a) “Existing CCR landfill” means a CCR landfill that receives CCR both before and after October 19, 2015.

(b) “Existing CCR landfill” includes a CCR landfill for which construction commenced prior to October 19, 2015, and which receives CCR on or after October 19, 2015, where all of the following occurred:

1. The landfill owner or operator obtained all federal, state, and local approvals or permits to begin physical construction.

2. The landfill had a continuous on-site, physical construction program that began prior to October 19, 2015.

**SECTION 3. NR 500.03 (96) is amended to read:**

**NR 500.03 (96)** “Groundwater” means any waters of the state, as defined in s. ~~280.01(2)~~ 281.01 (18), Stats., occurring in a saturated subsurface geological formation of rock or soil.

**SECTION 4. NR 500.03 (106m), (121m), (152m), (189m), (197) (Note), (246m), (254g), and (254r) are created to read:**

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**(106m)** “Hydraulic conductivity” means the rate at which water can move through a permeable medium and is also called the coefficient of permeability.

**(121m)** “Lateral expansion of a CCR landfill” means a horizontal expansion of the waste boundaries of an existing CCR landfill made after October 19, 2015.

**(152m)** (a) “New CCR landfill” means a CCR landfill or lateral expansion of a CCR landfill that first receives CCR after October 19, 2015.

(b) “New CCR landfill” includes a CCR landfill or lateral expansion of a CCR landfill that commences construction after October 19, 2015, where all of the following occurred:

1. The landfill owner or operator obtained all federal, state, and local approvals or permits to begin physical construction.
2. The landfill had a continuous on-site, physical construction program that began after October 19, 2015.

**(189m)** “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.

**(197) Note:** See EPA Publication SW-846, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, Chapter 9 (<https://www.epa.gov/hw-sw846>) dated September 1986 for a discussion and examples of representative samples.

**(246m)** “Uppermost aquifer” means the geologic formation nearest the natural ground surface of a CCR landfill capable of yielding usable quantities of groundwater to wells or springs, as well as lower aquifers that are hydraulically interconnected with the uppermost aquifer within a CCR landfill’s property boundary, as measured at a point nearest to the natural ground surface to which the aquifer rises during the wet season.

**(254g)** “Washout” means the carrying away of solid waste by waters of a regional flood.

**(254r)** “Waste boundary” means a vertical surface located at the hydraulically downgradient limit of a CCR unit and extends down into the uppermost aquifer.

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**SECTION 5. NR 500.035 is created to read:**

**NR 500.035 CCR landfill requirements.** (1) The CCR landfill requirements included in chs. NR 500 to 538 apply to an owner or operator of a new or existing CCR landfill, including any lateral expansion of a new or existing CCR landfill that disposes or otherwise engages in solid waste management of CCR generated from the combustion of coal at electric utilities and independent power producers. 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. Unless otherwise provided in chs. NR 500 to 538, these requirements also apply to any disposal unit that is not a CCR surface impoundment located off-site of the electric utility or independent power producer. An off-site disposal facility is in operation if it is accepting or managing CCR on or after October 19, 2015. The CCR landfill requirements in chs. NR 500 to 538 also apply to any CCR disposal practice that does not meet the definition of a beneficial use of CCR.

(2) The CCR landfill requirements included in chs. NR 500 to 538 do not apply to any of the following:

- (a) A CCR landfill that ceased receiving CCR prior to October 19, 2015.
- (b) An electric utility or independent power producer that has ceased producing electricity prior to October 19, 2015.
- (c) Any waste, including fly ash, bottom ash, boiler slag, and flue gas desulfurization materials, generated at a facility that is not part of an electric utility or independent power producer, such as a manufacturing facility, university, or hospital.
- (d) Fly ash, bottom ash, boiler slag, and flue gas desulfurization materials, generated primarily from the combustion of fuels and fossil fuels other than coal, for the purpose of generating electricity unless the fuel burned consists of more than 50 percent coal on a total heat input or mass input basis, whichever results in the greater mass feed rate of coal.
- (e) A practice that meets the definition of a beneficial use of CCR.
- (f) CCR placement at active or abandoned underground or surface coal mines.
- (g) A municipal solid waste landfill that receives CCR.

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(h) A CCR surface impoundment.

(3) Compliance with the CCR landfill requirements in chs. NR 500 to 538 does not affect the need for the owner or operator of a CCR landfill or lateral expansion of a CCR landfill to comply with all other applicable federal, state, tribal, or local laws or other requirements.

**SECTION 6. NR 500.05 (intro.) is amended to read:**

**NR 500.05 General submittal requirements.** Unless otherwise specified, all submittals for review and approval of any initial site report, feasibility report, plan of operation site investigation report, remedial action options report, construction documentation report, or closure plan, or any modifications to those plans, shall include all of the following:

**SECTION 7. NR 500.08 (4) is amended to read:**

**NR 500.08 (4) EXEMPTIONS FROM SOLID WASTE RULES.** Exemptions from the requirements of chs. NR 500 to 538 may be granted in writing by the department in special cases except as otherwise provided. A person may apply for an exemption by providing the department with a written request along with the appropriate documentation ~~which that~~ demonstrates that the proposal will not cause environmental pollution as defined ~~in~~ under s. 299.01 (4), Stats. The department shall take into account such factors as the population of the area being served, the amount of waste being generated, the geologic and hydrogeologic conditions at the facility, the design of the facility, the operational history of the facility, the physical and chemical characteristics of the waste, and any other information ~~which that~~ may be appropriate. The department shall review and make a written determination on the exemption request within 65 business days after receipt of a complete request and the appropriate review fee under ch. NR 520 unless a different time period is provided by law. An exemption may not be granted if it will result in noncompliance with the minimum federal requirements under Subtitle D.

**SECTION 8. NR 504.02 (1) is renumbered NR 504.02 (1) (a) and amended to read:**

**NR 504.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all landfills as defined ~~in~~ under s. 289.01 (20), Stats., ~~except landspreading including all CCR landfills and expansions.~~

(b) This chapter does not govern any of the following:

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1. Landspreading facilities regulated under ch. NR 518, small demolition waste landfills regulated under ch. NR 503, hazardous waste facilities as defined ~~in~~under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallie.~~

2. Metallic mining operations for nonferrous minerals as defined ~~in~~under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallie.~~

3. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 9. NR 504.10 (intro.) is amended to read:**

**NR 504.10 Alternative design criteria for landfills accepting high volume industrial wastes.** This section applies to landfills designed principally for high volume industrial waste, wood residue and minor amounts of other wastes as approved by the department. This section applies to all new landfills and to the expansion of existing landfills for which the plan of operation was approved after February 1, 1988. This section also applies to new and existing CCR landfills and lateral expansions of a CCR landfill.

**SECTION 10. NR 504.10 (3) (g) is created to read:**

**NR 504.10 (3) (g)** For new and existing CCR landfills and any lateral expansion of a CCR landfill, a demonstration that the alternative design meets the federal requirements located under 40 CFR part 257, Subpart D dated April 17, 2015 (80 FR 21468), as amended at 83 FR 36451, July 30, 2018.

**Note:** The code of federal regulations may be obtained at [www.ecfr.gov](http://www.ecfr.gov). Copies of 40 CFR part 257, Subpart D dated April 17, 2015 (80 FR 21468), as amended at 83 FR 36451, July 30, 2018 are available for inspection at the offices of the department of natural resources and the legislative reference bureau.

**SECTION 11. NR 504.12 is created to read:**

**NR 504.12 Minimum design and construction criteria for CCR landfills.**



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**(1) APPLICABILITY.** In addition to ss. NR 504.04 to 504.10, applicable to all landfills or landfills accepting high volume industrial waste, this section includes design criteria that are applicable to the construction of a new or existing CCR landfill or a lateral expansion of a CCR landfill.

**(2) RUN-ON AND RUN-OFF CONTROLS.** An existing or new CCR landfill or any lateral expansion of a CCR landfill shall be designed, constructed, operated, and maintained with a run-off and run-on control system in accordance with the requirements under s. NR 504.09 (1) (f) and (g) and all of the following:

(a) A run-on control system shall prevent flow onto the active portion of the CCR landfill during the peak discharge from a 24-hour, 25-year storm.

(b) A run-off control system from the active portion of the CCR landfill shall collect and control, at a minimum, the water volume resulting from a 24-hour, 25-year storm.

**(3) LINER DESIGN.** (a) A new CCR landfill or a lateral expansion of a CCR landfill shall be designed, constructed, operated, and maintained with a composite liner that meets the requirements under s. NR 504.06 (2) and (3) and a leachate collection and removal system that meets the requirements under s. NR 504.06 (5). The composite liner shall consist of 2 components; the upper component shall consist of a nominal 60-mil or thicker geomembrane liner, and the lower component shall consist of a minimum 4-foot-thick layer of compacted clay. A GCL and soil barrier may be used in place of the clay layer of a composite liner in accordance with s. NR 504.06 (7). In addition to the minimum design and construction criteria for landfill liners and leachate collection systems under s. NR 504.06, the liner and leachate collection system shall meet all of the following:

1. The leachate collection and removal system shall be designed, constructed, operated, and maintained to limit the leachate head level on the liner to one foot or less.

2. The leachate collection and removal system shall be constructed of materials that exhibit all of the following properties:

a. Chemically resistant to the CCR and any non-CCR waste managed in the CCR landfill and the leachate expected to be generated.

b. Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying waste, waste cover materials, and equipment used at the CCR landfill.

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3. The leachate collection and removal system shall be designed and operated to minimize clogging during the active life and during the long-term care of the landfill.

4. The geomembrane component of the liner shall be installed in direct and uniform contact with the compacted clay soil component.

5. A liner that utilizes a GCL and soil barrier layer in accordance with s. NR 504.06 (7) shall be designed to have a liquid flow rate no greater than the liquid flow rate through 2 feet of compacted soil with a hydraulic conductivity of  $1 \times 10^{-7}$  cm/sec. The liquid flow rate comparison shall be made using the following equation, which is derived from Darcy's Law for gravity flow through porous media:

$$Q/A = q = k (h/t + 1)$$

Where:

Q = flow rate (cubic centimeters / second).

A = surface area of the liner (squared centimeters).

q = flow rate per unit area (cubic centimeters / second / squared centimeter).

k = hydraulic conductivity of the liner (centimeters / second).

h = hydraulic head above the liner (centimeters).

t = thickness of the liner (centimeters).

(b) A new CCR landfill or a lateral expansion of a CCR landfill shall be designed and constructed with a subbase grade that is located no less than 5 feet above the upper limit of the uppermost aquifer, or shall demonstrate that there will not be an intermittent recurring or sustained hydraulic connection between any portion of the base of the CCR landfill and the uppermost aquifer due to normal fluctuations in groundwater elevations, including the seasonal high water table.

**Note:** A new CCR landfill or lateral expansion of a CCR landfill is also required to comply with s. NR 504.06 (2) (b) or (4) for zone-of-saturation landfills. The definition of an uppermost aquifer can be found under s. NR 500.03 (246m).

(c) A new CCR landfill or a lateral expansion of a CCR landfill may not be constructed over a closed CCR surface impoundment.

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**(4) FINAL COVER SYSTEM.** (a) A new or existing CCR landfill or a lateral expansion of a CCR landfill shall be designed and constructed with a final cover system that meets the requirements under s. NR 504.07.

(b) The owner or operator of a new or existing CCR landfill or a lateral expansion of a CCR landfill may propose an alternative final cover system design within a written closure plan in accordance with s. NR 504.10 and all of the following:

1. The permeability of the final cover system shall be less than or equal to the permeability of any bottom liner system or natural subsoils present or shall be no greater than  $1 \times 10^{-5}$  cm/sec, whichever is less.

2. The design of the final cover system shall include an infiltration layer that achieves an equivalent reduction in infiltration as the layers specified under s. NR 504.07 (4).

3. The design of the final cover system shall include an erosion layer that provides equivalent protection from wind or water erosion as the topsoil layer specified under s. NR 504.07 (7).

4. The disruption of the integrity of the final cover system shall be minimized through a design that accommodates settling and subsidence.

**SECTION 12. NR 506.02 (1) is renumbered NR 506.02 (1) (a) and amended to read:**

**NR 506.02 Applicability. (1)** (a) Except as provided in par. (b) and except as otherwise provided, this chapter governs all solid waste disposal facilities as defined ~~in~~under s. 289.01 (35), Stats., ~~except hazardous including all CCR landfills and expansions.~~

(b) This chapter does not govern any of the following:

1. Hazardous waste facilities as defined ~~in~~under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallie.~~

2. Metallic mining operations for nonferrous minerals as defined ~~in~~under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallie.~~

3. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

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**SECTION 13. NR 506.08 (intro.) is amended to read:**

**NR 506.08 Closure requirements.** Any person who maintains or operates a landfill, except a CCR landfill regulated under s. NR 506.083, or who permits use of property for such purpose shall, when the fill area or portion thereof reaches final grade, or when the department determines that closure is required, cease to accept solid waste and close the landfill or portion thereof in accordance with the plan approval issued by the department and all of the following minimum practices unless otherwise approved by the department in writing:

**SECTION 14. NR 506.083 and 506.084 are created to read:**

**NR 506.083 Closure requirements for CCR landfills.** Closure of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall be performed in accordance with the plan of operation approval issued by the department and all of the following:

(1) NOTIFICATION PROCEDURES. (a) No later than the date the owner or operator initiates closure of a CCR landfill under sub. (2), the owner or operator shall notify the department in writing of the intent to close the landfill and place a copy of the notification in the facility's operating record.

(b) Within 30 days following completion of closure of a CCR landfill under sub. (3), the owner or operator shall prepare and submit a notification of closure to the department and place a copy in the facility's operating record. The notification shall include the certification required under s. NR 516.04 (3) (d).

(2) INITIATION OF CLOSURE ACTIVITIES. (a) The owner or operator shall commence closure of the CCR landfill no later than 30 days after either of the following occur:

1. The date of final receipt of CCR waste and any non-CCR waste stream.
2. Final removal of CCR from the CCR landfill for the purpose of beneficial use of CCR.

(b) The owner or operator may delay commencing closure up to 2 years from the last receipt of waste or the last removal of CCR material for the purpose of beneficial use upon written approval by the department if the owner or operator demonstrates that there is a reasonable likelihood that the CCR landfill will accept wastes in the foreseeable future or will remove CCR from the landfill for the purpose of beneficial use. The delay shall be requested in writing to the department as a modification to the written closure plan required under s. NR 514.07 (10) (c) and include documentation that the CCR landfill

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will continue to accept wastes or will start removing CCR for the purpose of beneficial use. The request shall include all of the following:

1. Information documenting that the CCR landfill has remaining storage or disposal capacity or that the CCR landfill may have CCR removed for the purpose of beneficial use.

2. Information demonstrating that there is a reasonable likelihood that the CCR landfill will resume receiving CCR or non-CCR waste streams in the foreseeable future or that CCR may be removed for the purpose of beneficial use. Any portion of the landfill that will not receive additional CCR or have CCR removed for a period exceeding 6 months shall be covered with one foot of fine grained intermediate cover or other material approved by the department. The narrative shall include a best estimate as to when the CCR landfill will resume receiving CCR or non-CCR waste streams.

3. 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."

(c) Prior to the end of a 2-year delay for commencing closure, the owner or operator may request a subsequent 2-year delay under par. (b).

(d) For purposes of this section, closure of the CCR landfill has commenced once the owner or operator has ceased placing waste and undertakes any of the following actions or activities:

1. Takes any steps necessary to implement the approved closure plan.

2. Applies to the department or another agency for a permit or modification related to closure.

3. Takes any steps necessary to comply with any department or other agency requirements that are a prerequisite, or are otherwise applicable, to initiating or completing the closure of a CCR landfill.

**(3) COMPLETION OF CLOSURE ACTIVITIES.** (a) The owner or operator shall complete closure of the CCR landfill within 6 months of commencing closure activities.

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(b) The timeframe for completing closure of a CCR landfill may be extended for a one-year period upon written department approval if the owner or operator demonstrates that it was not feasible to complete closure of the CCR landfill within the required timeframe due to factors beyond the owner or operator's control. No more than a total of 2 one-year extensions may be obtained for any CCR landfill. An owner or operator shall request the time extensions to the department in writing as modifications to the approved closure plan and include a narrative discussion providing the basis for additional time. The time extension request shall include 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 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."

**(4) DEED NOTATION.** (a) Following closure of a CCR landfill, the owner or operator shall, within 60 days after closure is complete, record an affidavit with the register of deeds to notify any potential purchaser of the property that the land has been used as a landfill and its use is restricted to prevent disturbing the integrity of the final cover, liner or any other components of the containment system or the function of the monitoring systems.

(b) A copy of the affidavit shall be submitted to the department and placed in the facility's operating record within 30 days of recordation.

**(5) CLOSURE BY REMOVAL OF CCR.** An owner or operator may close a CCR landfill by removing and decontaminating all areas affected by releases from the CCR landfill. CCR removal and decontamination of the CCR landfill are complete when constituent concentrations throughout the CCR landfill and any areas affected by releases from the CCR landfill have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard for constituents listed under s. NR 140.10, Table 1. A landfill closed by removal of CCR and associated remediation is not subject to the deed notation requirement under s. NR 506.08 (4) and long-term care requirements under s. NR 506.084.

**(6) CLOSURE PERFORMANCE STANDARDS WHEN LEAVING CCR IN PLACE.** An owner or operator of a CCR landfill shall ensure that, at a minimum the CCR landfill is closed in a manner that will achieve all of the following performance standards:

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(a) Control, minimization or elimination, to the maximum extent feasible, of post-closure infiltration of liquids into the waste and of releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere.

(b) Prevention of the impoundment of water, sediment or slurry.

(c) Slope stability to prevent the sloughing or movement of the final cover system during the closure and long-term care period.

(d) Minimization of the need for long term maintenance of the CCR landfill.

(e) Complete closure in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

(7) ALTERNATIVE CLOSURE REQUIREMENTS. An owner or operator that is subject to closure for failure to demonstrate compliance with locational criteria under s. NR 514.045 (5) may continue to receive CCR in the CCR landfill provided the owner or operator meets all of the following:

(a) The owner or operator of the CCR landfill certifies that the CCR shall continue to be managed in that CCR landfill due to the absence of an alternative disposal capacity both on-site and off-site of the facility. The owner or operator of the CCR landfill shall document that all of the following conditions have been met:

1. 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 subdivision.

2. The owner or operator has made, and continues to make, efforts to obtain additional capacity. Qualification under this subdivision lasts only as long as no alternative capacity is available. Once alternative capacity is identified, the owner or operator shall arrange to use the capacity as soon as feasible.

3. The owner or operator shall remain in compliance with all other operating requirements under ch. NR 506 and the requirements of chs. NR 507 and 508, including the requirement to conduct any necessary corrective action required under s. NR 508.06 (5).

4. The owner or operator shall prepare an annual progress report documenting the continued lack of alternative capacity and the progress towards the development of alternative CCR disposal capacity.

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(b) Once alternative capacity is available, the CCR landfill shall cease receiving CCR and initiate closure following the timeframes under subs. (2) and (3).

(c) If no alternative capacity is identified within 5 years after the initial certification, the CCR landfill shall cease receiving CCR and close under subs. (2) and (3).

(d) An owner or operator that closes in accordance with this section shall complete and submit to the department the notices and progress reports in accordance with all of the following:

1. Within 6 months of becoming subject to closure, the owner or operator shall prepare and submit a notification of intent to comply with the alternative closure requirements of this section. The notification shall describe why the CCR landfill qualifies for the alternative closure provisions of this section, in addition to providing the required documentation and certifications.

2. The owner or operator shall prepare the periodic progress reports required under par. (a) 4., in addition to describing any problems encountered and a description of the actions taken to resolve the problems. The annual progress reports shall be completed according to the following schedule:

a. The first annual progress report shall be prepared no later than 13 months after completing the notification of intent to comply with the alternative closure requirements.

b. The second annual progress report shall be prepared no later than 12 months after completing the first annual progress report. Additional annual progress reports shall be prepared within 12 months of completing the previous annual progress report.

3. The notification and progress reports shall be placed in the written operating record and posted on a publicly accessible internet site under s. NR 506.17 (2) and (3).

**NR 506.084 Long-term care requirements for CCR landfills.** Long-term care of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall be performed in accordance with the plan of operation approval issued by the department and all of the following:

**(1) LONG-TERM CARE MAINTENANCE REQUIREMENTS.** Following closure of the CCR landfill, the owner or operator shall conduct long-term care for the CCR landfill in accordance with the approved long-term care plan required under s. NR 514.07 (10).



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**(2) LONG-TERM CARE PERIOD.** Long-term care of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall be performed in accordance with the plan of operation, with perpetual long-term care responsibility under s. 289.41 (1m) (c), Stats., and all of the following:

(a) The long-term care period for a CCR landfill is 40 years for purposes of record keeping under s. NR 506.17 (2) and proof of owner financial responsibility under s. NR 520.05.

(b) No later than 60 days following the end of the 40-year long-term care proof period, a notification shall be submitted to the department and placed in the written operating record. The notification shall verify that the landfill is complying with the approved long-term care plan and long-term care requirements. The notification shall include a certification by a professional engineer.

**SECTION 15. NR 506.17 is renumbered 506.17 (1).**

**SECTION 16. NR 506.17 (1) (title) is created to read:**

**NR 506.17 (1) (title) MUNICIPAL SOLID WASTE LANDFILL WRITTEN OPERATING RECORD.**

**SECTION 17. NR 506.17 (2), (3), and (4) are created to read:**

**NR 506.17 (2) CCR LANDFILL WRITTEN OPERATING RECORD.** The owner or operator of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall maintain a written operating record at the landfill during the operating life and 40-year long-term care period of the landfill, unless an alternative timeframe is specified under this section. The written operating record shall be maintained in accordance with all of the following:

(a) The department may approve an alternate location for maintaining the record. The alternate location of the record shall be identified within the plan of operation.

(b) An owner or operator of more than one CCR landfill may comply with the requirements of this section in one recordkeeping system provided the system identifies each file by the name of each CCR landfill.

(c) Documentation shall be placed into the written operating record as it becomes available.

(d) Documentation shall be submitted to the department upon request.

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(e) The written operating record shall contain the plan of operation, plan modifications, construction documentation, department approvals, annual reports, inspection records, monitoring and corrective action records, notifications to the department, and records of public comments received during any public comment period.

(f) If records are developed within 5 years of the end of the 40-year long-term care period, the records shall be maintained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, record, or study.

(g) Retention by the owner or operator of a new or existing CCR landfill or a lateral expansion of a CCR landfill of the following documents is only required for 5 years after the submittal date to the department:

1. Annual reports required under s. NR 506.20 (4).
2. Documentation recording the results of the periodic inspections required under s. NR 506.20 (2).

**(3) CCR LANDFILL PUBLICLY ACCESSIBLE INTERNET SITE.** Each owner or operator of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall maintain a publicly accessible internet site titled “CCR Rule Compliance Data and Information” in accordance with all of the following:

(a) An owner or operator of more than one CCR landfill may choose to comply with the requirements of this section by using the same internet site for multiple CCR landfills provided the internet site clearly delineates information by the name and license number.

(b) The information required to be posted to the internet site under par. (d) shall be made available on the internet site to the public for at least 5 years following the date on which the information was first posted to the internet site.

(c) The information required to be posted to the internet site under par. (d) shall be posted to the internet site within 30 days of placing the information in the operating record.

(d) The internet site shall contain all of the following information, if applicable:

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1. The plan of operation modification documents required under s. NR 514.045 (1), any subsequent modifications to the plan of operation, and the department's decision documents, including the notification of completeness required under s. NR 514.045 (3).

2. Liner construction documentation and the department's decision documents for new CCR landfills.

3. The annual groundwater monitoring and corrective action report.

4. Documentation of the design, installation, development, and decommissioning of any monitoring wells, piezometers and other measurement, sampling, and analytical devices.

5. The notification to the department of the establishment of an assessment monitoring program or any alternate source demonstration and the department's response under ch. NR 508, and any applicable site investigation work plan and department response, site investigation report, and notification of any exceedance of a groundwater quality standard.

6. The notification to the department of a return to a detection monitoring program.

7. The notification to the department of the initiation of an assessment of corrective measures requirements under ch. NR 508.

8. The completed remedial action options report, which includes the remedial action selection, any addendum to the report and the department's response.

9. Documentation prepared by the owner or operator recording any public comments received during the public informational hearing under s. NR 508.06 (3) (e) for the discussion of the results of the remedial action options report.

10. The semiannual report describing the progress in selecting and designing the remedy and the selection of remedy report, except that the selection of remedy report shall be maintained until the remedy has been completed.

11. The notification to the department of the completion of the remedy.

(e) For CCR landfills with a plan of operation approved after the effective date of this section [LRB inserts date] the internet site shall also contain all of the following:

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1. The feasibility report and department's decision document.
2. The plan of operation and department's decision document.
3. Any modifications to the feasibility determination or plan of operation approval and the department's decision documents.

**(4) CCR LANDFILL NOTIFICATION REQUIREMENTS.** (a) A notification required under ch. NR 507 or 508 or this chapter shall be sent to the department's waste and materials management program 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 email. If a notification deadline falls on a weekend or state holiday, the notification deadline is automatically extended to the next business day.

(b) Notifications under par. (a) may be combined provided the deadline requirement for each notification is met.

(c) Unless otherwise required, a notification under par. (a) shall be sent to the department within 30 days of placing the notification in the landfill's written operating record.

**SECTION 18. NR 506.20 is created to read:**

**NR 506.20 Inspection and reporting requirements for a CCR landfill. (1) PERIODIC INSPECTIONS.** A new or existing CCR landfill or a lateral expansion of a CCR landfill shall be inspected in accordance with all of the following:

(a) A person trained to recognize appearances or conditions of landfill structures shall do all of the following:

1. At intervals not exceeding 7 days, after initial receipt of CCR by the CCR landfill, inspect for any appearances of actual or potential structural weakness and other conditions that are disrupting or have the potential to disrupt the operation or safety of the CCR landfill.

2. At intervals not exceeding 7 days, during the active operating life of the landfill, conduct a visual inspection to assess the effectiveness of fugitive dust control measures as required under s. NR 514.07 (10) (a) 3.

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(b) The owner or operator of the CCR landfill shall maintain the results of the periodic inspections under par. (a) in the facility's written operating record for a period of 5 years.

**(2) ANNUAL INSPECTIONS BY A LICENSED PROFESSIONAL ENGINEER.** (a) A licensed professional engineer shall annually inspect a new or existing CCR landfill or a lateral expansion of a CCR landfill to ensure that the design, construction, operation, and maintenance of the CCR landfill is consistent with recognized and generally accepted good engineering standards. The inspection shall be performed no later than December 31 of each year. The inspection shall, at a minimum, include all of the following:

1. A review of available information regarding the status and condition of the CCR landfill, including files available in the operating record, such as the results of inspections under sub. (1) (a) 1., and results of previous annual inspections.

2. A visual inspection of the CCR landfill to identify signs of distress or malfunction of the CCR landfill.

(b) The licensed professional engineer conducting the inspection under par. (a) shall prepare a report following each inspection that addresses all of the following:

1. Any changes in geometry of the structure since the previous annual inspection.

2. The approximate volume of CCR contained in the CCR landfill at the time of the inspection.

3. Any appearances of an actual or potential structural weakness of the CCR landfill, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR landfill.

4. Any other changes that may have affected the stability or operation of the CCR landfill since the previous annual inspection.

5. Any deficiencies or releases identified during an inspection and documentation detailing the corrective measures taken. The owner or operator shall remedy the deficiency or release as soon as feasible and prepare documentation detailing the corrective measures taken.

**(3) ANNUAL REPORT.** The owner or operator of a new or existing CCR landfill or a lateral expansion of a CCR landfill shall prepare and submit an annual report to the department and place the

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report in the facility's operating record by January 31 of each year. The annual report shall include all of the following components at a minimum:

(a) An annual CCR fugitive dust control report that includes a description of the actions taken by the owner or operator to control CCR fugitive dust, a record of all citizen complaints, and a summary of any corrective measures taken.

(b) The annual inspection report required under sub. (2) (b).

(c) The annual groundwater monitoring and corrective action report required under s. NR 507.15 (3) (m).

(d) The leachate pipe cleaning and inspection report required under s. NR 506.07 (5) (g).

**SECTION 19. NR 507.02 (1) is renumbered 507.02 (1) (a) and amended to read:**

**NR 507.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all environmental monitoring for solid waste disposal facilities as defined by under s. 289.01 (35), Stats., except hazardous including all CCR landfills and expansions.

(b) This chapter does not govern any of the following:

1. Hazardous waste facilities as defined ~~in under~~ s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallie.~~

2. Metallic mining operations for nonferrous minerals as defined ~~in under~~ s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallie.~~

3. Metallic mining operations for ferrous minerals as defined ~~in under~~ s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in under~~ s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 20. NR 507.15 (3) is created to read:**

**NR 507.15 (3) CCR LANDFILLS.** In addition to the detection groundwater monitoring system required under s. NR 507.19, the owner or operator of a CCR landfill that accepts CCR on or after October 19, 2015 shall also submit a plan establishing a separate CCR groundwater monitoring system for the purpose of monitoring groundwater quality in the uppermost aquifer in accordance with this

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chapter. The plan shall be submitted with the plan of operation modification for initial permitting in accordance with s. NR 514.045 or in the feasibility report under ch. NR 512.

(a) The CCR groundwater monitoring system shall consist of a sufficient number of CCR wells, installed at appropriate locations and depths, as approved by the department, adequate to yield groundwater samples from the uppermost aquifer that accurately represent upgradient groundwater quality that has not been affected by leakage from a CCR landfill and downgradient groundwater quality passing the waste boundary of the CCR landfill. The downgradient monitoring wells shall be installed to ensure detection of groundwater contamination in the uppermost aquifer, including all known or suspected contaminant pathways.

(b) The number, spacing, and depths of monitoring wells submitted to the department as part of the CCR groundwater monitoring system plan shall be determined based upon site-specific technical information that shall include thorough characterization of aquifer thickness, groundwater flow rate, and groundwater flow direction, including seasonal and temporal fluctuations in groundwater flow. The monitoring systems shall also take into account the 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 thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities, and effective porosities.

(c) The CCR groundwater monitoring system plan shall include the minimum number of monitoring wells necessary to meet the performance standards specified under par. (a), based on the site-specific information specified under par. (b). The groundwater monitoring system plan shall contain all of the following:

1. A minimum of one upgradient and 3 downgradient monitoring wells to be designated as CCR wells.
2. Additional monitoring wells as necessary to accurately represent the background groundwater quality in the uppermost aquifer that has not been affected by leakage from the CCR landfill and the quality of groundwater passing the waste boundary of the CCR landfill.

(d) Monitoring wells shall be designed and installed in accordance with s. NR 507.06 and regularly inspected in accordance with s. NR 507.13. All monitoring wells, piezometers, and other measuring, sampling, and analytical devices shall be operated and maintained so that the devices perform to the design specifications throughout the life of the monitoring program.

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(e) The documentation of the design, installation, development, and decommissioning of any monitoring wells, piezometers, and other measurement, sampling, and analytical devices shall be performed in accordance with s. NR 507.14 and applicable requirements under ch. NR 141. This includes submission of all required forms to the department in the timeframes specified.

(f) A sampling plan that includes the CCR groundwater monitoring system shall be submitted to the department in accordance with s. NR 507.16 and the requirements under s. NR 140.16. The sampling plan shall include consistent sampling and analysis procedures that are designed to ensure the production of monitoring results that provide an accurate representation of groundwater quality in the uppermost aquifer at the upgradient and downgradient CCR wells and that provide a characterization of leachate quality generated by the CCR landfill. The sampling plan shall be implemented as approved in writing by the department.

(g) The sampling plan shall include sampling and analytical methods that are appropriate for groundwater sampling and that accurately measure all required monitoring parameters under ch. NR 507, Appendix I in groundwater samples. The CCR landfill owner or operator shall obtain and analyze samples in accordance with the approved sampling plan under par. (f) and the requirements under s. NR 507.17.

(h) In addition to the field measurements required under s. NR 507.17 (1), the groundwater elevations shall be measured in each CCR well immediately prior to purging, each time groundwater is sampled. The owner or operator of the CCR landfill shall determine the rate and direction of groundwater flow each time groundwater is sampled and report the result to the department in accordance with s. NR 507.26. Groundwater elevations in wells that monitor the same CCR landfill shall be measured within a timeframe short enough to avoid temporal variations in groundwater flow that could preclude accurate determination of groundwater flow rate and direction.

(i) The owner or operator of the CCR landfill shall establish baseline groundwater quality in accordance with s. NR 507.18 for each CCR well and for each of the constituents required in ch. NR 507 Appendix I, Table 1A and in accordance with the approved sampling plan.

(j) The owner or operator of the CCR landfill shall measure total recoverable metals concentrations when measuring groundwater quality for each CCR well. Measurement of total recoverable metals includes both the particulate fraction and dissolved fraction of metals in natural waters. To ensure this, groundwater samples from CCR wells may not be field filtered prior to analysis.



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(k) The owner or operator of the CCR landfill shall notify the department in writing within 60 days of completing sampling and analysis at any CCR well when a groundwater standard at the point of standards application has been attained or exceeded in accordance with s. NR 507.30.

(L) The owner or operator of a CCR landfill shall conduct detection groundwater monitoring at all CCR wells consistent with the requirements of this section and s. NR 507.19. Detection groundwater monitoring shall include groundwater monitoring for all constituents appropriate for CCR wells as listed under ch. NR 507 Appendix I, Table 1A and additional parameters if approved by the department in writing and in accordance with all of the following:

1. The minimum monitoring frequency for the constituents approved by the department as part of the detection groundwater monitoring shall be semi-annual during the active life of the CCR landfill and the post-closure period. For existing and new CCR landfills and all lateral expansions of CCR landfills, baseline groundwater quality shall be established at each CCR monitoring well in accordance with s. NR 507.18. This includes the collection of a minimum of 8 independent groundwater quality samples for each CCR well, each of which shall be analyzed for all constituents appropriate for CCR landfills as listed under ch. NR 507 Appendix I, Tables 1A and 3 and any additional parameters approved by the department in writing.

2. The number and methodology of groundwater quality samples collected and analyzed for each CCR well during subsequent semiannual sampling events shall be consistent with the approved sampling plan under s. NR 507.16, and shall account for any unique characteristics of the site. The CCR landfill owner or operator shall inform the department in accordance with s. NR 507.26 of any CCR well that purges dry, is damaged or obstructed, or in any way is rendered such that a sample was unable to be collected from the well during a scheduled sampling event and shall propose remedial actions to correct the problem prior to the next sampling event.

3. The owner or operator of the CCR landfill shall notify the department and respond in accordance with s. NR 507.30 when a groundwater standard at the point of standards application has been attained or exceeded at any CCR well. This response includes the establishment of an assessment monitoring program meeting the requirements under s. NR 508.06, unless the exceedance is determined by the department to be from a source other than the CCR landfill, or that the groundwater standard exceedance resulted from error in sampling, analysis, or natural variation in background groundwater quality in accordance with s. NR 508.06 (2) (f) 2.

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4. For the purposes of determining the point of standards application for a groundwater quality exceedance at a CCR well, the horizontal distance for the design management zone under s. NR 140.22 (3) (a) for a CCR landfill is 0 feet from the waste boundary and may not be expanded by the department under s. NR 140.22 (3) (b). The waste boundary shall include the horizontal space taken up by any liner, dike, or other barrier designed to contain CCR waste.

(m) The owner or operator of a CCR landfill shall prepare an annual groundwater monitoring and corrective action report for submittal to the department. The annual groundwater monitoring and corrective action report shall be placed in the written operating record and posted on a publicly accessible internet site under s. NR 506.17 (2) and (3) no later than January 31 of the year following the calendar year a groundwater monitoring system has been approved by the department, and annually thereafter. For the preceding calendar year, the annual report shall document the status of the groundwater monitoring and any corrective action implemented at the CCR landfill, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. At a minimum, the annual groundwater monitoring and corrective action report shall contain all of the following information, to the extent available:

1. A map, aerial image, or diagram showing the CCR landfill and all upgradient and downgradient monitoring wells, including the well identification numbers, that are part of the groundwater monitoring for the CCR landfill.

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 sub. (L), a summary including the number of groundwater samples that were collected for analysis for each upgradient and downgradient well, the dates the samples were collected, and whether the sample was required by detection monitoring or assessment monitoring.

4. A narrative discussion of any transition between monitoring including the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying any constituents detected above ch. NR 140 standards.

5. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action for the CCR landfill. At a minimum, the summary shall include all of the following:

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a. At the start of the current annual reporting period, whether the CCR landfill was operating under detection monitoring or assessment monitoring.

b. At the end of the current annual reporting period, whether the CCR landfill was operating under detection monitoring or assessment monitoring.

c. If it was determined by the operator that there was a groundwater quality exceedance under ch. NR 140 for one or more constituents listed in ch. NR 507 Appendix I for CCR wells, a listing of those constituents, the names of the monitoring wells associated with the exceedances, and the date when the assessment monitoring was initiated for the CCR landfill.

d. If corrective action measures were required, the date when the assessment of corrective measures was initiated for the CCR landfill, the date when the public informational hearing under s. NR 508.06 (3) (e) was held for the discussion of the results of the remedial action options report, and the date when the assessment of corrective measures was completed.

e. If a remedy was required under ch. NR 508 during the annual reporting period, the date of remedy selection, and whether remedial activities were initiated or are ongoing during the annual reporting period.

**SECTION 21. NR 507.18 (1) (a) and (3) (a) are amended to read:**

**NR 507.18 (1) (a)** Baseline groundwater quality shall be established at all wells ~~which~~that were installed outside the proposed limits of filling to evaluate the proposed facility. Samples shall be analyzed for each detection monitoring parameter as appropriate for the particular waste types accepted at the landfill. Chapter NR 507 Appendix I, Tables 1, 1A, and 2 indicate which parameters shall be analyzed for each waste type. The department may require additional parameters based on the waste types and waste characteristics accepted at the landfill.

**(3) (a)** Baseline groundwater quality shall be established for all VOCs listed in ch. NR 507 Appendix III, at all monitoring wells outside the proposed limits of filling. Landfills designed to accept ~~primarily coal ash~~ CCR and CCR landfills are exempt from baseline groundwater quality monitoring for VOCs.

**SECTION 22. NR 507.18 (5) is created to read:**

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**NR 507.18 (5) BASELINE GROUNDWATER QUALITY SAMPLING AT CCR WELLS.** (a) Baseline groundwater quality shall be established by the owner or operator of a CCR landfill at all CCR wells installed outside the proposed limits of filling to evaluate groundwater quality in the uppermost aquifer beneath the CCR landfill as provided in par. (b). Samples shall be analyzed for each monitoring parameter as indicated under ch. NR 507 Appendix I, Tables 1A and 3 for detection and baseline monitoring for CCR wells.

(b) The owner or operator of a CCR landfill shall obtain, analyze, and submit the results from a minimum of 8 groundwater quality samples from each CCR well to the department to determine baseline groundwater quality for the parameters required under this subsection. The information shall be submitted as part of the plan of operation modification required under s. NR 514.045 or the feasibility report for a proposed landfill.

(c) The department may not approve a CCR landfill at a location where a preventive action limit or enforcement standard adopted under s. NR 140.10 or 140.12 has been attained or exceeded in the baseline monitoring sampling results unless the department grants an exemption to those standards in accordance with s. NR 140.28 as part of a CCR landfill feasibility determination, plan of operation approval, or plan of operation modification approval under s. NR 514.045.

(d) A preventive action limit for lithium shall be established by the department at each CCR well in accordance with s. NR 140.20 (2) (c) set at the background water quality plus 3 standard deviations.

**SECTION 23. NR 507.19 (2) and (3) are amended to read:**

**NR 507.19 (2) SAMPLING FREQUENCY.** The minimum sampling frequency for detection groundwater monitoring shall be appropriate for the particular waste types accepted at the landfill and are listed in ch. NR 507 Appendix I, Tables 1, 1A, and 2. The department may approve other sampling frequencies in writing.

**(3) SAMPLING PARAMETERS.** The sampling parameters required for detection groundwater monitoring shall be appropriate for the particular waste types accepted at the landfill. Chapter NR 507 Appendix I, Tables 1, 1A, and 2 indicate which sampling parameters are appropriate for each waste type. Chapter NR 507 Appendix III lists the volatile organic compounds to be sampled when a VOC scan is required. The department may approve other sampling parameters in writing. If 10% or more of a municipal solid waste landfill's total design capacity consists of a waste type listed in ch. NR 507 Appendix I, Table 2, the detection monitoring program shall include the additional parameters listed in

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ch. NR 507 Appendix I, Table 2 for that waste type. The owner or operator may demonstrate that a parameter is not present in the waste or leachate. The department shall review such a demonstration and take the appropriate action.

**SECTION 24. 507.27 (1) and (2) are amended to read:**

**NR 507.27 (1) PREVENTIVE ACTION LIMITS.** The owner or operator of an existing solid waste disposal facility shall calculate PALs for inorganic detection monitoring parameters at the direction of the department. Applicants for a proposed solid waste disposal facility shall calculate PALs for inorganic detection monitoring parameters prior to submitting the plan of operation. Detection monitoring parameters are listed in ch. NR 507 Appendix I Tables 1, 1A, and 2. The owner or operator shall calculate PALs for the inorganic detection parameters required at each well in accordance with the methods specified in s. NR 140.20. PALs are not required for pH or temperature. PALs may not be calculated for any parameter ~~which~~that has an ES established in ch. NR 140. The department may require the owner or operator to conduct additional sampling if the department determines that the data used to calculate a PAL is not representative of background water quality.

**(2) ALTERNATIVE CONCENTRATION LIMITS.** Applicants for proposed solid waste disposal facilities and the owner or operator of an existing solid waste disposal facility may request an exemption and calculate ACLs for any inorganic public health or welfare parameter ~~which~~that has established standards listed in ch. NR 140 Tables 1, 1A, and 2 in accordance with s. NR 507.29.

**SECTION 25. 507.28 (2) is amended to read:**

**NR 507.28 (2) THE POINT OF STANDARDS APPLICATION.** The point of standards application to determine if a PAL or ES has been attained or exceeded is specified in either s. NR 140.22 (2) or (3) or s. NR 507.15 (3) (L) 4. for a CCR well. The design management zone and waste boundary are defined in s. NR 140.22 (3). The department may consider an expansion or reduction of the design management zone, excluding CCR wells, in accordance with s. NR 140.22 (3) (b) to (d). For purposes of evaluating compliance, a groundwater monitoring well located at the property line is a point of standards application for an ES.

**SECTION 26. NR 507 Appendix I Table 1A is created to read:**

**NR 507 APPENDIX I BASELINE AND DETECTION MONITORING REQUIREMENTS**

**Table 1A**

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## DETECTION GROUNDWATER MONITORING FOR CCR WELLS AT CCR LANDFILLS

Waste Type	Detection Parameters <sup>1</sup>	Monitoring Frequency
Coal combustion residuals	Alkalinity Boron Calcium Chloride Fluoride Field conductivity (at 25°C) Field pH Field temperature Groundwater elevation Hardness Total Dissolved Solids (TDS) Sulfate	Semi-annual

<sup>1</sup> Groundwater samples collected at CCR wells must be unfiltered.

**SECTION 27. NR 507 Appendix I Table 2 Footnote 1 is created to read:**

**NR 507 APPENDIX I BASELINE AND DETECTION MONITORING REQUIREMENTS**

**Table 2**

Fly or bottom ash<sup>1</sup>

<sup>1</sup> Detection monitoring parameters apply to all wells monitoring CCR landfills that are not defined as CCR wells under s. NR 500.03 (26y).

**SECTION 28. NR 507 Appendix I Table 3 and 4 are repealed and recreated to read:**

**NR 507 APPENDIX I BASELINE AND DETECTION MONITORING REQUIREMENTS**

**Table 3**

**BASELINE AND ASSESSMENT GROUNDWATER MONITORING  
PUBLIC HEALTH AND WELFARE PARAMETERS**

All Wells	Additional Parameters for Subtitle D Wells	Additional Parameters for CCR Wells
Arsenic Barium	Antimony Beryllium	Antimony Beryllium

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<p>Cadmium Chromium Copper Fluoride Lead Manganese Mercury Nitrate + Nitrite (as N) Selenium Silver Sulfate Zinc</p>	<p>Cobalt Nickel Thallium Vanadium</p>	<p>Cobalt Lithium Molybdenum Thallium Ra-226 and Ra-228, combined<sup>1</sup></p>
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<sup>1</sup> The maximum contaminant level (MCL) for combined radium is 5 pCi/L under s. NR 809.50 (1)

(a).

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**Table 4**  
**DETECTION LEACHATE MONITORING**  
**FOR ALL LANDFILLS<sup>1,2</sup>**

Municipal Solid Waste and Municipal Solid Waste Combustor Residue	Paper Mill Sludge	Fly or Bottom Ash	Foundry Waste
The volume of the leachate removed shall be recorded at least monthly and reported to the department semi-annually.			
Semi-Annual Monitoring Parameters			
BOD <sub>5</sub> Field Conductivity (at 25°C) Field pH Alkalinity Cadmium Chloride COD Hardness Iron Lead Manganese Mercury Ammonia nitrogen Total Kjeldahl nitrogen Sodium Sulfate Total suspended solids VOC scan <sup>3</sup>  Other parameters specified by waste type in this table if accepted at the landfill	BOD <sub>5</sub> Field Conductivity (at 25°C) Field pH Alkalinity Cadmium Chloride COD Hardness Iron Lead Manganese Mercury Ammonia nitrogen Total Kjeldahl nitrogen Sodium Sulfate Total suspended solids VOC scan <sup>3</sup>	BOD <sub>5</sub> Field Conductivity (at 25°C) Field pH Alkalinity Boron Cadmium Chloride COD Hardness Iron Lead Manganese Mercury Selenium Total suspended solids <b>Additional Parameters for            CCR Landfills</b> Antimony Beryllium Cobalt Fluoride Lithium Molybdenum Ra <sup>226</sup> and Ra <sup>228</sup> combined Sulfate Thallium	BOD <sub>5</sub> Field Conductivity (at 25°C) Field pH Alkalinity Cadmium Chloride COD Fluoride Hardness Iron Lead Manganese Mercury Sodium Sulfate Total suspended solids VOC scan <sup>3</sup>
Annual Monitoring Parameters			
Semivolatile organic compound scan <sup>4</sup>	Semivolatile organic compound scan <sup>4</sup>	Semivolatile organic compound scan <sup>4</sup>	Semivolatile organic compound scan <sup>4</sup>

1 Leachate monitoring for other solid waste not included in this table may be done as specified by the department in writing.

2 Leachate samples may not be filtered. The color, odor and turbidity shall also be noted for all samples.

3 Refer to ch. NR 507 Appendix III for a list of the individual volatile organic compounds required for a VOC Scan.

4 Refer to ch. NR 507 Appendix IV for a list of the individual semivolatile organic compounds required for a semivolatile organic compound scan.

**SECTION 29. NR 508.01 is amended to read:**

**NR 508.01 Purpose.** The purpose of this chapter is to establish procedures for responding to a groundwater standard ~~which that~~ is attained or exceeded at any groundwater monitoring well at a solid waste facility and for conducting assessment monitoring at Subtitle D wells and CCR wells. This chapter is adopted under ch. 289, Stats., and s. 227.11, Stats.



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**SECTION 30. NR 508.02 (1) is renumbered NR 508.02 (1) (a) and amended to read:**

**NR 508.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all environmental monitoring for solid waste disposal facilities as defined by under s. 289.01 (35), Stats., ~~except hazardous~~ including all CCR landfills and expansions.

(b) This chapter does not govern any of the following:

1. Hazardous waste facilities as defined ~~in under~~ s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallic.~~

2. Metallic mining operations for nonferrous minerals as defined ~~in under~~ s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallic.~~

3. Metallic mining operations for ferrous minerals as defined ~~in under~~ s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in under~~ s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 31. NR 508.06 is created to read:**

**NR 508.06 Responses when a groundwater standard is attained or exceeded at a CCR well.**  
**(1) NOTIFICATION AND CONFIRMATION.** If a PAL, ACL, or ES is attained or exceeded at a CCR well according to s. NR 140.14 and the value is confirmed, the owner or operator of the CCR landfill shall continue detection monitoring in accordance with s. NR 507.15 (3) (L) and shall respond in accordance with all of the following requirements:

(a) The owner or operator shall notify the department in accordance with s. NR 507.30 (1). The notification shall be submitted to the department under s. NR 506.17 (4), placed in the written operating record under s. NR 506.17 (2) and posted on a publicly accessible internet site under s. NR 506.17 (3).

(b) The owner or operator shall determine whether a reported value has attained or exceeded a PAL or ES in accordance with s. NR 140.14 at the point of standards application and respond in accordance with s. NR 140.24 or 140.26.

(c) The owner or operator may demonstrate that a reported value represents a false exceedance of a groundwater standard in accordance with s. NR 507.28 (3) and shall submit the demonstration within 60 days of the groundwater standard attainment or exceedance. If the department does not concur with the

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written demonstration within 30 days after receipt of the demonstration, the owner or operator shall begin assessment monitoring in accordance with sub. (2). If the department concurs within 30 days after receipt of the demonstration, the owner or operator is not required to begin assessment monitoring. The owner or operator shall include the demonstration in the annual groundwater monitoring and corrective action report.

**(2) ASSESSMENT MONITORING PROGRAM.** The owner or operator of a CCR landfill shall conduct an assessment monitoring program in accordance with all of the following requirements:

(a) The owner or operator shall collect and analyze assessment monitoring samples from all of the CCR wells at the facility. The assessment monitoring samples shall be collected within 90 days of triggering an assessment monitoring program and annually thereafter. The owner or operator of the CCR landfill shall sample and analyze the groundwater for all constituents listed under ch. NR 507, Appendix I, Table 3 for CCR wells. The number of samples collected and analyzed for each well during each sampling event shall be consistent with the approved sampling plan and shall be no less than one sample from each well.

(b) After obtaining the results from the initial assessment sampling event required in par. (a), the owner or operator shall, within 90 days of obtaining the results, and semiannually thereafter, resample all CCR wells, conduct analyses for all detection monitoring parameters under ch. NR 507, Appendix I, Table 1A and for those constituents under ch. NR 507, Appendix I, Table 3 that are detected in response to par. (a), and report the results to the department in accordance with s. NR 507.30 (1). The number of samples collected and analyzed for each CCR well during subsequent semiannual sampling events shall be consistent with the approved sampling plan and shall consist of a minimum of one sample from each well.

(c) If the concentrations of all constituents sampled under par. (b) are shown to be at or below a PAL or ES under s. NR 140.10 or an approved ACL for two consecutive sampling events at the point of standards application, the owner or operator may return to detection monitoring of the CCR landfill. The owner or operator shall notify the department that detection monitoring is resuming for the CCR landfill within 60 days after the end of the sampling period. The notification shall be submitted to the department under s. NR 506.17 (4), placed in the written operating record under s. NR 506.17 (2) and posted on a publicly accessible internet site under NR 506.17 (3).

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(d) If the concentrations of any sampled parameter are above the PAL or ES standards in s. NR 140.10 or approved ACL at the point of standards application, the owner or operator shall continue assessment monitoring in accordance with this section.

(e) If one or more constituents in the assessment monitoring are detected at levels above the groundwater protection standard under s. NR 140.10 in any sampling event, the owner or operator shall do all of the following:

1. Notify the department in accordance with s. NR 507.30 (1). The notification shall be submitted to the department under s. NR 506.17 (4), placed in the written operating record under s. NR 506.17 (2) and posted on a publicly accessible internet site under s. NR 506.17 (3).

2. Characterize the nature and extent of the release and any relevant site conditions that may affect the remedy ultimately selected. The characterization shall include a complete and accurate assessment of the corrective measures necessary to effectively prevent and remediate all releases from the CCR landfill.

3. Install additional monitoring wells necessary to define the contaminant plumes.

4. Collect data on the nature and estimated volume of leachate including specific information on the constituents listed under ch. NR 507, Appendix I, Table 3 and the concentrations at which the constituents are present in the landfill leachate.

5. Install at least one additional monitoring well at the property boundary in the direction of contaminant migration and sample this well in accordance with par. (b).

6. Sample all wells in accordance with par. (b) to characterize the nature and extent of the release.

7. Notify all property owners and residents on land that directly overlies any part of the plume of contamination if contaminants have migrated off-site as indicated by sampling of wells in accordance with subd. 6. The owner or operator shall provide the department with copies of the notifications within 60 days of their certified delivery to the affected property owners or residents.

(f) Within 60 days of finding that one or more constituents in the assessment monitoring are detected at levels at or above a PAL, ACL, or ES in any sampling event according to s. NR 140.14 and the value is confirmed, the owner or operator shall do one of the following:

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1. Develop a site investigation workplan in accordance with ss. NR 716.05 to 716.11 and submit it to the department within 60 days of confirming an exceedance of a PAL, ACL, or ES in accordance with s. NR 716.09 (1) and containing the information required under s. NR 716.09 (2). The department shall review the submitted work plan within 30 days and respond or direct the owner or operator to proceed without departmental review of the submitted work plans in accordance with s. NR 716.09 (3). The owner or operator shall initiate a site investigation within 90 days of submittal of the workplan to the department in accordance with s. NR 716.11 (2) (g). The owner or operator shall then submit a site investigation report in accordance with ss. NR 716.15 to 716.17 to the department within 60 days of completing the site investigation and receipt of laboratory data in accordance with s. NR 716.15 (1). The department may impose additional requirements on the owner or operator based on the results of the site investigation in accordance with s. NR 716.17 including implementation of an immediate or interim action in accordance with ch. NR 708, if warranted. If a site investigation report is submitted under s. NR 716.15, the report shall include proof of financial responsibility to comply with s. NR 520.05 (1).

2. Submit a report to the department that demonstrates that a source other than the CCR landfill caused the contamination, or that the groundwater standard exceedance resulted from error in sampling, analysis, or natural variation in background groundwater quality. The report shall include the factual or evidentiary basis for any conclusions. The department shall review the submitted report within 30 days and respond with either a denial or acknowledgement that the owner or operator successfully demonstrated that an alternate source was responsible for the exceedances. If the department determines that the owner or operator did not successfully demonstrate that the exceedances were the result of a source other than the CCR landfill, the owner or operator shall develop a site investigation workplan in accordance with subd. 1. If a successful demonstration is made, as determined by the department, the owner or operator shall continue monitoring in accordance with the assessment monitoring program and may return to detection monitoring if the constituents under ch. NR 507, Appendix I for CCR wells are below the groundwater protection standards. The owner or operator shall include the report required under this subdivision in the annual groundwater monitoring and corrective action report required under par. (a).

**(3) REMEDIAL ACTION OPTIONS.** (a) Upon confirmation of a release from a CCR landfill or confirmation under s. NR 508.06 (2) that a PAL, ACL, or ES has been attained or exceeded at any CCR well according to s. NR 140.14 and an alternate source was not demonstrated in accordance with sub. (2) (f) 2., the owner or operator shall evaluate and select remedial action options and develop a remedial action options report in accordance with ch. NR 722 to assess potential corrective measures to prevent further releases, to remediate any releases, and to restore the affected area to original conditions if

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possible. The department may not grant the owners or operators of any CCR landfill an approval to prepare or submit a risk assessment under s. NR 722.11. Any soil contamination shall be addressed in accordance with the requirements under ch. NR 720. The initial remedial action options report shall be completed and submitted to the department within 90 days of the confirmation of a release from the CCR landfill in accordance with s. NR 722.13, unless the department determines that additional time to complete the report is needed due to site-specific conditions or circumstances. The 90-day deadline to complete the assessment of remedial action options may be extended by the department for no longer than an additional 60 days. The owner or operator shall submit an updated evaluation of the remedial action options based on the findings of the site investigation in an addendum to the initial remedial action options report to the department within 60 days of the submittal of the site investigation report required under sub. (2) (f) 1. The remedial action options report, any addendum, and department response shall be placed in the written operating record under s. NR 506.17 (2) and posted on a publicly accessible internet site under s. NR 506.17 (3). The owner or operator shall also include a copy of the remedial action options report and any addendums in the annual groundwater monitoring and corrective action report.

(b) The owner or operator of the CCR landfill shall continue to monitor groundwater in accordance with the assessment monitoring program under sub. (2) until completion of the remedy and case closure under sub. (5).

(c) The owner or operator shall also submit an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under par. (a) and address all of the following in the remedial action options report submitted to the department under ch. NR 722:

1. The performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination.

2. The time required to begin and complete the remedy.

3. The institutional requirements, such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy.

(d) The department shall respond to the submission of the remedial action options report required under ch. NR 722 in accordance with s. NR 722.15.

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(e) The department shall hold a public informational hearing to discuss the results of the remedial action options report with interested and affected parties at least 30 days prior to the selection of a remedy.

**(4) REMEDIAL ACTION SELECTION.** (a) Based on the results of the remedial action options evaluation, the owner or operator shall select a remedy that, at a minimum, meets the standards listed under par. (b) and meets the requirements under ch. NR 722 for the selection of remedial actions. The owner or operator shall describe the selected remedy in the remedial action options report and include a section indicating how the selected remedy meets the standards specified under par. (b).

(b) Any chosen remedial action shall meet all of the following standards:

1. Be protective of human health and the environment.
2. Be shown to have the ability to attain the groundwater protection standards under ch. NR 140.
3. Control the source or sources of releases to reduce or eliminate, to the maximum extent feasible, further releases of constituents under ch. NR 507, Appendix I for CCR landfills into the environment.
4. Remove from the environment as much of the contaminated material that may have been released from the CCR landfill as is feasible, accounting for factors such as avoiding inappropriate disturbance of sensitive ecosystems.
5. Comply with standards for management of wastes as specified under ch. NR 506 for CCR material.

(c) In selecting a remedy that meets the standards under par. (b), the owner or operator of the CCR landfill shall consider all of the following evaluation factors:

1. The long- and short-term effectiveness and protectiveness of the potential remedy or remedies, along with the degree of certainty that the remedy will prove successful based on consideration of all of the following:
  - a. The magnitude of reduction of existing risks.
  - b. The magnitude of residual risks in terms of likelihood of further releases due to CCR remaining following the implementation of a remedy.

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c. The type and degree of long-term management required, including monitoring, operation, and maintenance.

d. The short-term risks that might be posed to the community or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and re-disposal of the contaminant.

e. The time until full protection will be achieved.

f. The potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, re-disposal, or containment.

g. The long-term reliability of the engineering and institutional controls.

h. The potential need for replacement of the remedy.

2. The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of all of the following factors:

a. The extent to which containment practices will reduce further releases.

b. The extent to which treatment technologies may be used.

3. The ease or difficulty of implementing a potential remedy based on all of the following types of factors:

a. The degree of difficulty associated with constructing the technology.

b. The expected operational reliability of the technologies.

c. The need to coordinate with and obtain necessary approvals and permits from other municipalities, programs, or agencies.

d. The availability of necessary equipment and specialists.

e. The available capacity and location of needed treatment, storage, and disposal services.

f. The degree to which community concerns are addressed by a potential remedy.

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(d) The owner or operator shall specify, as part of the selected remedy in the remedial action options report, a schedule for implementing and completing the selected remedial activities. The owner or operator shall propose in the schedule the completion of remedial activities within a reasonable period of time, subject to approval by the department. The owner or operator of the CCR landfill shall consider all of the following factors in determining the schedule for implementing and completing the selected remedial activities:

1. The extent and nature of contamination.
  2. The reasonable probabilities of remedial technologies in achieving compliance with the ch. NR 140 groundwater protection standards and other objectives of the remedy.
  3. The availability of treatment or disposal capacity for CCR managed during implementation of the remedy.
  4. The potential risks to human health and the environment from exposure to contamination during implementation of the remedy.
  5. The resource value of the aquifer, including all of the following:
    - a. Current and future uses.
    - b. Proximity and withdrawal rate of users.
    - c. Groundwater quantity and quality.
    - d. The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to CCR constituents.
    - e. The hydrogeologic characteristic of the facility and surrounding land.
    - f. The availability of alternative water supplies.
  6. Any other factors determined by the department.
- (e) The department shall respond to the submission of the remedial action options report required under sub. (3) in accordance with s. NR 722.15.



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(5) REMEDIAL ACTION IMPLEMENTATION. (a) Within 90 days after the department approves a remedy from the remedial action report under sub. (4), the owner or operator shall initiate remedial activities. Based on the schedule established under sub. (4) (d) for implementation and completion of remedial activities, the owner or operator shall do all of the following:

1. Establish and implement a corrective action groundwater monitoring program that, at a minimum, meets the requirements of an assessment monitoring program under sub. (2), documents the effectiveness of the corrective action remedy, and demonstrates compliance with the groundwater protection standards under ch. NR 140.

2. Implement the corrective action remedy selected by the department under sub. (4).

3. Take any interim measures necessary to reduce the contaminants leaching from the CCR landfill and potential exposures to human or ecological receptors. Interim measures shall, to the greatest extent feasible, be consistent with the objectives of and contribute to the performance of any remedy approved by the department under sub. (4). All of the following factors shall be considered by an owner or operator in determining whether interim measures are necessary:

a. The time required to develop and implement a final remedy.

b. The actual or potential exposure of nearby populations or environmental receptors to any of the constituents detected under ch. NR 507, Appendix I, Tables 1A, 3, and 4.

c. The actual or potential contamination of drinking water supplies or sensitive ecosystems.

d. Further degradation of the groundwater that may occur if remedial action is not initiated expeditiously.

e. Weather conditions that may cause any of the constituents detected under ch. NR 507, Appendix I, Tables 1A, 3, and 4 to migrate or be released.

f. The potential for exposure to any of the constituents listed under ch. NR 507, Appendix I as a result of an accident or failure of a container or handling system.

g. Any other situations that may pose threats to human health and the environment.

(b) If, at any time, the department determines that compliance with the requirements under ch. NR 140 in accordance with ending a remedial action under ch. NR 726 are not being achieved through the

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remedy selected, the department shall direct the owner or operator in writing to propose an alternative remedy or other methods or techniques that could feasibly achieve compliance with the requirements to the department in accordance with sub. (4).

(c) A remedy selected under sub. (4) shall be considered complete when the department determines all of the following:

1. The groundwater protection standards under ch. NR 140 have been achieved at all points within the plume of contamination that lie beyond the groundwater monitoring well system established at the CCR landfill.

2. The owner or operator of the CCR landfill has demonstrated that concentrations of constituents detected under ch. NR 507, Appendix I, Tables 1A, 3, and 4 have not exceeded the groundwater protection standards under ch. NR 140 for a period of 3 consecutive years.

3. All actions required to complete the remedy have been satisfied.

(d) Upon completion of the remedy, the owner or operator shall notify the department in accordance with s. NR 507.30 (1). The notification shall be submitted to the department under s. NR 506.17 (4), placed in the written operating record under s. NR 506.17 (2) and posted on a publicly accessible internet site under NR 506.17 (3). The owner or operator shall apply to the department for a case closure under ch. NR 726.

**SECTION 32. NR 512.02 (1) is renumbered NR 512.02 (1) (a) and amended to read:**

**NR 512.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all landfills as defined in under s. 289.01 (20), Stats., ~~except landfills including all CCR landfills and expansions.~~

(b) This chapter does not govern any of the following:

1. Landfills regulated under ch. NR 503., ~~hazardous~~

2. Hazardous waste facilities as defined in under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallic.~~

3. Metallic mining operations for nonferrous minerals as defined in under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallic.~~

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4. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 33. NR 512.13 (1) is renumbered (1) (intro.) and amended to read:**

**NR 512.13 (1) LOCATIONAL CRITERIA AND PERFORMANCE STANDARDS.** A demonstration that the proposed landfill will meet the locational criteria and performance standards ~~in~~under s. NR 504.04. For a new CCR landfill or an expansion of a CCR landfill, all of the following also apply:

**SECTION 34. NR 512.13 (1) (a), (b), and (c) are created to read:**

**NR 512.13 (1) (a)** The demonstration shall address all of the following factors, at a minimum, when determining whether an area is unstable:

1. On-site or local soil conditions that may result in significant differential settling.
2. On-site or local geologic or geomorphologic features.
3. On-site or local human-made features or events both surface and subsurface.

(b) A facility or practice near a floodplain may not restrict the flow of the regional flood, reduce the temporary water storage capacity of the flood plain, or result in washout of solid waste, so as to pose a hazard to human life, wildlife, or land or water resources.

(c) A facility or practice may not result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in s. NR 27.03 (1).

**SECTION 35. NR 514.02 (1) is renumbered 514.02 (1) (a) and amended to read:**

**NR 514.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all landfills as defined ~~in~~under s. 289.01 (20), Stats., ~~except small~~ including all CCR landfills and expansions.

(b) This chapter does not govern any of the following:

1. Small size and intermediate size construction and demolition waste landfills regulated under ch. NR 503, hazardous waste facilities as defined ~~in~~under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallic.~~

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2. Metallic mining operations for nonferrous minerals as defined ~~in~~under s. 293.01 (9), Stats., and regulated under ch. NR 182;~~and metallic.~~

3. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 36. NR 514.04 (7) and (8) are created to read:**

**NR 514.04 (7) DISCRETIONARY PRE-PLAN OF OPERATION SUBMITTAL PUBLIC MEETING.** (a) After a feasibility determination is issued by the department, the owner or operator of a proposed CCR landfill shall notify the department at least 30 days prior to the submittal of a plan of operation to the department and post the draft plan of operation on its publicly accessible internet site. The department shall post the draft plan of operation on its internet site and shall hold a public meeting if within 30 days after posting the draft plan of operation on the department's internet site any county, city, village or town, the applicant or any 6 or more persons file a written request for a public meeting with the department. The request shall indicate the interests of the municipality or persons who file the request and state the reasons why the hearing is requested.

(b) The department shall post notice of the public meeting and the draft plan of operation report on the department's internet site at least 30 days prior to the meeting, and the owner or operator shall also post the notice and the draft plan of operation on its publicly accessible internet site. Additionally, the department shall post a written notice of the public meeting at the department office closest to the location of the proposed CCR landfill. Written notice shall be provided by the department to any interested party identified in the department's feasibility determination. At the public meeting the department shall solicit public comments on the draft plan of operation report.

**(8) DISCRETIONARY PRE-PLAN OF OPERATION MODIFICATION PUBLIC MEETING.** (a) Excluding the plan of operation modification for initial permitting under s. NR 514.045, the owner or operator of a CCR landfill shall notify the department at least 30 days prior to the submittal of a plan of operation modification affecting the closure plan, liner system, leachate system, or changes that reduce the stringency of groundwater monitoring requirements to the department and post the draft plan of operation modification on its publicly accessible internet site. The department shall post the draft plan of operation modification on its internet site and shall hold a public meeting if within 30 days after posting the draft plan of operation on the department's internet site, any county, city, village or town, the applicant or any 6 or more persons file a written request for a public meeting with the department. The request shall

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indicate the interests of the municipality or persons who file the request and state the reasons why the hearing is requested.

(b) If the department determines that a public meeting will be held, the department shall post notice of the public meeting and the draft plan of operation modification report on the department's internet site at least 30 days prior to the meeting, and the owner or operator shall also post the notice and the draft plan of operation modification on its publicly accessible internet site. Additionally, the department shall post a written notice of the public meeting at the department office closest to the location of the proposed CCR landfill. At the public meeting, the department shall solicit public comments on the draft plan of operation modification report.

**SECTION 37. NR 514.045 is created to read:**

**NR 514.045 Procedural requirements for initial permitting of CCR landfills. (1)**

GENERAL. An owner or operator of a new or existing CCR landfill that is licensed or constructed prior to the effective date of this section [LRB inserts date] shall submit a plan of operation modification to the department no later than 6 months after the effective date of this section [LRB inserts date] to update the plan of operation to comply with the applicable requirements under chs. NR 500 to 520 for CCR landfills. The plan of operation modification shall address all phases of the CCR landfill. At a minimum, the plan of operation modification shall include all of the following:

(a) A plan that meets the requirements under s. NR 500.05, including the certifications required under s. NR 500.05 (4).

(b) A demonstration that all phases of the CCR landfill meet the performance criteria under s. NR 504.04 (4) (a), (b), and (c).

(c) A demonstration that all phases of the CCR landfill meet the locational criteria under s. NR 504.04 (3) (g), (h), and (i). The demonstration shall address all of the following factors, at a minimum, when determining whether an area is unstable:

1. On-site or local soil conditions that may result in significant differential settling.
2. On-site or local geologic or geomorphologic features.
3. On-site or local human-made features or events both surface and subsurface.

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(d) A demonstration that the facility or practices near floodplains may not restrict the flow of the regional flood, reduce the temporary water storage capacity of the floodplain, or result in washout of solid waste so as to pose a hazard to human life, wildlife, or land or water resources.

(e) A demonstration that the facility or practices may not result in the destruction or adverse modifications of the critical habitat of endangered or threatened species as identified in s. NR 27.03 (1).

(f) A demonstration that the CCR landfill design meets requirements under s. NR 504.12 or an alternate design under s. NR 504.10. The demonstration shall include a design report, engineering drawings, and calculations.

(g) The plans required under s. NR 514.07 (10).

(h) A demonstration that the CCR groundwater monitoring system complies with the requirements under s. NR 507.15 (3), including documentation of the design, installation, and development of any CCR wells.

(i) An updated sampling plan that addresses the requirements under s. NR 507.15 (3).

**(2) COMPLETENESS.** Within 90 days after the owner or operator of a new or existing CCR landfill submits a plan of operation modification, the department shall provide written notification to the owner or operator, and any other person who has filed a written request, whether or not the plan of operation modification is complete. If the submittal is determined to be incomplete, the department shall specify the information that shall be submitted before the plan may be deemed complete. The department shall determine if the plan of operation modification is complete by determining whether or not the minimum requirements of this chapter have been met. The department may require the applicant to submit additional information at any time, including after determining that the plan of operation is complete, if the department establishes that the plan of operation is insufficient without the additional information. If the owner or operator submits additional information that substantially differs from the complete submittal, the procedures under this subsection and sub. (3) shall be repeated.

**(3) NOTIFICATION OF COMPLETENESS, PUBLIC MEETING AND PUBLIC COMMENT PERIOD.** After the department determines the report is complete, the department shall publish a class 1 notice under ch. 985, Stats., in the official newspaper designated under s. 985.04 or 985.05, Stats., or, if none exists, in a newspaper likely to give notice in the area of the landfill, and shall publish the notice on its internet site. A copy of the plan of operation modification submittal shall also be published on the department's

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internet site during the comment period. The notice shall include a statement that the plan of operation modification for initial permitting of the CCR landfill is complete. The notice shall invite the submission of written comments by any person within 60 days after the notice is published. The department shall hold a virtual or in person public meeting during the 60-day comment period to receive oral comments on the complete submittal.

**Note:** Section NR 506.17 (3) (d) 1., requires an owner or operator to publicly notice the plan of operation modification submittal and the department's final decision documents, including the notification of completeness, on the owner or operator's publicly accessible internet site.

**(4) DRAFT DECISION AND REVIEW TIMES.** The department shall issue a draft decision on the plan of operation modification to the owner or operator in writing within 60 days after the completion of the public comment period under sub. (3). The draft decision shall include a written response to comments received under sub. (3). The draft decision shall be published on the department's internet site for 30 days for public comments. The department shall issue a final decision within 30 days following the end of the 30-day public comment period on the draft decision.

**(5) FAILURE TO DEMONSTRATE COMPLIANCE WITH LOCATIONAL CRITERIA.** (a) Within 6 months of a determination that an existing CCR landfill does not comply with the location criteria for unstable areas specified under sub. (1) (c), an owner or operator shall cease placing CCR and non-CCR waste streams into the CCR landfill and close the CCR landfill in accordance with the requirements under s. NR 506.083. This timeframe does not apply if the owner or operator complies with the alternative closure procedures under s. NR 506.083 (7).

(b) An owner or operator of a new CCR landfill or a lateral expansion of a CCR landfill who fails to make the demonstration showing compliance with the locational requirements specified under sub. (1) (b) to (f) is prohibited from placing CCR in the CCR unit.

**SECTION 38. NR 514.07 (10) is created to read:**

**NR 514.07 (10) ADDITIONAL REQUIREMENTS FOR CCR LANDFILLS.** The owner or operator of a new or existing CCR landfill or lateral expansion of a CCR landfill shall update the plan of operation every 10 years during the landfill's active life to comply with regulations in place at the time of the update. The plan of operation update will be considered a plan of operation modification, but shall follow the completeness, review times and pre-plan of operation submittal public meeting requirements of s. NR 514.04. The plan of operation for all CCR landfills shall include all of the following:

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(a) A CCR fugitive dust control plan in accordance with all of the following:

1. The plan shall identify and describe the CCR fugitive dust control measures the owner or operator will use to minimize CCR from becoming airborne at the facility. The owner or operator shall select and include in the CCR fugitive dust control plan the CCR fugitive dust control measures that are most appropriate for site conditions, along with an explanation of how the measures selected are applicable and appropriate for site conditions. Control measures may include any of the following:

- a. Locating CCR inside an enclosure or partial enclosure.
- b. Operating a water sprayer or fogging system.
- c. Reducing fall distances at material drop points.
- d. Using wind barriers, compaction or vegetative covers.
- e. Establishing and enforcing reduced vehicle speed limits.
- f. Paving and sweeping roads.
- g. Covering trucks transporting CCR.
- h. Reducing or halting operations during high wind events.
- i. Applying a daily or intermediate cover.

2. The plan shall include procedures to wet CCR with water to a moisture content that will prevent wind dispersal but will not result in free liquids. In lieu of water, wetting of CCR may be accomplished with an appropriate chemical dust suppression agent.

3. The plan shall include a description of the procedures the owner or operator will follow to periodically assess the effectiveness of the control plan. At a minimum, the assessment shall include a visual inspection at least every 7 days, unless the CCR landfill is inactive and all areas are covered by intermediate or final cover.

4. The plan shall be modified in accordance with s. NR 514.04 (6) whenever there is a change in conditions that may substantially affect the plan of operation.



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5. The plan shall address the preparation of an annual fugitive dust control report in accordance with s. NR 506.20 (4).

**Note:** The requirements under par. (a) apply in addition to, not in place of, any applicable standards under the federal Occupational Safety and Health Act.

(b) A run-on and run-off control system plan that includes all of the following:

1. A run-on and run-off control system designed in accordance with the requirements under s. NR 504.12 (2).

2. Plan sheets depicting the location of run-on and run-off control features, detail drawings, and supporting engineering calculations.

3. Construction procedures and a schedule for construction.

4. Modification every 5 years from the date of the most recent plan approval or whenever there is a change in conditions that may substantially affect the written plan in effect. The modification shall be requested by the owner or operator in accordance with s. NR 514.04 (6) prior to the 5-year deadline.

(c) A written closure plan in accordance with the requirements under s. NR 514.06 (10) and all of the following:

1. A narrative description of how the CCR landfill will be closed, including a description of 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.

2. A description of the final cover system, designed in accordance with s. NR 504.07, and the methods and procedures to be used to install the final cover.

3. A demonstration, including a narrative discussion, of how final closure will meet the performance standards under s. NR 506.083 (6).

4. An estimate of the maximum volume in cubic yards of CCR that will be disposed on-site over the active life of the CCR landfill.

5. An estimate of the largest area of the CCR landfill that will require a final cover at any time during the CCR landfill's active life.

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6. A schedule for completion of all closure activities, including an estimate of the year in which all closure activities for the CCR landfill will be completed. The schedule shall provide sufficient information to describe the sequential steps that will be taken to close the CCR landfill, including identification of major milestones such as coordinating with other agencies and obtaining other necessary approvals or permits, installation of the final cover system, and the estimated timeframes to complete each step or phase of CCR landfill closure. If the estimated timeframes to complete closure exceed the timeframes specified under s. NR 506.083 (3) (a), the plan shall include the site-specific information, factors and considerations that support any time extension.

7. The plan shall be modified in accordance with s. NR 514.04 (6) whenever there is a change in conditions that may substantially affect the written closure plan or unanticipated events necessitate a revision of the written closure plan. The modification shall be submitted to the department in writing at least 60 days prior to a planned change in the operation of the CCR landfill, 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 landfill, the owner or operator shall submit the modification request to the department no later than 30 days following the triggering event.

8. If closure of the CCR landfill will be accomplished through removal of CCR from the CCR landfill, the closure plan shall be modified and approved by the department prior to implementation in accordance with s. NR 514.04 (6). The closure plan shall include a description of the procedures to remove the CCR and decontaminate all areas affected by the CCR landfill in accordance with s. NR 506.08 (5).

(d) A written long-term care plan that addresses all of the following:

1. A description of the monitoring and maintenance activities and the frequency at which those activities will be performed. The activities shall include, at a minimum, all of the following:

a. Long-term care activities specified under s. NR 514.06 (11).

b. Maintaining the integrity and effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.

c. Maintaining the effectiveness of the leachate collection and removal system and operating the leachate collection and removal system in accordance with the requirements under s. NR 504.12 (3) (a).

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d. Maintaining the groundwater monitoring system and monitoring the groundwater in accordance with ch. NR 507 and the sampling plan approval.

2. The name, address, telephone number, and email address of the person or office to contact about the facility during long-term care.

3. A description of the planned uses of the property during long-term care. Post-closure uses may not disturb the integrity of the final cover, liner, or any other component of the landfill, or the function of the monitoring systems unless approved in writing by the department. A written request for approval as part of the plan of operation submittal or a modification shall include a demonstration that disturbance of the final cover, liner, or other component of the containment system, including any removal of CCR, will not increase the potential threat to human health or the environment. The demonstration shall be certified by a professional engineer in accordance with s. NR 500.05 (4) (a).

(e) The long-term care plan under par. (d) may be modified in accordance with s. NR 514.04 (6). The owner or operator shall modify the long-term care plan whenever there is a change in the operation of the CCR landfill that would substantially affect the written long-term care plan in effect; or after long-term care activities have commenced, when unanticipated events necessitate a revision of the written long-term care plan. The modification shall be submitted to the department in writing at least 60 days prior to a planned change in the operation of the CCR landfill, or no later than 60 days after an unanticipated event requires the need to revise an existing long-term care plan. If a written long-term care plan is revised after long-term care activities have commenced for a CCR landfill, the owner or operator shall submit the modification request to the department no later than 30 days following the triggering event.

**SECTION 39. NR 514.09 (1) (b) 7. is repealed.**

**SECTION 40. NR 516.02 (1) is renumbered NR 516.02 (1) (a) and amended to read:**

**NR 516.02 Applicability. (1) (a)** Except as provided in par. (b) and except as otherwise provided, this chapter governs all landfills as defined ~~in~~under s. 289.01 (20), Stats., ~~except small~~ including all CCR landfills and expansions as defined under s. NR 500.03 (26n) and (121m).

(b) This chapter does not govern any of the following:

1. Small size construction and demolition waste landfills regulated under ch. NR 503, hazardous

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2. Hazardous waste facilities as defined ~~in~~under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallie.~~

3. Metallic mining operations for nonferrous minerals as defined ~~in~~under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallie.~~

4. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 41. NR 520.02 (1) is renumbered NR 520.02 (1) (a) and amended to read:**

**NR 520.02 Applicability. (1)** (a) Except as provided in par. (b) and except as otherwise provided, this chapter governs all solid waste facilities as defined ~~in~~under s. 289.01 (35), Stats., ~~except hazardous including all CCR landfills and expansions.~~

(b) This chapter does not govern any of the following:

1. Hazardous waste facilities as defined ~~in~~under s. 291.01 (8), Stats., and regulated under chs. NR 660 to 679; ~~metallie.~~

2. Metallic mining operations for nonferrous minerals as defined ~~in~~under s. 293.01 (9), Stats., and regulated under ch. NR 182; ~~and metallie.~~

3. Metallic mining operations for ferrous minerals as defined ~~in~~under s. 295.41 (26), Stats., including mining wastes and mining waste sites as defined ~~in~~under s. 295.41 (30) and (31), Stats., and regulated under subch. III of ch. 295, Stats.

**SECTION 42. NR 520.15 Table 5 is amended to read:**

**TABLE 5**  
**Fee Schedule - Landfills And Surface Impoundments Plan Review Fees**

Facility Type	Type of Submittal	Plan Review Fee
Municipal solid waste landfills	Landfill stability plan	\$2500 <sup>(1)(2)</sup>
All solid waste landfills	Research, development and demonstration plan	\$2500 <sup>(1)(2)</sup>
All landfills, <u>excluding CCR landfills</u>	Annual report	\$500 <sup>(3)</sup>
<u>CCR landfills</u>	<u>Annual report under s. NR 506.20 (3)</u>	<u>\$2,000</u>
<u>CCR landfills</u>	<u>Plan of operation modification for initial permitting under s. NR 514.045 (1)</u>	<u>\$30,500</u>

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- (1) These fees apply if the submittal is not proposed as part of the plan of operation. These fees apply to proposed renewal submittals for research, development and demonstration plans after approval of initial submittal.
  - (2) A landfill stability plan submitted under s. NR 514.07 (9) or a research, development and demonstration submitted under s. NR 514.10, as referred to in Table 5, are plan modifications which propose to modify a feasibility report, plan of operation, or closure plan.
  - (3) This fee applies to all annual reports for ~~landfill~~ landfills, except CCR landfills, unless the report is also a renewal submittal for a research, development and demonstration plan.

**SECTION 43. EFFECTIVE DATE.** This rule takes effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.

**SECTION 44. BOARD ADOPTION.** This rule was approved and adopted by the State of Wisconsin Natural Resources Board on [DATE].

Dated at Madison, Wisconsin \_\_\_\_\_.

STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

BY \_\_\_\_\_

For Preston D. Cole, Secretary

(SEAL)

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