

**Nebraska Department of  
Environment and Energy**



# **Coal Combustion Residuals (CCR) Rule & State Permit Program Application**

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and  
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# Nebraska Department of Environment and Energy

- **CCR Rule History & Litigation**
- **Title 132 State Rulemaking**
- **State CCR Permit Program Application Process to EPA**

# CCR Rule History

- **2015 CCR Rule**
  - **Established RCRA subtitle D regulation over CCR**
  - **Created 40 CFR 257, subpart D**
    - **Overlap with MSWLF program in Part 258; 2 unit types**
    - **Non-compliant units are “open dumps” and must close**
    - **Robust G.W. monitoring & protection req'ts, 30 yr. P.C.**
  - **2015 rule designed to be “self-implementing” (???)**
    - **No federal permitting, inspection, or enforcement**
    - **Enforcement through environmental citizen suits**
    - **States could amend SWMPs to extend some deadlines**

## CCR Rule History (cont.)

- **2016 WIIN Act -- amended RCRA § 4005(d)**
  - **States may, but are not required to, develop & submit a CCR permit program for EPA approval**
  - **Approved programs operate “in lieu of” CCR rule**
  - **Federal CCR rule applies until CCR unit is permitted**
  - **Not identical, but “at least as protective as” federal**
  - **EPA must implement in “nonparticipating states”**
  - **EPA must review state program every 12 yrs, or more frequently upon rule amendment (within 3 yrs) or a “significant release” (within 1 yr)**

## CCR Rule History (cont.)

- ***Util. Solid Waste Activities Grp. v. EPA (USWAG), 901 F.3d 414 (D.C. Cir. 2018)***
  - **Consolidated multiparty litigation before D.C. Circuit challenging 2015 rule by both enviros & industry**
  - **3 major holdings applicable to existing CCR units:**
    - **Non-leaking, unlined surface impoundments cannot continue operation (allowed under 2015 rule)**
    - **Leaking, clay-lined surface impoundments cannot continue operation (2015 rule allowed repair and remediation while continuing operation)**
    - **“Legacy Ponds” are not exempt from post-closure and corrective action req’ts, even when they “early close”**

## Title 132 state rulemaking

- **NDEE website → “Laws/Regs & EQC” → “Proposed Rules and Regulations”**
- **Implement Executive Order 17-04 – Reg Reform**
  - **Comply by more use of incorporation by reference**
- **Replace state FFCA regs in Chapter 4 with adoption of CCR rule by reference**
  - **Current proposal adopts federal rule without modification**
- **Incorporate financial assurance mechanisms by reference while maintaining state differences**
  - **Existing F.A. req’t is 5 years; proposed is 30 years – give us feedback**

# Title 132 rulemaking (cont.)

Title 132, Chapter 4, section number & heading	Corresponding CFR sections
<u>002</u> Location Restrictions	40 CFR §§257.60 through 257.64
<u>003</u> Design Criteria	40 CFR §§257.70 through 257.74
<u>004</u> Operating Criteria	40 CFR §§257.80 through 257.84
<u>005</u> Groundwater Monitoring and Corrective Action	40 CFR §§257.90 through 257.98
<u>006</u> Closure and Post-Closure Care	40 CFR §§257.100 through 257.104
<u>007</u> Recordkeeping, Notification, and Posting of Information to the Internet	40 CFR §§257.105 through 257.107
<u>008</u> Appendices	Appendix I-IV to Part 257
<u>009</u> Maps and Drawings	Existing state requirement

## CCR State Application

- **NDEC → NDEQ → NDEE have regulated “fossil fuel combustion ash” for over 30 years**
  - **Regulated as a solid waste since 1987 or before**
  - **State disposal area permit req’t since around 1992**
  - **G.W. monitoring & protection req’ts since mid 90s**
- **NE’s 100% public power system & accountability to ratepayers are a contrast to other states**
- **Utilities have been proactive in CCR compliance**
- **Existing NDEE staff capabilities & funding**



## CCR State Application (cont.)

- **Application Components:**
  - **Transmittal Letter signed by State Agency Director**
  - **Narrative Description of the State permit program**
    - **Jurisdiction, program responsibilities, & capabilities**
    - **State requirements for compliance monitoring, inspection authority, enforcement, civil intervention**
    - **Permitting and public participation procedures**
    - **number, type, size, and location of CCR units in state**
  - **Legal certification by NE Attorney General's Office**
  - **Copies of all applicable state statutes & regulations**

## CCR State Application (cont.)

- **Application Timeline:**
  - **DRAFT application to EPA in late 2021 for comments**
  - **EQC rulemaking hearing early- to mid- 2022**
  - **If adopted, submit formal application with request that EPA approval be conditioned upon regulations taking effect after NE-AGO, PRO, and SoS review**
  - **“Not later than 180 days” after submittal, EPA must make a “program adequacy determination”, which is published in the Federal Register w/ effective date**
  - **NDEE will contact FFCA permittees in 180-day window to plan for CCR permit issuance**

## CCR State Application (cont.)

- **Other approved states so far: AL, OK, TX**
- **Themes/concerns in other state applications:**
  - **Statistical methods used in analysis of G.W. monitoring data**
  - **Permit term lengths / “Permits for Life”**
  - **Opportunities for Public Participation**
  - **Offsite disposal on property not owned by the electric utility (Bokoshe, OK)**

# Groundwater Monitoring and Corrective Action

- **Analytes**
- **Statistics**
- **Corrective Action**
- **Notifications and Reporting**

# Groundwater Monitoring and Corrective Action (cont.)

- Analytes
  - CCR more logical
  - Legacy SSIs
  - Title 118 option

Title 132 and CCR Analytical Summary Table

Constituent	Title 132 Detection & Assessment	CCR Apx. III Detection	CCR Apx IV Assessment
Antimony			X
Arsenic	X		X
Barium	X		X
Beryllium			X
Boron		X	
Cadmium	X		X
Calcium		X	
Chloride		X	
Chromium	X		X
Cobalt			X
Fluoride		X	X
Iron	X		
Lead	X		X
Lithium			X
Mercury	X		X
Molybdenum			X
pH	X	X	
Radium 226+228			X
Selenium	X		X
Silver	X		
Sulfate	X	X	
TDS		X	
Thallium			X
Zinc	X		
Count:	12	7	15

**Key:**  
 Subject to detection monitoring due to historical SSIs.  
 Subject to remedial action under Nebraska Title 118



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Constituent	Title 132 Detection & Assessment	CCR Apx. III Detection	CCR Apx IV Assessment
Antimony			X
Arsenic	X		X
Barium	X		X
Beryllium			X
Boron		X	
Cadmium	X		X
Calcium		X	
Chloride		X	
Chromium	X		X
Cobalt			X
Fluoride		X	X
Iron	X		
Lead	X		X
Lithium			X
Mercury	X		X
Molybdenum			X
pH	X	X	
Radium 226+228			X
Selenium	X		X
Silver	X		
Sulfate	X	X	
TDS		X	
Thallium			X
Zinc	X		
Count:	12	7	15

Subject to detection monitoring due to historical SSIs.

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# Groundwater Monitoring and Corrective Action (cont.)

## • **Statistics**

- **Identical Regulatory Requirements**
- **Intra-well statistics still allowed for existing analytes, but continue to use early data for background**
- **Inter-well statistics recommended for new analytes if low/absent natural variability**
- **NDEE Flexibility**
  - **NDEE 8-point memo, next page**

## 2021 Power Summit Groundwater Monitoring and Corrective Action (cont.)

**From:** Southwick, Ed

**Sent:** Tuesday, June 1, 2021 1:41 PM

**Subject:** Use of groundwater monitoring statistics at permitted Title 132 facilities

This memo documents recent decisions approved by management regarding groundwater statistical procedures at permitted solid waste disposal areas.

1. A facility may use any method described in the USEPA Statistical Analysis of Ground-water Monitoring Data at RCRA Facilities – Unified Guidance (USEPA, 2009) as well as ASTM D 6312-98 Standard Guide for Developing Appropriate Statistical Approaches for Groundwater Detection Monitoring Programs provided: a. The method still meets the requirements of Title 132, Integrated Solid Waste Management Regulations, Chapter 7, Sections 003.05 through 003.09. b. The method is described in the Sampling and Analysis Plan and approved by the Department.
2. A facility may use an approved verification resampling method, which requires 2 or more sampling events before an initial statistical determination can be made, and still be in compliance with Title 132, Chapter 7, 003.09B, which states “*Within thirty (30) days of completing sampling and analysis, the owner or operator shall determine whether there has been a statistically significant increase over background at each monitoring well,*” provided the initial determination is made within 30 days of the last sampling event needed to perform the resampling method.
3. A facility may use an approved double quantification method, which requires 2 consecutive detections of a previously undetected constituent, before being required use both results to determine if there is an SSI, and still be in compliance with Title 132, Chapter 7, 003.09B, which states “*Within thirty (30) days of completing sampling and analysis, the owner or operator shall determine whether there has been a statistically significant increase over background at each monitoring well,*” provided it makes the determination within 30 days of the second sampling event.
4. A facility can comply with Title 132, Chapter 7, 003.08E, which states “*The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment,*” by using approved surrogate values (i.e. one-half the detection limit) in lieu of J-coded approximate concentrations below the practical quantitation limit (PQL), provided the PQL meets the requirements of Title 132, Chapter 7, 003.08E1.
5. Title 132, Chapter 7, 003.08E1, states “*Any practical quantitation limit that is used in the statistical method shall be the lowest concentration level that can reliably be achieved within the specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.*” Additionally, Title 132, Chapter 7, 003.03 states “*The sampling procedures and frequency shall be protective of human health and the environment.*” The Department interprets Chapter 7 sections 003.03, 003.08E, and 003.08E1 together to require the PQL be at least as low as the groundwater protection standard (i.e. MCL) and should be even lower than the groundwater protection standard if that is attainable.
6. Man-made contaminants: Facilities are no longer required to *qualitatively* declare an SSI based solely on a J-coded detection of a man-made contaminant, such as volatile organic compounds (VOC). In lieu of using approved quantitative tests to determine if there is an SSI, the facility must qualitatively declare an SSI for any detection above the PQL, unless nullified by means of the double quantification method.
7. In response to triggering assessment monitoring and conducting a full Appendix II scan, Title 132, Chapter 7, 005.02B states: “*For any constituent detected in the downgradient wells as a result of the complete Appendix II analysis, a minimum of four (4) independent samples must be collected and analyzed to establish background for the constituents.*” This requirement does not apply to any Appendix I constituent (which is included in the full Appendix II list), because the facility established background for all Appendix I constituents before initiating assessment monitoring.
8. A replacement well does not need to establish initial statistical background pursuant to Title 132, Chapter 7, 003.05 and 003.06, provided initial sampling results from the replacement well are comparable to the most recent results from the well it replaced. Instead, the statistical background already established for the replaced well may be used for the replacement well.



# Groundwater Monitoring and Corrective Action (cont.)

- **Corrective Action**

- **Title 132 and Title 118 requirements will be replaced by 257.96 – 257.98**
- **Strict timelines but N & E can be focused**
- **Public meeting required**
- **Selected Remedies will be Protective yet Practical**

## Groundwater Monitoring and Corrective Action (cont.)

- **Notifications and Reporting**
  - **More time (90 days vs. 30 days) to determine SSIs**
  - **More time to report SSIs (up to 120 days vs. 14 days)**
  - **Implications for Semi-Annual reports (still required)**

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