Impacts of CCR Management Audits and How Utilities are Responding

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Key Points

1. Final Rule Highlights
2. How Utilities Have Prepared
3. Audit Overview & Lessons Learned
4. What Utilities are Doing
Final Rule Highlights
Final CCR Rule

• For purposes of this presentation, we assume the group has a general to detailed understanding of the Final Rule

• The Rule is complex and has layers of interpretation

• Definitions are key

• There are not definitive answers to all site-specific scenarios
  – Legal team should be integral to process
  – Falls back on “recognized and generally accepted good engineering practice” to meet the specified requirements or topics that are more vague
Site-Specific Nature of Applicability

• The truth is, there is not one size fits all or one right answer – depends on utility risk tolerance, management strategies, and management/budget

• Specific applications to Rule require site-specific information, so illustrations/examples, comments are not applicable for every site

• For an informed answer, have to look at site-specific information that will include site conditions/siting issues:
  • History
  • Geotechnical & hydrogeology/GW conditions,
  • Surface water management conditions;
  • Interrelationship with other CCR units on site;
  • Plant operational plans; and
  • Interplay/coordination with other compliance standards
New CCR Impoundments, landfills/landfill lateral expansions must demonstrate compliance prior to placing CCR materials.
What to Focus on Now

• Reconfiguring “Status Designations” of units/sites

• Potential Causal Triggers
  – Stability
  – Groundwater
  – Siting

• Internal Team and Management

• **Ultimately – Keeping Your Plant Operating**
How Utilities Have Prepared
What is the Spectrum of Utility Activity?

- Proactive versus Reactionary
- Where do I stand? How do I compare to the industry?
Level of Activity Silos

• Those that have been restricted (regulated vs. de-regulated)

• Those that have moved slow
  – Available Budget
  – Limited Staff
  – Management hurdles
  – Other Focuses (Air, etc)

• Those that are aggressive
  – Developing internal management protocols
  – Buy-in from Management
What Roadblocks/Hurdles are We Seeing?

• Internal Schedule, $$ Allocation Under-Budgeted (for 2015/16/17)
• Lack of utility staff/resources
• Conflicts with State Permits/Programs (e.g. we want to close now under federal, but state has 12 to 18 month lead time to approve under its permitting programs)
• Status Designations of Inactive and Secondary/Tertiary Ponds
• Historic Impoundments – Closed, Idled, Inactive
• Misconception that entire state permitted landfill (with portions not “existing”) means the remaining footprint not impacted by Rule
• Staging Area Management – being “containerized”
Audits Overview and Lessons Learned
Types of Audits and Purpose

Programmatic Audits
• Outcome = Determine where to focus resources

Detailed Multimedia Audits
• Outcome = Thorough Preparation, Strategy, and Ability to Act
Compliance by “Definition”….from the Bottom Up or Top Down, What Does that Mean or Look Like?

3 STEPS

• **1st – Understand the Rule:** What does it say, digest it, apply it

• **2nd – Apply the Rule:** Identify & audit for compliance - Every known or potentially known CCR unit [Inventory/Status Designations, Applicability]
Compliance by “Definition”….from the Bottom Up or Top Down, What Does that Mean or Look Like?

• 3rd – Strategic Planning and Action
  - Yes – Status Quo may be fine
  - No – What do we have to do “To Comply”
  - Maybe/Never - the answer to “what if we can’t comply”, or “if the cost is too high”, or “we don’t have enough time”, or “it doesn’t mesh with the rest of our overall CCR plan”, or if we did “we’d have to make a draconian change/shut-down”
  - Alternate and/or Supporting Compliance Strategies?
What can you do by the Effective Date?

• Determine what units are exempt/regulated

• Any potential closure triggers you can address?

• “Lined” vs. Unlined Impoundment?

• CCR Piles vs. CCR “Staging Areas”

• Proactive construction or closure activities

• Groundwater Monitoring Program – Preliminary Understanding

• Documentation development / PE certifications – Website and protocols
Compliance Demonstrations

• What to focus on:
  – First, Dust Control Plan
    • Need to find method to “emplace CCR as conditions” or chemical dust suppression agents?
    • May require time to implement operational changes prior to Effective Date
  – Potential causal triggers
    • Structural Integrity Assessments
      – Ability to Retrofit to meet FS?
      – Otherwise, a definitive answer to understand need for alternative management (dry conversion, new unit)
    • Siting
      – Need time to develop alternative path?
      – Need time to determine if you can resolve?
Compliance Demonstrations

• Why Early?
  – Develop process for:
  • Internal review
    – Give time for layers of internal review/comment
    – Legal
    – Branding of units
    – Naming conventions
  • External review
    – Gives team buy-in that results are correct
    – Consistency
    – Manage level of aggression or conservatism
    – Alternate compliance standards
Internal Justifications for Exempting Units

• Since Rule is self-implementing, develop a basis for why you are exempting a unit
  – “Closed” impoundment
  – Inactive Impoundments
  – Staging Areas instead of CCR Piles

• Don’t wait for outside ENGO to inquire

• Develops a common understanding internally
  – Common talking points and understanding for all layers of organization

• Not intended to be placed on public website (in back pocket)
So What Are Utilities Doing?

- Status Designations
- Landfill Expansions
- Staging Areas
- Groundwater
- Data Management
Defining An Impoundment’s “Status Designation”

• Has it already been closed?
• Was it designed to receive CCRs?
  – Determines: CCR or Non-CCR Impoundment
• If CCR Impoundment, does it and/or will it continue to receive CCRs after Effective Date?
  – Determines: Active or Inactive CCR Impoundment
• If Active, is it idled with capacity remaining or plans for beneficial use?
  – Determines: When closure may be triggered
• If Active, does it meet the definition of an existing lined impoundment?
  – Determines: Lined or Unlined Existing Impoundment
• If Inactive, do you plan on closing in 36 months?
  – Determines: Which criteria apply
Secondary/Tertiary Ponds - Designation

• Assume the scenario shown

• Key Questions to Ask:
  – Was this pond originally designed to hold an accumulation of CCRs?
  – Does it treat, store, or dispose of CCR?
  – Does it receive significant amounts of CCR?
  – Even if original design did not intend for it to be a CCR impoundment by definition, has it ever acted as one?
Secondary/Tertiary Impoundments - Limiting CCR Material Discharge

- Longest Flow Path for Settling
- Hanging Baffles
- Decant Structures

INTENT? MODIFY DOWNSTREAM IMPOUNDMENT STATUS
Opportunistic Construction Activities – Pond Reconfiguration
Historic “Closed” vs. Inactive Impoundments

• Need to make determination if unit is “closed” or simply “inactive” (meaning it no longer receives CCR after Effective Date but still contains CCRs and liquids)
  – Is it “breached and dewatered”? Can it impound water (closest definition to “closed”)?

Preamble Page 21409

Once an inactive CCR surface impoundment has been breached and dewatered, the risks are essentially the same as the risks associated with an inactive CCR landfill, which are not subject to any requirements under the final rule.

Preamble Page 21343

Accordingly, the final rule does not impose any requirements on any CCR surface impoundments that have in fact “closed” before the rule’s effective date—i.e., those that no longer contain water and can no longer impound liquid.

– If it still has liquids and/or the ability to impound liquids, may be considered “inactive” instead of “closed” and therefore subject to the regulation
“Strategic” Vertical or Horizontal Expansion?
Strategic CCR Landfill
Horizontal Expansion

Existing

Proposed

STORMWATER POND
(TO BE REMOVED UPON CLOSING OF PHASE II)
Temporary Stockpiling

- A temporary stockpile of CCRs placed on land at the plant site in an “unprotected manner” is considered to be a “CCR Pile”

- The definition of a “CCR Pile” is:
  - any non-containerized accumulation of solid, non-flowing CCR that is placed on land. CCR that is beneficially used off-site is not a CCR pile.

- “CCR Pile” = CCR Landfill
CCR Piles

• To clarify the definition, the EPA discusses its intent of the term *non-containerized* on page 21356 of the Preamble:
  – The use of the phrase “non-containerized” is not intended to require that all activities occur within tanks or containment structures, but merely that specific measures have been adopted to control exposures to human health and the environment.
  – This could include placement of the CCR on an impervious base such as asphalt, concrete, or a geomembrane; leachate and run-off collection; and walls or wind barriers.
“Containerized” Staging Areas
Beneficial Uses

- Coal Mine Reclamation
- Roadway Activities/Agricultural
- Mining out historic disposal activities
Groundwater Monitoring

Assessment Monitoring (§ 257.79)

- Required whenever a statistically significant increase over background is detected for any II constituent(s) (257.79(c)(1))
- Within 90 days of triggering Assessment Monitoring, must establish GOMPs (257.79(c)(3))
- Within 90 days of triggering Assessment Monitoring, and annually thereafter, analyze all aquifer constituents at or below background levels (257.79(g)(4))

Corrective Actions (257.36)

- Triggered by detection of any II constituent exceeding or immediately upon detection of release from CCR unit (257.36(a))
- Most initiate assessment of corrective actions within 90 days of triggering (257.36(a))

Detection Monitoring (§ 257.94)

- Can a demonstration be made to support alternative sampling frequency (other than annual)? (257.94(a))
- Conduct Detection Monitoring every 3 years (257.94(b)(2))
- Conduct Detection Monitoring at alternative frequency if monitoring results support reduction in sampling frequency (257.94(b)(3))

Remedy Selection (257.59)

- Select an approved fate-based remedy (257.59(a)(1))
- Determine if the proposed remedy is technically and economically feasible (257.59(a)(2))
- Implement Alternative Action Program (257.59(c))

Remedial Action Program (257.58)

- Determine if the proposed remedy is technically and economically feasible (257.58(a)(1))
- Implement Alternative Action Program (257.58(c))
- Implement Alternative Action Program (257.58(d))

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Groundwater
Monitoring

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General Timeline – Groundwater Monitoring

30 Months – Where did the time go?

Can you pull some of these activities forward to allow more time for sampling and analyses?
Early Groundwater Analyses

- Groundwater Flow Direction and Elevations
- Site Conceptual Models
Information Management

**Step 1: Develop CCR Public Website Implementation & Action Plan**
- Develop CCR Strategy & Implementation Plan for each CCR Unit
- Determine Operating Record Req. for each compliance component for each affected unit & minimum level of content required for website

**Step 2: CCR Website Logistics, Design, Content, Review Criteria**
- Develop website strategy, implementation schedule w/ action items & responsibilities
- Review existing material, identify other related public information,
- Develop required content per plan for CCR Compliance, PE required sign offs

**Step 3: Review Developed Content & Post Material to Public Site**
- Professional Third Party Review
- Post to Public Portal “Go Live”
- Prepare responses for potential questions
Conclusion

• Publishing of Rule has forced utilities to act

• There is still time to manage risk and find opportunities to actively manage assets and plan

• Getting all critical personnel (eng/enviro/legal/plant/management) in the same room and on same path forward is of utmost importance
Impacts of CCR Management Audits and How Utilities are Responding

QUESTIONS??

Thank you

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