TITLE 329 SOLID WASTE MANAGEMENT DIVISON

Regulatory Analysis
LSA Document #21-458

I. Description of Rule

a. History and Background of the Rule – On April 17, 2015, the United States Environmental Protection Agency (U.S. EPA) published a final rule in the Federal Register (FR) at 80 FR 21302 that established national minimum criteria for the disposal of coal combustion residuals (CCR) as a solid waste, and the design, operation, and closure of new and existing CCR landfills and surface impoundments under Subtitle D of the Resource Conservation and Recovery Act of 1976. This final rule became effective on October 19, 2015, and is codified in the Code of Federal Regulations (CFR) at 40 CFR 257, Subpart D.

When the federal CCR rule was first established in 2015, Indiana rules at 329 IAC 10 permitted regulated entities to dispose of CCR in landfills known as restricted waste sites. Indiana rules at that time did not regulate CCR surface impoundments during operation, and the state standards applicable to closure of CCR surface impoundments differed from the new federal closure standards in some cases. Consequently, IDEM published a final rule in the Indiana Register on December 7, 2016, that incorporated by reference into 329 IAC 10-9-1 the federal standards for CCR surface impoundments at 40 CFR 257, Subpart D.

After promulgation of the U.S. EPA final rule in 2015, the United States Congress passed the Water Infrastructure Improvements for the Nation Act of 2016 (WIIN Act). Section 2301 of the WIIN Act, codified at 42 U.S.C. 6945(d), provides the opportunity for states to seek U.S. EPA approval to operate a state permit program for CCR units. To operate in lieu of the federal CCR rule, a state CCR permit program must be at least as protective as the federal standards.

The First Notice of Comment Period for the CCR rulemaking was published in the Indiana Register (IR) on October 13, 2021, notifying the public of IDEM's intent to establish a comprehensive state permitting program for CCR. The Second Notice of Comment Period for the CCR rulemaking published in the Indiana Register (IR) on December 21, 2022, proposed amendments to rules at 329 IAC 10-3-1, 329 IAC 10-3-4, and 329 IAC 10-9-1, as well as adding a new article at 329 IAC 14, concerning the establishment of a state permitting program for CCR. Subsequently, a Continuation of Second Notice of Comment Period was published in the IR on January 18, 2023, to give interested parties additional time to submit comments on the rulemaking. During this time, the General Assembly passed amendments to IC 13-19-3-3. Public Law 249-2023, effective May 4, 2023, required that Indiana create a state permitting program that is no more stringent than the U.S. EPA regulations at 40 CFR 257, Subpart D.

In response to the passage of Public Law 249-2023, the comments received during the first and second Continuations of Second Notice of Comment Period and the preliminary adoption hearing, and publication of the May 8, 2024, federal final rule establishing regulatory requirements for legacy impoundments and management units, IDEM is proposing to revise the new article added at 329 IAC 14 of the draft rule to incorporate by reference the July 1, 2025, version of the CFR, and to ensure that the state rule is no more stringent than existing federal requirements and does not impose a restriction or requirement that is not imposed by the federal CCR rule, except for new permitting standards. Accordingly, IDEM published an Additional Notice of Public Comment Period (Third Notice of Public Comment Period) on November 5, 2025, reflecting these updates. IDEM is also updating amendments at 329 IAC 10-3-1 and 329 IAC 10-9-1, removing amendments at 329 IAC 10-3-4, and repealing rule language at 329 IAC 10-9-1(b) and 329 IAC 10-9-1(c).

b. Scope of the Rule – This rulemaking is mandated by portions of Indiana Public Laws 100-2021 and 249-2023, codified at IC 13-19-3-1 and IC 13-19-3-3. The goal of this rulemaking is to comply with those provisions and Section 2301 of the WIIN Act, 42 U.S.C. 6945(d), for the implementation in Indiana of the federal CCR rule, and to incorporate by reference 40 CFR 257, Subpart D, concerning minimum criteria and requirements for CCR units. This comprehensive state-operated permit program for CCR units replaces the current partial incorporation of the federal rule at 329 IAC 10-9-1 and is no more stringent than the federal standards at 40 CFR 257, Subpart D, for CCR surface impoundments, CCR landfills, and CCR management units.

c. Statement of Need – This rulemaking is mandated by portions of Indiana Public Laws 100-2021 and 249-2023, codified at IC 13-19-3-1 and IC 13-19-3-3. It is intended to comply with those provisions and Section 2301 of the WIIN Act, 42 U.S.C. 6945(d), for the implementation in Indiana of the federal CCR rule. It ensures that state rules are consistent with, and no more stringent than, federal regulations through incorporation by reference of 40 CFR 257, Subpart D.

d. Statutory Authority for the Proposed Rule – This rulemaking is mandated by portions of Indiana Public Laws 100-2021 and 249-2023, codified at IC 13-19-3-1 and IC 13-19-3-3.

e. Fees, Fines, and Civil Penalties – The proposed rule does not directly impose new fees, fines, or civil penalties. However, regulated entities subject to the new permitting requirements will begin paying the statutory permit fees outlined at IC 13-19-3-3(i).

II. Fiscal Impact Analysis

a. Anticipated Effective Date of the Rule - The anticipated effective date of this rule is September, 2027.

b. Estimated Fiscal Impact on State and Local Government - This rulemaking action eventually will result in two fiscal impacts to the State: 1) the State will begin to receive

permit fees required by IC 13-19-3-3(i); and 2) the State will experience administrative costs to implement a CCR program that will operate in lieu of federal law. Aside from any administrative costs borne by the agency in preparation for the rule's effectiveness, these impacts will not arise until the proposed rule becomes effective, which cannot occur until after U.S. EPA approves Indiana's program. U.S. EPA's evaluation process has averaged one to two years for the states that have applied for approval. See the Federal Register notices approving states' CCR programs at U.S. EPA, Permit Programs for Coal Combustion Residuals, https://www.epa.gov/coalash/permit-programs-coal-combustion-residual-disposal-units. The statutory permit fees are intended to offset the agency's administrative costs in operating the permit program; ideally, the net fiscal impact of this rulemaking action on state government will be less than or equal to zero.

This rulemaking action will not have a fiscal impact on local government.

c. **Sources of Expenditures or Revenues Affected by the Rule –** The statutory CCR permit fees will be triggered by this rule, assuming U.S. EPA approval of the permit program. Upon U.S. EPA program approval, the fees must be deposited into the CCR program fund established by IC 13-19-3-3.2. This fund was "established for the purpose of paying costs incurred by [IDEM] in operating the state permit program." IC 13-19-3-3.2(a). The expenditures and revenues associated with CCR permitting will be impacted until all permitted CCR units are no longer subject to regulation. Note, however, the fees apply to CCR surface impoundments and CCR landfills but not CCR management units. *See* IC 13-19-3-3(i) and (k).

III. Impacted Parties

This rulemaking incorporates by reference the latest version of the CFR for CCR surface impoundments, landfills, and management units. Any facility in Indiana with CCR units that are regulated under the federal rule at 40 CFR 257, Subpart D, will be required to obtain a state permit.

The most recent substantive amendments to the federal CCR rule, which this rulemaking action proposes to add to Indiana law, began regulating two CCR unit types for the first time: legacy CCR surface impoundments and CCR management units (CCRMUs). In turn, those units will be regulated by Indiana's CCR program upon U.S. EPA's approval. According to U.S. EPA, there are fifteen (15) legacy surface impoundments and twenty-four (24) known CCRMUs in Indiana. The number of CCRMUs may change as facilities comply with 40 CFR 257.75, which requires CCR facility owners to "conduct a facility evaluation to identify all CCR management units at the facility." Non-legacy CCR surface impoundments and CCR landfills are already regulated by Indiana's rules; therefore, these units are not impacted by this rule, except to the extent this rule triggers the statutory permit fees applicable to these units. Any landfill currently accepting CCR is already subject to a permit fee under IC 13-20-21-3.

IDEM staff will also experience increased administrative workload related to processing CCR unit applications and ensuring compliance with the new state CCR requirements.

This rulemaking also affects members of the public, especially those living near CCR units, which can affect human health and the environment.

IV. Changes in Proposed Rule

329 IAC 10

The proposed rule makes the following changes to existing rule language:

Under 329 IAC 10-3-1, "Exclusions; general":

- Makes technical amendments to existing rule language to account for the creation of Indiana CCR permit program in 329 IAC 14.
- While the surface impoundment closure standard appears to be new, bold-formatted rule language, it is not new or amended language. The approval standard for the closure of solid waste surface impoundments currently exists at 329 IAC 10-3-1(9), and IDEM did not propose to change that standard, which does not apply to CCR surface impoundments, through this rulemaking action. Indeed, changing that standard now would exceed the scope of this rule's public notices, which deal only with regulating and permitting CCR units.

Under 329 IAC 10-3-4, "Exclusion; disposal of wastes meeting restricted waste site Type IV criteria":

- Cleans up outdated language in 329 IAC 10-3-4(a) to conform with current LSA standards.
- Removes references to coal ash residues and foundry sands from 329 IAC 10-3-4(a). Coal ash residues and foundry sands are simply examples of wastes that might be, but are not necessarily, "classified by the commissioner to meet the criteria established in 329 IAC 10-9-4 for restricted waste site Type IV waste." It is unnecessary to provide specific examples of such wastes.
- Adds the reference "in 326 IAC 6-4" to 329 IAC 10-3-4(c)(1).

Under 329 IAC 10-9-1, "Types of facilities":

- Adds "except coal combustion residuals units subject to 329 IAC 14" to the existing rule languages and changes "must" to "shall".

329 IAC 14

This rulemaking action proposes to create a new article at 329 IAC 14. All changes noted under Article 14 reflect new rule language. Generally, IC 13-19-3-3 imposes the requirements that Indiana's CCR program has 1) technical standards consistent with and no more stringent than the corresponding federal standards; and 2) permitting requirements that will satisfy U.S. EPA's standards for state program approval. Under each relevant section, IDEM notes the corresponding federal regulation being mimicked

or incorporated by reference by the draft rule. IDEM also describes changes or additions to the federal regulations; these changes are necessary to implement the permit program and change the self-implementing federal CCR rule to an Indiana-specific rule with state oversight, as required by IC 13-19-3-3(d).

Regarding the state-specific permitting and oversight requirements, IC 13-19-3-3 requires IDEM to adopt rules concerning CCR that are consistent with and no more stringent than the federal CCR rule at 40 CFR 257, Subpart D. The statute also requires IDEM to "Establish a state permit program under Section 2301 of the federal Water Infrastructure Improvements for the Nation Act (42 U.S.C. 6945(d)) for the implementation in Indiana of the federal CCR rule." IC 13-19-3-3(d). The federal CCR rule does not establish a permit program with which IDEM's proposed permit program rules may conflict. Pursuant to the mandate in IC 13-19-3-3(d), IDEM is proposing a permit program that includes administrative elements such as agency approval requirements in addition to Qualified Professional Engineer (QPE) certification, good character disclosures, and financial assurance requirements. The good character and financial assurance requirements are identical to the state requirements that currently apply to comparable solid waste management facilities under the Indiana Code and 329 IAC 10. *See* IC 13-19-4; 329 IAC 10-39-1 *et seq*.

Such requirements do not run afoul of IC 13-19-3-3. While a portion of that section prohibits exceeding the federal CCR rule's standards, another requires the creation of a CCR permit program despite the absence of such a program in the federal rule. To harmonize those provisions, IDEM interprets the statute to mean its proposed CCR rule may not exceed the federal CCR rule's technical standards under subsection (c); however, under subsection (d), the proposed rule must contain the administrative elements of a solid waste management permit program, even though such elements do not exist in the federal CCR rule.

Specifically, with respect to agency oversight over QPE-certified plans, unlike the self-implementing federal CCR rule, which relies on QPE approvals in lieu of permit-based approvals by a governmental regulatory body, Indiana's CCR rule is required by IC 13-19-3-3 to establish a CCR permit program. A CCR program that does not include independent State oversight and approval of CCR unit operation and closure would fail to satisfy IC 13-19-3-3(d) and could jeopardize U.S. EPA's ability to approve Indiana's program to operate in lieu of federal law. All other state CCR permit programs that have been approved, or proposed for approval, by U.S. EPA include independent state-agency oversight and approval of CCR unit operation and closure. For example, North Dakota requires QPE certification (NDAC 33.1-20-08-04(3)(d)(3); NDAC 33.1-20-08-04(3)(e)(2)) and state agency approval (NDAC 33.1-20-08-04(3)(f)(1) and (2)) of the periodic assessments required at 40 CFR 257.73. However, the federal CCR rule only requires QPE certification (40 CFR 257.73(d)(3); 40 CFR 257.73(e)(2)) and placement in the facility's operating record (40 CFR 257.73(f)(1) and (3)). North Dakota added these state-specific approval requirements to the federal rule requirements despite being

discouraged by statute, similar to Indiana, from adopting environmental rules more stringent than federal law. N.D. Cent. Code § 23.1-01-04.

The proposed rule adds the following new rule language:

Under 329 IAC 14-1-1, "Applicability":

- States that the new article applies to CCR unit owners and operators and CCR units as described in 40 CFR 257.50(b) through (i).
- Imposed by 40 CFR 257.50.

Under 329 IAC 14-1-2, "Incorporation by reference":

- Clarifies that references to the CFR mean the July 1, 2025, edition.
- Specifies certain federal rule language and appendices that owners and operators of CCR units must comply with, except as amended to account for language substitutions and permitting standards.
- States that references to 329 IAC 10 MSWLFs mean CCR units for the purposes of this article.
- Clarifies the meaning of the term "subpart" as used in the incorporated federal regulations.

Under 329 IAC 14-1-3, "Validity of existing approvals":

- States that approvals issued by the department before the effective date of this article for CCR units remain valid and effective pending transition to permits under this article.

Under 329 IAC 14-1-4, "Definitions":

- Applies definitions from both state and federal rule language to Article 14 and clarifies that to the extent a federal definition conflicts with a state definition, the federal definition controls.
- Specifies additional definitions that apply throughout this article.
- Imposed by 40 CFR 257.2 and 40 CFR 257.53. Cross-references IC 13-11-2 and 329 IAC 10-2 as necessary pursuant to IC 13-19-3-3(d).

Under 329 IAC 14-1-5, "CCR Fees":

- States that "the owner, operator, or permittee of a CCR unit shall submit the applicable fees under the requirements of IC 13-19-3-3".

Under 329 IAC 14-2-1, "CCR unit permitting":

- States requirements for CCR unit owners and operators regarding closure and post-closure certification approval.

- Specifies that owners and operators are to submit permit applications within 180 days of the effective date of this article.
- Details requirements that do not apply to the permitting of CCR units.
- Details the items that owners and operators of CCR units must include with their permit applications, including a good character disclosure statement under 329 IAC 10-11-2.1(b)(5) and IC 13-19-4. Similar, if not more onerous, disclosure statements are required by all states with CCR programs approved by U.S. EPA. *See* Ga. Comp. R. & Regs. r. 391-3-4-.02(7); N.D. Cent. Code § 23.1-08-17; Okla. Admin. Code § 252:517-3-3(g); Tex. Health & Safety Code § 361.084.
- Specifies that overfills, retrofits, and lateral expansions are subject to the permit requirements of this article.
- Cross-references permitting standards at 329 IAC 10-11 through 10-13. Multiple plans and certifications required by the federal rule must be submitted with a permit application. The federal regulations imposing these requirements are noted elsewhere in this Section.

Under 329 IAC 14-2-2, "Permitting of non-CCR waste in a CCR unit":

- Specifies that non-CCR waste must not be placed in a CCR unit until approval is received from the department through the listed approval mechanisms.
- States that the permit application or modification must include a waste classification under 329 IAC 10-9-4.
- States that non-CCR waste approved for disposal in the CCR unit must maintain a waste classification under 329 IAC 10-9-4.

Under 329 IAC 14-2-3, "Deadlines for acting on applications; insignificant facility modifications":

- Specifies the number of days the commissioner has to approve or deny an application filed with the department.
- Outlines the determination timelines and process that apply to insignificant facility modifications.

Under 329 IAC 14-3-1, "Location restrictions and setbacks":

- Requires the owner or operator of a CCR unit to comply with location restrictions in 40 CFR 257.60 through 40 CFR 257.64.
- Imposed by 40 CFR 257.60 through 257.64.

Under 329 IAC 14-3-2, "Design criteria":

- Specifies that any owner or operator of a new CCR unit or lateral expansion that applies for a permit must comply with the design criteria requirements in 40 CFR 257.70 through 40 CFR 257.75.
- Adds additional clarifying language to sections of 40 CFR 257.70 through 40 CFR 257.75.

- Specifies an alternative compliance option for hydraulic conductivity requirements and geosynthetic clay liner requirements under 40 CFR 257.70(c).
- Imposed by 40 CFR 257.70 through 257.75.

Under 329 IAC 14-3-3, "Operating criteria":

- Specifies that owners and operators of CCR units must follow the operating criteria requirements in 40 CFR 257.80 through 40 CFR 257.84.
- Lists additions and revisions that apply to 40 CFR 257.80 through 40 CFR 257.84.
- Imposed by 40 CFR 257.80 through 257.84.

Under 329 IAC 14-3-4, "Groundwater monitoring and corrective action":

- States that owners and operators of CCR units must comply with the groundwater and corrective action requirements in 40 CFR 257.90 through 40 CFR 257.98.
- Lists additions and revisions that apply to 40 CFR 257.90 through 40 CFR 257.98.
- Clarifies that the commissioner may require monitoring of additional constituents beyond those in 40 CFR 257, Appendix III and Appendix IV, based on the constituents in any non-CCR waste permitted to be accepted at the facility, and that such constituents will be added to the permit.
- Imposed by 40 CFR 257.90 through 257.98.

Under 329 IAC 14-3-5, "Closure and post-closure":

- States that the owner or operator of a CCR unit must follow the closure and post-closure requirements in 40 CFR 257.100 through 40 CFR 257.104 as revised by subsections (b) through (f).
- Replaces phrases in 40 CFR 257.100 through 40 CFR 257.104 with "and approval from the commissioner".
- Details changes made to 40 CFR 257.102.
- Adds the sentence "the progress report must be approved by the commissioner and be placed in the facility's operating record" to the listed provisions.
- Makes the listed changes to 40 CFR 257.104.
- Details requirements that apply to closure and post-closure of a CCR unit, in addition to subsections (a) through (e).
- Imposed by 40 CFR 257.100 through 257.104, IC 13-19-3-3(d), and 329 IAC 10-16-2, 10-22-2(c), 10-22-3, 10-30-4, 10-30-7, 10-31-2(a), 10-31-3(a), 10-31-4 through 10-31-7, and 10-39-2.

Under 329 IAC 14-3-6, "Record keeping, notification, and posting information":

- States that the owner or operator of a CCR unit must comply with the record keeping, notification, and internet posting requirements under 40 CFR 257.105 through 40 CFR 257.107, as amended by subsection (b).

- Imposed by 40 CFR 257.105 through 257.107.

Under 329 IAC 14-4-1, "Financial assurance":

- States that the owner or operator of a CCR unit must comply with the financial assurance requirements of 329 IAC 10-39.
- Imposed by IC 13-19-3-3(d) and 329 IAC 10-39. Financial assurance requirements do not exceed the federal CCR rule and therefore are consistent with IC 13-19-3-3(c). As noted above, IC 13-19-3-3(d) explicitly requires the creation of a state CCR permit program. If financial assurance requirements exceed IC 13-19-3-3 because they do not exist in the federal rule, then IDEM also cannot adopt any permitting requirements whatsoever because those requirements would be considered beyond the minimum federal requirements. Financial assurance, which has no bearing on the technical design or operation of a CCR unit, is properly considered a permit requirement. U.S. EPA agrees. See 83 FR 30360 (Jun. 28, 2018) (Regarding financial assurance and other state-specific requirements in Oklahoma's approved program, "EPA considers these revisions to be administrative ones, that they do not substantively modify the Federal technical criteria.").
- All states with approved CCR permit programs require financial assurance. *See* 85 FR 1271 (Jan. 10, 2020) (Georgia: Approval of State CCR Permit Program); 83 FR 30360 (Jun. 28, 2018) (Oklahoma: Approval of State CCR Permit Program); 86 FR 33898 (Jun. 28, 2021) (Texas: Approval of State CCR Permit Program).

V. Benefit Analysis

a. Estimate of Primary and Direct Benefits of the Rule – The primary and direct benefits of this rulemaking are to 1) comply with Public Laws 100-2021 and 249-2023, codified at IC 13-19-3-1 and IC 13-19-3-3; and 2) create a CCR permit program that incorporates the federal regulations at 40 CFR 257, Subpart D. This rulemaking will ensure that state laws and federal standards are consistent and will allow affected facilities to maintain compliance with both state and federal regulations for CCR units. Furthermore, this rulemaking eventually will trigger statutory permit fees pursuant to IC 13-19-3-3(i) that will financially support IDEM's CCR permit and compliance programs. The analysis that follows relies on the present-day fee structure, which is subject to change over the life of a CCR unit under IC 13-19-3-3(j).

Including legacy ponds, IDEM estimates there are 68 CCR surface impoundments that would be regulated under the proposed state CCR permit program if that program took effect today. Because IC 13-19-3-3(g) mandates that the permit program cannot take effect until it is approved by U.S. EPA, some of those 68 impoundments might not fall under the permit program by the time it becomes effective. Assuming all 68 impoundments are still regulated under the permit program when it takes effect, IDEM should receive $1,394,000 ($20,500 multiplied by 68) in initial one-time permit fees pursuant to IC 13-19-3-3(i)(1).

One year after assessing one-time fees under IC 13-19-3-3(i)(1), IDEM will begin collecting annual fees under IC 13-19-3-3(i)(2) and (3). By statute, the application of those annual fees to any given surface impoundment depends upon whether the impoundment has completed closure in accordance with Section 257.102 of the federal CCR rule and whether post-closure care has been initiated and is still required in accordance with Section 257.104 of the federal CCR rule. As closure methods and timeframes will vary among units, it is impossible to accurately predict how much IDEM should receive in total annual fees under the proposed CCR permit program. For a hypothetical surface impoundment that completes closure in accordance with Section 257.102 of the federal CCR rule sooner than one year after assessment of the one-time fee under IC 13-19-3-3(i)(1) and then needs 30 years of post-closure care in accordance with Section 257.104 of the federal CCR rule, IDEM should receive a total of $300,000 ($10,000 multiplied by 30) in annual fees under IC 13-19-3-3(i)(3). That total would increase by $20,500 for each year the impoundment was subject to the higher annual fee under IC 13-19-3-3(i)(2) before completing closure in accordance with Section 257.102 of the federal CCR rule.

b. Estimate of Secondary or Indirect Benefits of the Rule – As required by IC 13-19-3-3, this rulemaking only incorporates by reference the federal CCR technical standards. Indiana's CCR units already must comply with these federal standards to satisfy federal law. There are, therefore, no secondary benefits associated with this rulemaking.

Instead, any such benefits flow from U.S. EPA's May 2024 rule that added legacy CCR surface impoundments and CCRMUs to the scope of federal CCR regulation. U.S. EPA's analysis of that rule evaluated costs and benefits on a national scale and generally found the estimated costs exceeded monetized benefits, but many expected benefits could not be quantified. EPA RIA, 7-3. If all identified benefits could be fully quantified, the federal rule's benefits may exceed its costs. EPA-RIA, ES-29.

The following tables summarize U.S. EPA's benefits analysis:

Exhibit 5-11 Net Present Value Monetized Benefits for the Final Rule Calculated in Perpetuity (2024$) ($Millions)

Benefit Element	Net Present Value in Perpetuity @ 2% Discount Rate*			
	Legacy CCR SIs	OAFUs	CCRMUs	Total**
Prevention of Impoundment Containment Failure				
Prevention of impoundment releases	$1,830	$21.6	$140	**$1,990**
Sub-Total	**$1,830**	**$21.6**	**$140**	**$1,990**
Avoided Impairment of Human Health				
Reduced incidence of cancer due to arsenic contaminated groundwater	$0.02	<$0.01	$0.01	**$0.03**
Reduced incidence of non-cancer health effects due to arsenic contaminated groundwater	*Not Estimated*	*Not Estimated*	*Not Estimated*	***Not Estimated***
Avoided IQ losses from ingestion of Mercury contaminated fish	$136	$11.7	$118	**$266**
Avoided IQ losses from ingestion of Lead contaminated fish	$37.2	$3.18	$32.1	**$72.5**
Reduced need for specialized education due to ingestion of lead contaminated fish	$0.2	$0.02	$0.2	**$0.39**
Sub-Total	**$174**	**$14.9**	**$150**	**$339**
Avoided Ecological Harm				
Non-Market Water Quality Benefits[211]	$157 - $869	$13.5 - $74.5	$136 - $752	**$306-$1,700**
Protection of Threatened and Endangered Species[212]	$0.12 - $0.36	$0.01 - $0.03	$0.1 - $0.31	**$0.24 - $0.71**
Sub-Total	**$157-$869**	**$13.5-$74.5**	**$136-$752**	**$307-$1,700**
Total	**$2,160 -$2,870**	**$50.0 - $111**	**$426 - $1,040**	**$2,640 – $4,030**

* EPA does not quantify benefits for regulated CCR landfills.
**Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 5-12 Annualized Partially-Monetized Benefits for the Final Rule, 80-Year Time Horizon (2024$) ($Millions)

Benefit Element	Annualized Benefits @ 2% Discount Rate, 80-Year Time Horizon*			
	Legacy CCR SIs	OAFUs	CCRMUs	Total**
Prevention of Impoundment Containment Failure				
Prevention of impoundment releases	$36.6	$0.43	$2.82	**$39.8**
Sub-Total	**$36.6**	**$0.43**	**$2.82**	**$39.8**
Avoided Degradation of Human Health				
Reduced incidence of cancer due to arsenic contaminated groundwater	<$0.01	<$0.01	<$0.01	**<$0.01**
Reduced incidence of non-cancer health effects due to arsenic contaminated groundwater	*Not Estimated*	*Not Estimated*	*Not Estimated*	***Not Estimated***
Avoided IQ losses from ingestion of Mercury contaminated fish	$2.73	$0.23	$2.35	**$5.31**
Avoided IQ losses from ingestion of lead contaminated fish	$0.74	$0.06	$0.64	**$1.45**
Reduced need for specialized education due to ingestion of lead contaminated fish	<$0.01	<$0.01	<$0.01	**$0.01**
Sub-Total	**$3.48**	**$0.30**	**$2.99**	**$6.77**
Avoided Ecological Harm				
Non-Market Water Quality Benefits[213]	$3.14 - $17.4	$0.27 - $1.49	$2.70 - $15.0	**$6.11 - $33.8**
Protection of Threatened and Endangered Species[214]	<$0.01 - $0.01	<$0.01 - <$0.01	<$0.01 - $0.01	**<$0.01 - $0.01**
Sub-Total	**$3.14 - $17.4**	**$0.27 - $1.49**	**$2.71 - $15.0**	**$6.12 - $33.8**
Total	**$43.2 - $57.4**	**$1.0 - $2.22**	**$8.52 - $20.7**	**$52.7 - $80.4**

* EPA does not quantify benefits for regulated CCR landfills.
**Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 5-13 Summary of Estimated Benefits, Net Present Value Basis Calculated in Perpetuity (2024$, $Millions)

Benefit Category	Net Present Value in Perpetuity @ 2% Discount Rate*			
	Legacy CCR SIs	OAFUs	CCRMUs	Total**
Prevention of Impoundment Containment Failure	$1,830	$21.6	$140	$1,990
Avoided Impairment of Human Health	$174	$14.9	$150	$339
Avoided Ecological Harm	$157-$869	$13.5-$74.5	$136-$752	$307-$1,700
Total	**$2,160 -$2,870**	**$50.0 - $111**	**$426 - $1,040**	**$2,640 – $4,030**

*EPA does not quantify benefits for regulated CCR landfills.
**Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 5-14 Summary of Estimated Benefits, Annualized Values, 80-Year Time Horizon (2024$, $Millions)

Benefit Element	Annualized Benefits @ 2% Discount Rate, 80-Year Time Horizon*			
	Legacy CCR SIs	OAFUs	CCRMUs	Total**
Prevention of Impoundment Containment Failure	$36.6	$0.43	$2.82	$39.8
Avoided Impairment of Human Health	$3.48	$0.30	$2.99	$6.77
Avoided Ecological Harm	$3.14 - $17.4	$0.27 - $1.49	$2.71 - $15.0	$6.12 - $33.8
Total	**$43.2 - $57.4**	**$1.0 - $2.22**	**$8.52 - $20.7**	**$52.7 - $80.4**

*EPA does not quantify benefits for regulated CCR landfills.
**Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

For reference, EPA's analysis assumes Indiana has fifteen (15) legacy CCR surface impoundments, out of one hundred ninety-four (194) nationally; twenty-four (24) CCRMUs, out of one hundred ninety-five (195) nationally; and zero (0) OAFUs, or CCRMUs at other active facilities.

c. **Estimate of Any Cost Savings to Regulated Industries –** Once Indiana's CCR permit program is approved by U.S. EPA, facilities may experience a reduction in administrative costs since Indiana's regulations will operate in lieu of federal law, and facilities will not be subject to dual regulation. Otherwise, there are no cost savings to regulated entities as a result of this proposed rule because the regulated facilities are already required to comply with the federal regulations at 40 CFR 257, Subpart D.

VI. Cost Analysis

a. Estimate of Compliance Costs for Regulated Entities – No new technical compliance costs result directly from this rulemaking because regulated CCR units currently must comply with the federal CCR regulations being incorporated by this rulemaking action. Also, regulated entities will be subject to new permit fees, but those fees are imposed by statute. *See* IC 13-19-3-3(i). CCR surface impoundments and CCRMUs are not currently subject to permit fees; surface impoundments will be subject to fees under IC 13-19-3-3(i) once U.S. EPA approves Indiana's program. CCR landfills, currently regulated as restricted waste sites in Indiana, already must pay permit fees and will continue to pay the same fees even after Indiana's program is in place. *See* IC 13-19-3-3(k). CCRMUs have not been accounted for in the fee-setting statute.

Similarly, any costs to comply with the proposed rule's technical standards derive not from this rulemaking action alone, but rather from the federal CCR rule already in effect and from IC 13-19-3-3, which directs IDEM to incorporate the federal standards into state law. Like the benefits discussed above, U.S. EPA analyzed the compliance costs associated with regulating legacy CCR surface impoundments and CCRMUs. The tables below summarize U.S. EPA's conclusions.

The draft rule also requires all CCR units to demonstrate financial responsibility as part of the new permitting program. *See* draft language at 329 IAC 14-4-1. However, only legacy CCR surface impoundments and CCRMUs will incur financial assurance costs for the first time under this rule. CCR landfills and CCR surface impoundments undergoing closure or post-closure already must demonstrate financial assurance under current state regulations. Because facilities do not share their financial assurance costs with the agency, IDEM cannot estimate the costs legacy pond or CCRMU owners and operators will bear because of this rulemaking action.

Exhibit 4-4 Estimated Closure Costs for Legacy CCR SIs (2024$, $Millions)

Discount Rate	Per-Acre Weighted Average Closure Cost	Count of Legacy CCR SIs	Total Acres	Total Closure Cost	Annual Average (Over 7 Years)	Sum or Net Present Value
Total Universe						
Undiscounted	$1.28	194	3,850	$4,910	$702	$4,910
2%	--	194	3,850	--	--	$4,370
Legacy CCR SIs Incurring Incremental Costs						
Undiscounted	$1.28	160	1,720- 2,140	$2,190 - $2,720	$313 - $389	$2,190 - $2,720
2%	--	160	1,720- 2,140	--	--	$1,940 - $2,420

[a] The range for incremental costs reflects differing assumptions about the size of the 140 Legacy CCR SIs without known size information: the low end of the range reflects a median acreage of 9.5 acres based on the 20 Legacy CCR SIs with known size information incurring incremental costs; the high end of the range reflects a median acreage of 12.5 acres based on the set of 40 Legacy CCR SIs with known size information, including those not incurring incremental costs.
[b] Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 4-5 Estimated Groundwater Monitoring and Corrective Action Costs for Legacy CCR SIs (2024$, $Millions)

Discount Rate	Per-Unit Groundwater Monitoring System Cost	Count of Legacy CCR SIs	Per-Unit Corrective Action Cost	Count of Corrective Actions	Total Groundwater Monitoring System Cost	Total Corrective Action Cost	Sum or Net Present Value
Total Universe							
Undiscounted	$0.229	194	$21.9	181	$44.5	$3,970	$4,020
2%	--	194	--	181	--	--	$3,080
Legacy CCR SIs Incurring Incremental Costs							
Undiscounted	$0.229	175	$21.9	163	$40.1	$3,580	$3,620
2%	--	175	--	163	--	--	$2,770

* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 4-6 Estimated Fugitive Dust Control Costs for Legacy CCR SIs (2024$, $Millions)

Discount Rate	Per-Unit Fugitive Dust Control Cost (Annual)	Count of Legacy CCR SIs	Total Fugitive Dust Control Costs	Sum or Net Present Value
Total Universe				
Undiscounted	$0.0110	194	$36.9	$36.9
2%	--	194	--	$30.6
Legacy CCR SIs Incurring Incremental Costs				
Undiscounted	$0.0110	175	$33.2	$33.2
2%	--	175	--	$27.6

* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.

Exhibit 4-7 Estimated Structural Integrity Inspection Costs for Legacy CCR SIs (2024$, $Millions)

Discount Rate	Per-Unit Structural Integrity Cost (Annual)	Count of Legacy CCR SIs	Total Structural Integrity Inspection Costs	Sum or Net Present Value
Total Universe				
Undiscounted	$0.0390	194	$131	$131
2%	--	194	--	$108
Legacy CCR SIs Incurring Incremental Costs				
Undiscounted	$0.0390	175	$118	$118
2%	--	175	--	$97.8
* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.				

Exhibit 4-8 Summary of Estimated Closure Costs for CCRMUs (2024$, $Millions)

Discount Rate	Per-Acre Closure-by-Removal Cost	Count of CCRMUs	Total Acres	Total Closure Cost	Annual Average (Over 7 Years)	Sum or Net Present Value
Total Universe						
Undiscounted	$1.160	195	2,110	$2,450	$349	$2,450
2%	--	195	2,110	--	--	$2,130
CCRMUs Incurring Incremental Costs*						
Undiscounted	$1.160	130	916 - 1,410	$1,060 - $1,630	$152 - $233	$1,060 - $1,630
2%	--	130	916 - 1,410	--	--	$924 - $1,420
*The range for incremental costs reflects differing assumptions about the size of the 130 CCRMUs without known size information: the low end of the range reflects a median acreage of 6 acres based on the eight CCRMUs with known size information incurring incremental costs; the high end of the range reflects a median acreage of 10 acres based on the set of nine CCRMUs with known size information, including one not incurring incremental costs.						

Exhibit 4-9 Summary of Estimated Groundwater Monitoring and Corrective Action Costs for CCRMUs (2024$, $Millions)

Discount Rate	Per-Unit Groundwater Monitoring System Cost	Count of CCRMUs	Per-Unit Corrective Action Cost	Count of Corrective Actions	Total Groundwater Monitoring System Cost	Total Corrective Action Cost	Sum or Net Present Value
Total Universe							
Undiscounted	$0.229	195	$21.9	164	$44.7	$3,600	$3,640
2%	--	195	--	164	--	--	$2,730
CCRMUs Incurring Incremental Costs							
Undiscounted	$0.229	155	$21.9	130	$35.4	$2,850	$2,880
2%	--	155	--	130	--	--	$2,170
* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.							

Exhibit 4-10 Summary of Estimated Incremental Costs, Net Present Value Basis (2024$, $Millions)

Cost Element	Net Present Value (NPV) @ 2% Discount Rate				
	Legacy CCR SIs	OAFUs	CCRMUs	Regulated CCR Landfills	Total
Closure	$1,940 - $2,420	$90.8 - $151	$924 - $1,420	$155	**$3,110 - $4,150**
Groundwater Monitoring and Corrective Action	$2,780	$210	$2,170	$0	**$5,150**
Fugitive Dust Controls	$27.6	$2.73	$0	$0	**$30.3**
Structural Integrity Inspections	$97.8	$0	$0	$0	**$97.8**
Reporting and Recordkeeping	$62.7	$4.57	$52.3	$0	**$120**
Total	**$4,910 - $5,380**	**$308-$369**	**$3,140 - $3,640**	**$155**	**$8,510 - $9,550**
* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.					

Exhibit 4-11 Summary of Estimated Incremental Costs, Annualized Basis (2024$, $Millions)

Cost Element	Annualized Costs @ 2% Discount Rate (80-Year Time Horizon)				
	Legacy CCR SIs	OAFUs	CCRMUs	Regulated CCR Landfills	Total
Closure	$48.9 - $60.9	$2.28 - $3.81	$23.2 - $35.8	$3.89	**$78.4 - $104**
Groundwater Monitoring and Corrective Action	$69.8	$5.29	$54.5	$0	**$130**
Fugitive Dust Controls	$0.694	$0.0687	$0	$0	**$0.763**
Structural Integrity Inspections	$2.46	$0	$0	$0	**$2.46**
Reporting and Recordkeeping	$1.58	$0.115	$1.32	$0	**$3.01**
Total	**$123 - $135**	**$7.76 - $9.28**	**$79.0 - $91.6**	**$3.89**	**$214 - $240**
* Note that some totals may not appear to sum correctly due to the rounding of numbers to three significant digits within each category.					

b. **Estimate of Administrative Expenses Imposed by the Rules –** Aside from the minimal costs associated with permit application preparation and submission, there are no new administrative costs associated with this rulemaking for affected facilities. These costs are minimal because the permit application process requires submission to IDEM of plans and information regulated facilities already must generate to comply with the federal CCR rule.

c. **The fees, fines, and civil penalties analysis required by IC 4-22-2-19.6 –** Regulated entities will be subject to new statutorily required permit fees, *see* IC 13-19-3-3(i), but these fees are not added or imposed directly by this rulemaking action. Accordingly, no analysis is required under IC 4-22-2-19.6 for this rule.

d. **If the implementation costs of the proposed rule are expected to exceed the threshold set in IC 4-22-2-22.7(c)(6)** – The only costs potentially created by this rule involve costs associated with preparing and submitting permit applications and demonstrating financial assurance. These costs will not exceed $1,000,000 over any two-year period because the permitting process largely involves submitting documents applicants must already create under the federal CCR rule. As noted above, IDEM cannot estimate the cost of demonstrating financial assurance. Any other compliance or

implementation costs experienced by regulated entities in conjunction with this rule are properly attributed to IC 13-19-3-3 and the federal CCR rule at 40 CFR 257, Subpart D.

VII. Sources Relied Upon in Determining and Calculating Costs and Benefits – The sources used in determining the costs and benefits include the historical knowledge of the program staff in the Office of Land Quality and the Office of Legal Counsel; Public Laws 100-2021, 165-2021, and 249-2023, codified at IC 13-19-3-1 and IC 13-19-3-3; federal regulations at 40 CFR 257, Subpart D; information obtained from the following U.S. EPA final rules published in the Federal Register: 80 FR 21302, 83 FR 36435, 85 FR 53516, 85 FR 72506, and 89 FR 38950; and U.S. EPA, Regulatory Impact Analysis, *Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Legacy CCR Surface Impoundments*, April 2024, https://www.regulations.gov/document/EPA-HQ-OLEM-2020-0107-1067 (cited above as "EPA RIA").

VIII. Regulatory Analysis

In short, this rulemaking creates minimal costs for regulated entities. CCR unit owners and operators will expend costs preparing and submitting permit applications, but those applications will comprise materials that owners and operators already must create or compile to comply with the federal CCR rule at 40 CFR 257, Subpart D. IDEM cannot quantify the costs of demonstrating financial assurance, but those costs are greatly outweighed by the benefit of having certainty funds are available to close CCR units in a manner that protects human health and the environment. Any other compliance costs associated with technical standards incorporated into Indiana law by this rulemaking are directly attributed to the federal rule or IC 13-19-3-3, which requires this rulemaking and mandates consistency with the federal rule. Any costs to the State should be mitigated by the receipt of permit fees that will result from a federally approved CCR program. Accordingly, IDEM has determined that the benefits of the rule outweigh its costs.

Additional Information for OMB and SBA Review

IX. Contact Information of Staff to Answer Substantive Questions

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