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By U.S. Mail and E-mail

Docket No. EPA-HQ-OW-2009-0819

Mr. Scott Pruitt, Administrator
Environmental Protection Agency
William Jefferson Clinton Building
1200 Pennsylvania Avenue, N. W.
Mail Code: 1101A
Washington, DC 20460

Re: **Utility Water Act Group Petition for Reconsideration of EPA's "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule," 80 Fed. Reg. 67,838 (Nov. 3, 2015)**

Dear Administrator Pruitt:

Enclosed please find the Utility Water Act Group's Petition for Reconsideration of EPA's final rule titled "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category," 80 Fed. Reg. 67,838 (Nov. 3, 2015). A copy of this petition has also been electronically mailed to the Office of Water Docket Center for filing in Docket No. EPA-HQ-OW-2009-0819.

Please contact me if you have any questions about the Petition.

Sincerely,

Pete Johnson /bhp

Harry M. ("Pete") Johnson III

Enclosure

cc by hand delivery and e-mail:
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EPA Docket Center

In the United States Environmental Protection Agency

Utility Water Act Group's Petition for Rulemaking to Reconsider and Administratively Stay the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule, 80 Fed. Reg. 67,838-903 (Nov. 3, 2015)

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RELIEF SOUGHT

The Utility Water Act Group[1] ("UWAG") hereby petitions the United States Environmental Protection Agency ("EPA") pursuant to 5 U.S.C. § 553(e) for a rulemaking to reconsider the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category; Final Rule (the "ELG Rule," the "Final Rule," or "Rule").[2] UWAG also seeks an administrative stay of the Rule pursuant to 5 U.S.C. § 705 because the Rule is currently in litigation[3] and "justice so requires."[4] Furthermore, the EPA should take all other administrative

---

[1] UWAG is a voluntary, *ad hoc*, non-profit, unincorporated group of 163 individual energy companies and three national trade associations of energy companies: the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association. The individual energy companies operate power plants and other facilities that generate, transmit, and distribute electricity to residential, commercial, industrial, and institutional customers. The Edison Electric Institute is the association of U.S. shareholder-owned energy companies, international affiliates, and industry associates. EEI members serve 220 million Americans in all 50 states, approximately 70 percent of all retail electricity customers in the country. The National Rural Electric Cooperative Association is the association of not-for-profit energy cooperatives supplying central station service through generation, transmission, and distribution of electricity to rural areas of the United States. The American Public Power Association is the national service organization for the more than 2,000 not-for-profit, community-owned electric utilities in the U.S. APPA member utilities serve more than 48 million Americans in 49 states (all but Hawaii), representing 16 percent of the market. UWAG's purpose is to participate on behalf of its members in EPA's rulemakings under the Clean Water Act and in litigation arising from those rulemakings.

[2] Section 553(e) provides that interested persons have "the right to petition for the issuance, amendment, or repeal of a rule."

[3] *Southwestern Elec. Power Co. v. EPA*, et al, No. 15-60821(L) (5th Cir.) (consolidating seven separate Petitions for Review) ("ELG Litigation").

[4] The administrative stay under 5 U.S.C. § 705 should postpone all deadlines in the Rule. The length of the stay should be calculated based on the number of days between the date that the first Petition for Review was filed in a federal court of appeals (November 19, 2015) and the later of the conclusion of judicial review or any further rulemaking undertaken as a result of that litigation or reconsideration undertaken in response to this Petition.

actions that may be necessary to assure the immediate suspension or delay of the Rule's fast-approaching compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current Rule pursuant to notice and comment rulemaking.

INTRODUCTION

I. Overview of Reasons to Reconsider the Rule

UWAG petitions EPA to reconsider the Rule to address its numerous flaws. Some of those flaws are explained in detail in the pending ELG Litigation and others are demonstrated by new information and circumstances described in this petition. The Rule – which is the product of a settlement between environmental groups and EPA – is inconsistent with the President's regulatory reform agenda reflected in recent Executive Orders.

The Rule affects both the utility and coal industries and also affects the large and small businesses that support and rely upon those industries. It will cause negative impacts on jobs due to the excessive costs of compliance – which were grossly underestimated by EPA – and regulatory burdens forcing plant closures. Those impacts are being, and will be, felt in communities around the country where those industries operate. Reconsideration will enable the Agency to take all of these impacts into account to the full extent allowed by law, as contemplated by recent Executive Orders.

The cost issues are exacerbated by EPA's overly ambitious assumptions about facilities' ability to comply with the limits imposed in the Rule. In fact, in many instances, facilities are not able to meet the limits with the technologies that EPA identified as the "best available technology economically achievable" ("BAT"). Actual costs are, therefore, much higher than EPA predicted. Either plants cannot comply at all or they are being forced to design, test, and try unproven technologies in addition to, or in lieu of, the model technologies in the hope of developing a compliance strategy. The Rule should be reconsidered so that its true costs can be accounted for, as required by the Clean Water Act ("CWA").

It is also undisputed that the Rule fails to consider fully the cumulative impacts of the Rule and the other contemporaneous major rulemakings affecting these industries. The cumulative cost of all of those rules affecting the utility and coal industries is staggering. In addition to the issue of costs, the respective rules' compliance deadlines were not harmonized to minimize or eliminate their conflicts. In the ELG rulemaking, EPA did not take public comment on the impacts of all of the rules combined. Undoubtedly, the industry's views could have been – and can be – informative. Consistent with the Administration's regulatory reform agenda, reconsideration of the ELG Rule will allow EPA to

consider all of these major rules collectively – and not through a piecemeal approach – with the benefit of public input.[5]

In addition, the Rule violated fundamental principles of public participation in rulemakings – transparency and reproducibility. Never before has EPA promulgated a rule while shielding such vast amounts of its basic work product from review. Here, EPA invoked the concept of Confidential Business Information ("CBI") to withhold facts, methods, and analyses on which its conclusions depend. To an unprecedented extent, the Agency withheld fundamental information purporting to justify the Rule. Among the information claimed as CBI, EPA designated as CBI thousands of pages of the record that demonstrably were not entitled to confidential treatment.

Compounding the lack of transparency and reproducibility, EPA repeatedly responded to public comments by citing key information that the Agency withheld from the public record. Directing commenters to information that is unavailable is effectively no response at all. Reconsideration will allow EPA to fix these problems.

[5] Moreover, since promulgation of the ELG Rule, circumstances have changed for the Clean Power Plan ("CPP") and the Coal Combustion Residuals ("CCR") Rule. Now, it is unclear the extent to which the CPP Rule will take effect or what changes to the CCR Rule will be made since portions of it are the subject of a new rulemaking. These significant changes in circumstances alone warrant reconsideration of the ELG Rule.

EPA also promulgated the Rule without gathering necessary data on certain types of plants covered by the Rule. EPA gathered no data whatsoever on the treatability of selenium and nitrates in Flue Gas Desulfurization Wastewater ("FGDW") produced by plants burning subbituminous coals, such as Powder River Basin ("PRB") coal, or lignite. These plants comprise upwards of 25% of the industry. Likewise, EPA set limits for modern Integrated Gasification Combined-Cycle ("IGCC") plants without gathering data relevant to those plants. Lacking data or any other credible evaluation of the likely performance and cost, EPA had no reasonable basis for concluding that those plants can comply with the limits imposed by the Rule. The Rule should be re-opened and reconsidered so that the applicable limits can be based on appropriate data.

Actual experience is confirming that the FGD limits cannot be met at all facilities. A recent pilot study using the biological treatment technology EPA selected as BAT has been conducted at a PRB-burning plant, and indications are that the data show the selenium limits cannot be met. Other facilities are finding that technologies beyond those considered by EPA may be necessary to meet the FGD limits. Similarly, data from a state-of-the-art IGCC plant prove that it cannot meet the Rule's wastewater limits.

Finally, EPA used patently obsolete or otherwise unreliable data in its analyses supporting its "zero discharge" requirement for bottom ash transport

water ("BATW"). In violation of both the letter and spirit of the Data Quality Act[6] and its implementing regulations, EPA evaluated BATW with poor quality characterization data, some of which was decades old. EPA used the data for several important purposes, including calculating a cost-effectiveness ratio that allows the Agency to compare the ELG Rule to other effluent guidelines rules. Obviously, if the underlying BATW characterization data are flawed, then the cost-effectiveness analysis is also flawed. Although EPA insisted a cost-effectiveness analysis is not required by the CWA, the Agency generated these analyses for all recent effluent guidelines rules, and it had an obligation to base its analysis on acceptable data. This it did not do.

All of these issues, both together and individually, warrant reconsideration of the ELG Rule to promote the President's regulatory reform agenda.

II. The Policies Established by Executive Orders on Regulatory Reform

The President has established an agenda mandating regulatory reform.[7] Reconsideration of the Rule is essential to fulfill the policies expressed in the Regulatory Reform Order.

[6] Pub. L. 106-554, § 1(a)(3), Title V, § 515 (Dec. 21, 2000) (also sometimes known as "Information Quality Act").

[7] *See* Executive Order 13777*, Enforcing the Regulatory Reform Agenda* (Feb. 24, 2017), 82 Fed. Reg. 12,285 (Mar. 1, 2017) ("Regulatory Reform Order").

The Regulatory Reform Order directs agencies to create Task Forces to "evaluate existing regulations … and make recommendations to the agency head regarding their repeal, replacement, or modification, consistent with applicable law."[8] The Task Forces have until May 25, 2017, to make their recommendations.[9] The Rule should be chief among the EPA Task Force's recommendations, for all the reasons set forth in this Petition.

The Task Forces are charged *at a minimum* with identifying regulations that adversely affect jobs, that impose costs exceeding benefits, or that rely on information and methods that are not transparent and reproducible.[10] The Rule

[8] *Id.* at 12,286.

[9] By imposing a rigorous deadline on the Task Force, the Regulatory Reform Order recognizes the urgency of addressing overly burdensome regulations. Ultimately, it is the customers of the electric utility industry who suffer the economic burden of exorbitantly expensive rules. This burden is exacerbated when important issues regarding those rules go unresolved for extended periods of time (*e.g.*, the Mercury and Air Toxics rule). Uncertainty also contributes to potential instability in energy delivery. Thus, in the spirit of the Regulatory Reform Order, the Agency should move expeditiously to reconsider and revise the Rule while suspending its deadlines in the meanwhile.

[10] *Id.* § 3(d). The Order reads: "At a minimum, each Regulatory Reform Task Force shall attempt to identify regulations that:

> (i) eliminate jobs, or inhibit job creation; …
>
> (iii) impose costs that exceed benefits; … [or]
>
> (v) are inconsistent with the requirements of section 515 of the Treasury and General Government Appropriations Act, 2001 (44 U.S.C. 3516 note), or the guidance issued pursuant to that provision, in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard for reproducibility;..."

here meets *all three* of these criteria, as explained in more detail in the body of this Petition.[11]

Moreover, this Petition for Reconsideration satisfies another mandatory element of the Regulatory Reform Order – consultation with "entities significantly affected" by the Rule.[12] The Order directs that the Task Forces "shall seek input and other assistance" from stakeholders in identifying regulations with adverse effects:

> In performing the evaluation described in subsection (d) of this section, each Regulatory Reform Task Force shall seek input and other assistance, as permitted by law, from entities significantly affected by Federal regulations, including State, local, and tribal governments, small businesses, consumers, non-governmental organizations, and trade associations.[13]

Finally, the Regulatory Reform Order also incorporates fundamental principles from earlier Executive Orders that likewise support reconsideration of the Rule. For instance, agencies must consider the cumulative costs of regulations on businesses and communities:

> Each agency shall tailor its regulations to impose the least burden on society, including individuals, businesses of differing sizes, and other

---

[11] As to the second criterion (costs exceeding benefits), EPA's cost-benefit analysis was based so heavily on flawed or unavailable data that a full evaluation of the Rule's true costs and benefits is effectively impossible based on the current record. Thus, a primary focus on reconsideration should be to develop a record that will allow the Agency to determine whether the benefits indeed outweigh the costs of a new rule.

[12] *Id.* § 3(e).

[13] *Id.*

> entities (including small communities and governmental entities), consistent with obtaining the regulatory objectives, *taking into account, among other things, and to the extent practicable, the costs of cumulative regulations*.[14]

As detailed later in this Petition, the Rule fails to consider accurately the cumulative costs of EPA's major rules affecting the utility industry, the coal industry, and the communities depending on them.

In addition to the Regulatory Reform Order, the Rule also should be reconsidered as part of the Agency's compliance with the Executive Order 13771, popularly known as the "Two-for-One Order."[15] In addition to its other directives, the Two-for-One Order requires agencies to achieve a net incremental regulatory cost of zero in Fiscal 2017.[16] The costs of new regulations during the current fiscal year are offset by costs eliminated from existing regulations: "incremental costs associated with new regulations shall, to the extent permitted by law, be offset by the elimination of existing costs associated with at least two prior regulations."[17]

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[14] Executive Order 12866, *Regulatory Planning and Review* § 1(b)(11) (Sept. 30, 1993), 58 Fed. Reg. 51,735, 51,736 (Oct. 4, 1993) (emphasis added) (incorporated by reference in Regulatory Reform Order § 2(a)(ii)).

[15] *Executive Order 13771, Reducing Regulation and Controlling Regulatory Costs* (Jan. 30, 2017), 82 Fed. Reg. 9339 (Feb. 3, 2017).

[16] "For fiscal year 2017, which is in progress, the heads of all agencies are directed that the total incremental cost of all new regulations, including repealed regulations, to be finalized this year shall be no greater than zero,..." *Id.* § 2(b).

[17] *Id.* § 2(c).

By reconsidering the Rule and taking its costs properly into account when promulgating a revised ELG rule, EPA can discharge this obligation.

In carrying out its duties under the Regulatory Reform Order, the Agency must comply with the Administrative Procedure Act ("APA") and other applicable law.[18] Granting this Petition would enable EPA to promote the express policy of the Two-for-One Order consistent with the APA.

BACKGROUND ON RULE AND PENDING ELG LITIGATION

I. The Consent Decree Leading Up to the Final Rule

The ELG Rule is the product of a lawsuit. On September 14, 2009, the EPA Administrator received a 60-day notice of intent from the Environmental Integrity Project, which threatened to sue EPA for not revising the steam electric effluent limitations guidelines ("ELGs"). The very next day, EPA announced plans to revise the guidelines.[19] The next month, EPA released a "final detailed report" on its investigation of the industry for possible ELG revision.[20]

On November 8, 2010, Defenders of Wildlife and Sierra Club sued EPA and asked the court to set a judicial schedule for the rulemaking. But the plaintiffs had

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[18] *Id.*

[19] Press Release, EPA, *EPA Expects to Revise Rules for Wastewater Discharges from Power Plants* (Sept. 15, 2009).

[20] EPA, *Steam Electric Power Generating Point Source Category: Final Detailed Study Report,* EPA-821-R-09-008 (Oct. 2009), EPA-HQ-OW-2009-0819-0004 ("Final Detailed Study").

already settled with EPA. That same day, EPA and the environmental organizations jointly presented a Consent Decree to the court. As part of the settlement, EPA agreed to pay the plaintiffs $40,000 for the costs of negotiating, drafting, and filing the consent decree.[21] Thus, the rulemaking proceeded pursuant to a schedule imposed by a court order agreed to by environmental organizations and EPA without input from the industry and other affected stakeholders. Nonetheless, whenever possible – as during the comment periods on EPA's information collection request for the Rule – the industry urged EPA to collect representative data and provided recommendations for doing so.[22]

[21] UWAG moved to intervene in the litigation, asserting that the district court did not have subject matter jurisdiction over the matter because the CWA by its terms does not require EPA to revise ELGs by a date certain, instead requiring only that the Agency periodically review those guidelines – a duty that the facts pled showed EPA had discharged. The court denied UWAG's motion to intervene. *See Defenders of Wildlife v. Jackson,* 284 F.R.D. 1 (D.D.C. 2012). On appeal, the United States Court of Appeals of the D.C. Circuit found that UWAG lacked standing to challenge the rulemaking negotiated between EPA and environmental groups. *Defenders of Wildlife v. Perciaseppe,* 714 F.3d 1317 (D.C. Cir. 2013).

[22] *See, e.g.,* UWAG Comments on EPA's Draft Data Request (Mar. 23, 2007), EPA-HQ-OW-2009-0819-5450-Att 079 at 6 (commenting that EPA's plan to collect wastewater samples from 5-6 facilities would result in a dataset too small for valid correlations because even two plants burning the same coal and using similar technologies could have different wastewater quality due to factors such as boiler design, coal variations within the same coal rank, and size of treatment equipment or settling pond). *See also* UWAG Comments on Questionnaire for the Steam Electric Power Generating Effluent Guidelines, EPA ICR No. 2368.01 (Apr. 8, 2010), EPA-HQ-OW-2009-0819-0052 at 14-21 (questioning the practical utility of the ICR's focus on CCRs, when the proposed CCR rule was soon to be released and would radically change management of CCRs).

II. Promulgation of the Final Rule

EPA proposed the Rule on June 7, 2013.[23] The public comment period lasted until September 20, 2013. Between the end of the comment period and the promulgation of the Final Rule, EPA promulgated a suite of other major rules directed at coal-fired electric generating units. These included the Cooling Water Intake Structures ("CWIS") rule for existing facilities,[24] the CCR rule,[25] the CPP rule,[26] and the Carbon Pollution Standard for New Power Plants rule ("CPS").[27] EPA estimates the annualized total social costs[28] of the ELG and CWIS rules will be $471.2-479.5 million (2013$) and $274.9 million (2011$), respectively.[29] The Agency estimates the total annualized incremental costs of the CCR rule will be $509-735 million (2013$) (over 100 years).[30] The CPP is in a class by itself, with EPA predicting annual illustrative compliance costs of $1.4-2.5 billion (2020), $1.0-3.0 billion (2025), and $5.1-8.4 billion (2050) (all in 2011$).[31] Many of

[23] 78 Fed. Reg. 34,432 (June 7, 2013).

[24] 79 Fed. Reg. 48,300 (Aug. 15, 2014).

[25] 80 Fed. Reg. 21,302 (Apr. 17, 2015).

[26] 80 Fed. Reg. 64,662 (Oct. 23, 2015).

[27] 80 Fed. Reg. 64,510 (Oct. 23, 2015).

[28] "Total social costs" includes compliance costs to facilities and government administrative costs.

[29] 80 Fed. Reg. at 67,865 (ELG Rule); 79 Fed. Reg. at 48,415 (CWIS Rule).

[30] 80 Fed. Reg. at 21,309.

[31] 80 Fed. Reg. at 64,680-81.

those costs have been challenged as underestimates. In any event, it must be remembered that, ultimately, these billions in costs will be borne by utilities' ratepayers.

The Final ELG Rule was published on November 3, 2015.[32]

III. The Litigation Challenging the ELG Rule

Various petitioners filed seven petitions for judicial review of the Rule in multiple courts. The petitions were consolidated in the United States Court of Appeals for the Fifth Circuit.[33] Three separate groups of Petitioners (including UWAG as an industry petitioner) filed their opening briefs on December 5, 2016. EPA's brief is due May 4, 2017.[34]

IV. UWAG's Attempts to Obtain a Complete Record from EPA

When it promulgated the Final Rule, EPA improperly designated and withheld numerous documents in whole or in part on grounds of CBI. UWAG tried unsuccessfully to resolve these issues with EPA long before EPA finalized the administrative record and filed the certified index in the ELG Litigation. In a letter dated February 17, 2016, counsel for UWAG and others wrote to counsel for

[32] 80 Fed. Reg. 67,838-903 (Nov. 3, 2015).

[33] Consolidation Order, Judicial Panel on Multidistrict Litigation, ELG Litigation, ECF No. 00513301255 (Dec. 9, 2015).

[34] EPA's brief had been due April 4, 2017. On March 20, 2017, EPA filed a Motion to stay the briefing schedule for 30 days due to DOJ's unexpected reassignment of the case to new counsel. The Court granted the extension on March 21. However, the Rule itself is not stayed during this period. Hence, this Petition seeks an administrative stay of the Rule and/or other action to suspend the Rule's deadlines.

EPA seeking the disclosure of "EPA's methodologies and analyses supporting the ELG Rule that have been improperly withheld as … CBI," and additional "non-CBI information … improperly withheld from the public record."[35] In response, EPA refused to produce any additional information for the public record.[36] In fact, EPA apparently could not find a single *sentence or word* of additional information that could be disclosed despite clear evidence that the broad use of CBI designations was inappropriate.

Because the withheld information was critical to understanding the basis for the Rule, UWAG and others industry members thereafter filed a joint motion to complete the record in the Court of Appeals. The motion asked simply for EPA to reconsider whether the information withheld as CBI in fact qualified as CBI and for EPA to produce its methods and analyses in a non-CBI format for the public and the Court. EPA continued to resist the requests. The motion is still pending and is to be decided by the Court in conjunction with the merits of the appeal.

REASONS TO RECONSIDER THE RULE

I. EPA's Sweeping Use of CBI To Withhold Its Methods and Analyses Violated Principles of Transparency

EPA withheld its most basic data, methodologies, and analyses from the public record under the guise of CBI. This unprecedented lack of openness is

[35] Exhibit 1 at 1.

[36] Exhibit 2.

inconsistent with the policies articulated in Regulatory Reform Order for transparency and reproducibility. EPA has a duty to disclose the information supporting the Rule and to fully explain its course of inquiry, analysis, and reasoning. EPA has at its disposal tools that allow it to protect CBI, if necessary, yet EPA used none of them here, instead withholding at least 1,194 documents in whole or in part.

A. The Overreliance on CBI Is Inconsistent With the Data Quality Act and Agency Guidelines on Transparency and Reproducibility

In 2001, Congress enacted Public Law 106-554 ("Data Quality Act") directing OMB to issue guidance for ensuring the quality of data disseminated by Federal agencies by maximizing the objectivity, utility, and integrity of the information collected. OMB responded to the Data Quality Act by issuing guidelines for data quality and directing agencies to issue their own guidelines.[37] In turn, EPA issued its guidelines.[38] The Regulatory Reform Order expressly requires Task Forces to identify regulations that are inconsistent with the Data Quality Act or the guidance issued pursuant to it, "*in particular those regulations that rely in whole or in part on data, information, or methods that are not publicly*

[37] OMB, *Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies, Republication*, 67 Fed. Reg. 8452 (Feb. 22, 2002) ("OMB Data Quality Guidelines").

[38] EPA*, Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Disseminated by the Environmental Protection Agency*, EPA/260R-02-008 (Oct. 2002) ("EPA Data Quality Guidelines").

available or that are insufficiently transparent to meet the standard for reproducibility."[39] The Rule meets this definition squarely.

According to the OMB Data Quality Guidelines, agency information must satisfy the "objectivity" criterion of the Data Quality Act, meaning "a focus on ensuring accurate, reliable, and unbiased information."[40] EPA describes the objectivity criterion similarly: "'Objectivity' focuses on whether the disseminated information …, as a matter of substance, is accurate, reliable, and unbiased."[41]

Because the record in a major rulemaking is considered to be an "influential" class of information, EPA expressly recognizes that such information is subject to a heightened standard of quality.[42] This "higher degree of quality" requires even greater "transparency about data and methods" to "facilitate the reproducibility of such information…."[43] Indeed, it is "important that analytic results for influential information have a higher degree of transparency…."[44]

EPA's conclusions in the Rule, as shown below, do not meet the definition of "reproducibility" as a result of the heavy use of CBI:

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[39] Regulatory Reform Order § 3(d)(v), 82 Fed. Reg. at 12,286 (emphasis added).

[40] OMB Data Quality Guidelines at 8459.

[41] EPA Data Quality Guidelines at 15.

[42] *Id.* at 20 ("should adhere to a rigorous standard of quality").

[43] *Id.* at 20-21.

[44] *Id.* at 21.

> "Reproducibility" means that the information is capable of being substantially reproduced, subject to an acceptable degree of imprecision.… With respect to analytic results, "capable of being substantially reproduced" means that independent analysis of the original or supporting data using identical methods would generate similar analytic results, subject to an acceptable degree of imprecision or error.[45]

Likewise, EPA's conclusions in the Rule do not meet its own guidelines for reproducibility:

> In addition, these Guidelines provide for the use of especially rigorous "robustness checks" and documentation of what checks were undertaken. *These steps, along with transparency about the sources of data used, various assumptions employed, analytic methods applied, and statistical procedures employed should assure that analytic results are "capable of being substantially reproduced."*[46]

Protections for CBI do not automatically dispense with the requirements of reproducibility. The OMB Data Quality Guidelines provide for situations where data cannot be released for valid reasons, and the guidelines impose alternative requirements:

> i. Making the data and methods publicly available will assist in determining whether analytic results are reproducible. However, the objectivity standard does not override other compelling interests such as privacy, trade secrets, intellectual property, and other confidentiality protections.
>
> ii. In situations where public access to data and methods will not occur due to other compelling interests, agencies shall apply especially rigorous robustness checks to analytic results and document

[45] OMB Data Quality Guidelines at 8460.

[46] EPA Data Quality Guidelines, Appendix A at 47 (emphasis added).

> what checks were undertaken. *Agency guidelines shall, however, in all cases, require a disclosure of the specific data sources that have been used and the specific quantitative methods and assumptions that have been employed.*[47]

These heightened standards of transparency and reproducibility lay out a clear analytical process for each individual assertion of CBI by EPA. Is the information in fact CBI? If not, EPA must make it available to the public with the Rule. If the information is CBI, then EPA must perform "especially rigorous robustness checks," disclose the sources of information, and disclose the specific quantitative methods and assumptions used.

The record supporting the Rule did not meet the requirements for reproducibility, regardless of whether EPA's individual claims of CBI were valid. In many instances documented below and in the ELG Litigation,[48] the CBI claims were specious on their face. In other instances where the CBI designation may or may not be warranted, there is scant evidence of "robustness checks," documentation of those checks, or other assurances of reproducibility, such as sources of data, various assumptions applied, and analytic methods applied. Thus, the industry and the public have been unable to evaluate the Rule fully.

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[47] OMB Data Quality Guidelines at 8460 (emphasis added). *See also* EPA Data Quality Guidelines at 21 (implementing same).

[48] *See* Industry Petitioners' Joint Motion to Complete the Administrative Record, ELG Litigation (June 22, 2016), ECF No. 00513560826 ("Motion to Complete Record"); Original Brief of Industry Petitioners, ELG Litigation (Dec. 5, 2016), ECF No. 00513783903 at 24-51.

Reconsideration is appropriate to allow meaningful public participation consistent with the policies of the Regulatory Reform Order.

B. EPA Can Make the Relevant Information Available Without Compromising CBI

EPA has available a variety of tools to present facts and analyses on which it relied, while at the same time protecting CBI. It has used those tools in many other effluent guidelines rulemakings.[49] EPA could, for instance, produce ranges of values, graphs, cost formulas or curves, discussions, or other analyses, as appropriate, to satisfy its obligations to present the "whole record" for review, including its methodologies and analyses, without disclosing CBI.[50]

In addition, EPA could have simply taken the time to collect more data that are not CBI. It could have supplemented the CBI information with information from other sources or consultants who would not assert CBI. Likewise, EPA could have conducted or commissioned its own studies to independently verify the information claimed as CBI. Reconsideration would allow this.

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[49] *See, e.g.*, EPA, *Development Document for Final Effluent Limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category* (Apr. 2002), at 1-9, 14-3–14-6 (aggregating certain data in the public record and masking facility identities) (available at http://www.epa.gov/eg/iron-and-steel-manufacturing-effluent-guidelines-documents) (last accessed Dec. 2, 2016).

[50] *See NRDC v. Thomas*, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986).

C. EPA Has Not Been Transparent About the Cost or Performance of BAT for FGD Wastewater or Bottom Ash Transport Water

Congress has limited EPA's discretion in the selection of BAT by identifying specific factors the Agency must consider.[51] Because BAT must be "economically achievable," one such factor EPA must consider is cost.[52] The cost of regulations is also a policy priority under the Regulatory Reform Order. The CWA further requires EPA to consider the performance of the technology at reducing pollutants.[53] Performance and cost go hand-in-hand, as improving performance may require adding more technology, which then increases cost. The interplay of cost and performance is also a point of emphasis in the Regulatory Reform Order, which mandates a focus on cost-benefit analyses.

EPA bears the burden of demonstrating that it has considered the cost of the technology it chose as BAT and showing that the technology, at the cost EPA projected, will achieve the performance standards it set. Here, EPA's explanation of its performance and cost estimates for the technologies it chose as BAT for FGDW and BATW were general conclusions with crucial detail missing.

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[51] 33 U.S.C. § 1314(b)(2)(B).

[52] *Id.* ("Factors relating to the assessment of best available technology shall take into account … the cost of achieving such effluent reduction….").

[53] *Id.* at § 1314(b)(2)(A); *see E. I. du Pont de Nemours & Co. v. Train*, 430 U.S. 112, 131 (1977).

At the proposed rule stage, EPA discussed these technologies and its methodologies and analyses for evaluating their cost. EPA provided significantly more detail about its methodologies when it published the proposed ELG rule for public comment.[54] When EPA then took comments from the public, it learned – and in some instances even acknowledged – that its performance and cost analyses had shortcomings, overstating performance and understating cost.[55] This meant that EPA was required to collect additional information, make changes, and explain the changes in the Final Rule.

Transparency in the Final Rule was even more vital because EPA's errors at proposal were not trivial. For example, comments on the proposed Rule showed that, industry-wide, the cost of installing biological treatment alone for FGDW would nearly exceed EPA's estimated costs for adding both biological treatment and chemical precipitation treatment.[56] Indeed, one company's comments showed that the cost of installing EPA's selected FGDW treatment technology at its plants would be nearly *seven times higher* than EPA had estimated for a subset of those

[54] *See, e.g.*, Index.2292.6-88–6-105. [This Petition uses the same convention for citations to EPA's administrative record as in the Litigation by referring to the Certified Index. *See* Original Brief of Industry Petitioners at 5 n.11.]

[55] *See, e.g.*, Index.10081.6-665 (EPA agreeing with commenters who indicated that EPA should consider engineering-related costs and construction timelines associated with closed-loop bottom ash handling retrofits).

[56] *See* Index.8939.A-25 (finding incremental biological costs of over $2 billion).

same plants.[57] Similarly, the Electric Power Research Institute ("EPRI")[58] was unable to reproduce EPA's conclusions regarding the ability of biological treatment to remove pollutants from FGDW.[59] Based on EPRI's calculations, EPA had overestimated pollutant removals for biological treatment by a factor of eight.[60]

EPA's cost estimate for achieving no-discharge of BATW was likewise off by a wide margin. For example, after identifying a host of errors and omissions, EPRI calculated total industry capital costs for conversion from wet to dry bottom ash handling, just for plants with a nameplate generating capacity above 400 megawatts, to be over $6 billion and $452 million in annual O&M costs – more than double EPA's estimate.[61]

1. EPA Has Withheld Key Information Showing How the Agency Responded to Criticisms of Its Original Analyses

EPA responded to these comments by soliciting revised information from financially interested vendors. These are the same vendors whose technology was at issue and who had incentives to tout their systems as effective and reasonably

[57] Index.8689.160 (Southern Company).

[58] EPRI is an independent, nonprofit organization that conducts research and development relating to the generation, delivery, and use of electricity.

[59] Index.8939.4-2.

[60] *Id.* at 4-1.

[61] Index.8939.8-2.

priced. Much of the revised information – *and how EPA incorporated it into the final analyses* – was withheld. Thus, the public cannot determine whether EPA in fact corrected the original errors or whether the revised analyses are themselves appropriate. This flies in the face of the APA and the directives of the Regulatory Reform Order.

As Industry Petitioners have described at length, EPA's contacts with vendors demonstrate how EPA consciously chose to conceal the substance of its final cost analysis.[62] EPA prepared follow-up questions for one vendor "to clarify whether specific cost elements [identified by commenters] are included or not included in the cost estimates provided in previous correspondence," among other things.[63] The vendor responded to these questions, but that information has been withheld from the public record.[64]

Notes of subsequent meetings and correspondence between EPA and the vendor are similarly missing from the public record, nearly always in their entirety.[65] These inaccessible documents go to the heart of how EPA addressed the cost issue.

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[62] *See* Original Brief of Industry Petitioners at 30-32, 39-40.

[63] Post Proposal Questions for GE_for EPA Review, Index.11564.3.

[64] *See* CBI_GE Response to Post Proposal Questions, Index.11680.

[65] *See* Original Brief of Industry Petitioners at 30-32, 39-40.

2. In the Final Rule, EPA Hid Cost and Effectiveness Data, Methodologies, and Analyses Behind CBI

a. Cost

Using CBI as a pretext, EPA provided only its bare conclusions in the public record regarding many of its cost analyses. The Agency has not provided supporting detail for those analyses (anonymized or otherwise). Despite comments showing that EPA had omitted or grossly underestimated various costs for the proposed rule and despite the fact that EPA *added* new technology requirements, these final costs inexplicably *decreased* on a per-plant basis for FGDW. The average capital cost per plant went from just over $21.5 million for the Proposed Rule to approximately $20.5 million for the Final Rule.[66] And the average annual O&M costs went from approximately $2.2 million to approximately $1.4 million.[67]

EPA's revised cost figures cry out for explanation. Yet, EPA suggests only that it considered public comments and changed its analysis "where appropriate," but without ever explaining *how*.[68] This is not transparency, and it certainly eliminates any opportunity for reproducibility.

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[66] *Compare* Index.2920.9-28 *with* Index.12840.9-32.

[67] *Id.* (averages were calculated by dividing total industry cost by number of plants).

[68] *See, e.g.,* Index.12840.3-20 ("EPA evaluated public comments to identify plant-specific operation and flow data and, where appropriate, used this information to revise estimates of compliance costs and pollutant removals for those facilities….").

Despite the requirement to explain what it did, EPA withheld the underlying data, methodologies, and analyses under the guise of CBI. For example, they are missing from EPA's *Final Sanitized Steam Electric Incremental Costs and Pollutant Loadings Report* ("Final ICPR"), which EPA points to as "describ[ing] the methodologies used to estimate plant-specific compliance costs … associated with installing and operating the various technologies and practices that make up the regulatory options considered by EPA to revise the existing ELGs."[69] Unquestionably, this document was central to EPA's development of the Final Rule, yet information necessary to reproduce EPA's results is absent.

The Final ICPR is the only document that described EPA's consideration of costs and pollutant removals in full. The Final Technical Development Document[70] referred directly to the ICPR for detailed explanations of EPA's methodology.[71] Despite EPA's express reliance on this key document, the referenced subsections were redacted *in their entirety*. Again, this flies in the face of transparency and reproducibility.

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[69] Index.12134.1-1.

[70] EPA, *Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-007 (Sept. 2015), EPA-HQ-OW-2009-0819-6432 ("TDD"),

[71] *See, e.g.,* Index.12840.9-25 (indirect capital costs methodology).

In fact, EPA withheld hundreds of pages of information from the Final ICPR as CBI.[72] The table of contents revealed the titles of the missing sections and subsections, and those titles made clear the vital nature of the withheld information.[73] In Section 5 alone, one can see that basic subject matter about cost was redacted:[74]

[72] *See* Index.12134 (un-paginated placeholder between 4-35 and 9-1, noting that Sections 5, 6, 7, and 8 "have been removed from this document").

[73] *See id.* at ii-vii.

[74] *Id.* at ii-iii.

5. GENERAL METHODOLOGY, TERMINOLOGY, AND COMMON COST ELEMENTS 5-1
5.1 General Cost Methodology and Terminology 5-1
5.2 Compliance Monitoring Cost Methodology 5-3
5.2.1 Monitoring Requirements 5-3
5.2.2 Capital Cost Methodology 5-4
5.2.3 O&M Cost Methodology 5-4
5.2.3.1 Sampling Labor Cost 5-4
5.2.3.2 Sampling Material Cost 5-5
5.2.3.3 Sampling Preservation Cost 5-6
5.2.3.4 Sample Shipping Cost 5-7
5.2.3.5 Sample Analysis Cost 5-8
5.3 Transportation Cost Methodology 5-9
5.3.1 Technology Description 5-9
5.3.2 Cost Inputs 5-9
5.3.3 Cost Methodology 5-10
5.3.3.1 On-Site Transportation Cost Methodology 5-10
5.3.3.2 Off-Site Transportation Cost Methodology 5-11
5.4 Disposal Cost Methodology 5-12
5.4.1 Technology Description 5-12
5.4.2 Cost Inputs 5-12
5.4.3 Cost Methodology 5-12
5.4.3.1 On-Site Disposal Cost Methodology 5-12
5.4.3.2 Off-Site Disposal Cost Methodology 5-14
5.5 Surface Impoundment Operation Costs Methodology 5-15
5.5.1 Technology Description 5-15
5.5.2 Input Table 5-16
5.5.3 Cost Methodology 5-17
5.5.3.1 Impoundment O&M Costs 5-17
5.5.3.2 Impoundment Unitized O&M Costs 5-21
5.5.3.3 Earthmoving Unitized O&M Costs 5-22
5.5.3.4 Impoundment and Earthmoving Capacity Factors 5-24
5.5.3.5 Surface Impoundment Earthmoving Recurring Costs 5-24
5.6 References 5-25

According to its title, the missing Section 5 explains EPA's "General Methodology, Terminology, and Common Cost Elements." The missing subsections provided the "General Cost Methodology and Terminology" and other more specific cost methodologies, as well as the technologies evaluated.

The same is true for Sections 6 through 8. These sections laid out EPA's methodologies for analyzing costs and technologies for treating FGDW, fly ash

transport water, and BATW.[75] EPA redacted *all* of these sections and subsections. Under the pretext of CBI, EPA withheld over 250 pages in the Final ICPR.

While these sections or subsections might contain *some* CBI, the underlying methodologies themselves are necessary to understanding what EPA did and why. These missing pages are critical to determining whether EPA's promulgation of the Final Rule was reasonable. It is impossible to reproduce EPA's cost findings without the basic details on the methodology.

b. Effectiveness of BAT Technologies

In the Final Rule, EPA claimed that "biological treatment [is] well-demonstrated" technology for the treatment of FGDW.[76] But the public record hardly supports such an overarching conclusion. Nothing in the public record demonstrates that biological treatment can treat all of the industry's FGDW effectively.

EPA focused on a combination of two treatment systems for FGDW: chemical precipitation treatment (for mercury and arsenic) followed by biological treatment (for selenium and nitrate/nitrite).[77] These treatment systems are complex, multi-component technologies that must be designed and sized to treat a

[75] *Id.* at iii-vii (Section 6, 7, and 8 entitled "FGD Wastewater Cost Methodology," "Fly Ash Transport Water Cost Methodology," and "Bottom Ash Transport Water Cost Methodology," respectively).

[76] 80 Fed. Reg. at 67,850.

[77] Proposed Rule, 78 Fed. Reg. at 34,458 (Table VIII-1).

specific mix of pollutants, in terms of pollutant type, load, and distribution.[78] The use of biological treatment for FGDW treatment – and particularly for removal of selenium – is a relatively new innovation. The complexity and variability of FGDW make it difficult to treat using biological processes, which depend on stable conditions to maintain the microorganisms on which treatment depends. For instance, changes in temperature or in wastewater constituents, such as percentage of solids or an increase in chlorides, can cause system upsets.[79]

As explained in detail in the ELG Litigation, EPA's reliance on CBI prevented any demonstration that biological treatment is effective when a plant's FGDW contains high amounts of chloride.[80] Furthermore, EPA withheld correspondence with vendors that may undermine claims regarding the general efficacy of biological treatment. In one striking document, EPA redacted nearly everything of value as CBI regarding these issues.[81] The document suggested there are difficulties or, at the very least, important variables affecting the system's capabilities:[82]

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[78] Index.2920.7-4–7-13 (EPA's description of chemical precipitation and biological treatment technologies).

[79] *See, e.g.,* Index.9123.21-23.

[80] *See* Original Brief of Industry Petitioners at 38-39.

[81] Index.11999.

[82] *Id.* at 1-2 (all redactions in original).

- "GE reports [Redacted]. While GE has [Redacted]. GE is [Redacted] to control oxidants and ORP."
- "GE reports that thus far, any issues related to high oxidants or [Redacted]. GE believes these issues with [Redacted]."
- "The ABMet™ system can process wastewater with [Redacted] nitrate concentrations. [Redacted] with a membrane bioreactor (MBR) or stirred tank system with MBR to [Redacted] prior to treatment with the ABMet™ system. Alternatively, the ABMet™ system can be designed to [Redacted]."
- "EPA inquired about any existing biological treatment systems having operational issues. GE reported [Redacted]."
- "GE indicated [Redacted]."
- "EPA inquired about the mechanism used to remove selenium from the backwash stream. GE noted that [Redacted]."

Given these extreme redactions, EPA's analysis was not transparent, and its conclusions are not reproducible.

D. EPA has Not Documented Any "Especially Rigorous Robustness Checks" on Information Supplied by Third-Party Vendors With a Financial Stake in the Rule

As a general matter, EPA's duty to perform "robustness checks" is heightened when it relies on the expertise of third parties with a financial stake in the Agency's action. According to both the OMB Data Quality Guidelines and the EPA Data Quality Guidelines, a fundamental criterion for the "quality" of information is whether the information is "unbiased."[83] If EPA chooses to rely on

[83] OMB Data Quality Guidelines at 8459; EPA Data Quality Guidelines at 15.

self-interested outside vendors, the record must establish that the Agency critically analyzed the vendors' information due to the risk of bias. "An agency may not … reflexively rubber stamp information prepared by others."[84]

Here, EPA solicited information about the cost and performance of treatment technologies from the very vendors that would benefit financially from EPA's designation of their technologies as BAT. Because EPA's verification of vendor-supplied information is not available anywhere in the record, EPA did not satisfy its obligation to establish *reasonable* reliance on that information.

E. EPA's Lack of Transparency Is Evident in Its Responses to Public Comments That Cite Information Withheld from the Public Record

It is axiomatic that responses to public comments should advance the regulatory goals of transparency and reproducibility. Yet, for the ELG Rule, EPA's responses to comments demonstrate its failure to meet these goals. In its responses to comments, EPA referenced documents withheld, in whole or part, nearly 300 times under the pretext of CBI.[85] At least 53 of those references were to sections removed from the Final ICPR, which contains EPA's analysis of costs associated with the various technologies EPA considered and ultimately selected as BAT – 5 times to Section 5 (General Methodology, Terminology, and Common

[84] *Coliseum Square Ass'n, Inc. v. Jackson*, 465 F.3d 215, 236 (5th Cir. 2006), *cert. denied*, 552 U.S. 810 (2007) (internal quotation omitted).

[85] EPA cited documents entirely withheld 165 times and partially withheld 112 times.

Cost Elements), 30 times to Section 6 (FGD Wastewater Cost Methodology), 4 times to Section 7 (Fly Ash Transport Water Cost Methodology), and 14 times to Section 8 (Bottom Ash Transport Water Cost Methodology). Many of the "responses" corresponded to a public comment about an issue EPA is statutorily required to consider.[86] Thus, they were of central significance to the Final Rule.

Without the underlying documents referenced by EPA in its responses, the "responses" are reduced to summary conclusions. The responses cannot be reproduced or fully reviewed and, therefore, are inadequate. Referring commenters to unavailable CBI is effectively no response at all.

Beyond the policies of the Executive Orders, EPA has a legal duty to respond to public comments.[87] EPA has failed to satisfy either the regulatory policies expressed in the Executive Orders or the bare legal minimum required by the APA. Therefore, the Rule should be re-opened.

II. EPA Did Not Demonstrate That Biological Treatment is Technologically "Available"

A fundamental premise of "good science" and the regulatory reform agenda is that agencies must base regulations on adequate data. Although EPA sampled FGDW at several plants during development of the Rule, the resulting data do not

[86] For several pertinent examples pertaining to the statutory factors of cost, technical achievability, and facility age, *see* Original Brief of Industry Petitioners at 46-51.

[87] *PPG Indus., Inc. v. Costle*, 630 F.2d 462, 466 (6th Cir. 1980). *See* 5 U.S.C. § 553(c) (2015); *Nat'l Wildlife Fed'n v. Costle*, 629 F.2d 118, 134-35 (D.C. Cir. 1980).

capture the full range of FGDW variability across the broader industry as well as within a single facility throughout the year. As industry members emphasized in their comments on the proposed rule, FGDW quality is dependent on numerous factors. Those factors include coal quality, cycles of concentration in the FGD scrubber that impact chloride and other dissolved solids concentrations, residence time within the scrubber, and chloride and magnesium levels in the various reagents (*e.g.*, limestone) used in the scrubber to remove sulfur dioxide from the flue gas. In addition to the variability of FGD wastewater, industry has noted other factors that can affect the performance of biological treatment systems, specifically the FGDW chemistry, including the oxidation-reduction potential, nitrate concentration, and the various forms of selenium, some of which may be less efficiently captured in biological treatment. Other factors include cycling on and off of coal units, which can interfere with a continuous, steady FGD wastewater feed to the system, and temperature swings, which can inhibit the biological reaction rate. All of these factors can contribute to FGD wastewater variability whether the fuel is bituminous, subbituminous or lignite coal, or a blend of coals.

As just one example of this variability, the following sections focus on the differences between FGDW from bituminous and subbituminous plants and how those differences impact system performance. While EPA collected wastewater samples at a subbituminous plant, the plant did not have a biological treatment

system. In fact, *not one* of the subbituminous- or lignite-burning coal plants in EPA's database had biological treatment as part of its FGDW system.[88] Nor were any pilot test data for biological treatment available in the record for such facilities. Therefore, when promulgating the Rule, *the Agency did not demonstrate – and could not demonstrate – the feasibility of biological treatment for 16-25% of all plants (i.e., those burning subbituminous or lignite coal) subject to the new FGD limits*.[89] This was arbitrary, relied on an analysis that is not reproducible, and should be reconsidered.

Additionally, a new pilot study investigating biological treatment at a subbituminous-burning plant appears likely to demonstrate that the plant *cannot meet the FGDW limits using the technology EPA established as BAT*. UWAG is confident that these new data will confirm what industry has been saying all along: FGDW from plants burning subbituminous coal is different from that of plants burning bituminous coal, and the limits the Rule established for FGDW are

[88] The Rule's analytical database includes some data from Hatfield's Ferry, a plant that at the time burned a blend of PRB and Eastern bituminous coal. However, that plant did not have a biological treatment system for its FGD wastewater. *See* Index.1653.1.3-5. It also includes data from We Energies' Pleasant Prairie Plant which burns PRB coal but which also did not have biological treatment. *See* Index.9778.206.

[89] EPA based its estimates of plants burning subbituminous and lignite coals on EPA survey data. The survey collected information through 2009. But at the final rule stage, EPA asserted that, after accounting for "announced retirements," there were no lignite-burning plants discharging FGD wastewater. Index.10078.3-525. However, industry comments demonstrate that several lignite-burning plants are authorized to discharge FGD wastewater. *See* Index.9753.5.

therefore not appropriate. The limits also are not appropriate because plants burning bituminous coal can experience extreme FGDW variability due to a range of factors. EPA should grant this Petition and reconsider these limits based on appropriate and sufficient data that are broad enough to encompass the full range of coal-fired operations.

A. Differences Among Coal Types Have Significant Implications for the Performance and Cost of Biological Treatment

According to EPA, out of 100 plants identified as discharging FGDW in 2009, 15 to 20 plants burn subbituminous coal and 1 to 5 burn lignite.[90] This is important because coals vary greatly not only in their price,[91] availability, and heating value, but also in the air emissions they produce when burned,[92] the applicability and performance of air emissions control technologies,[93] and the characteristics of wastewater resulting from use of those air emissions control

[90] Index.12840.6-5(Table 6-2). EPA also identified 10-15 plants that burn two or more coal types. *Id.* Whether those plants can meet the limits is also in question.

[91] *See, e.g.,* Index.12372.215 (listing coal prices by types – bituminous, subbituminous, lignite, and anthracite – for selected years from 1949-2011).

[92] Different coals contain differing amounts and combinations of pollutants, including sulfur, hydrogen chloride, and mercury, which are important factors for designing and operating air emission technologies and managing the resulting wastewaters. *See* Index.12377.9-12.

[93] EPA has acknowledged differences between electric generating units based on coal types in other rulemakings. In the Mercury and Air Toxics Rule, EPA set different hazardous air pollutant emission standards based on coal ranks. 79 Fed. Reg. 24,073, 24,088 (Apr. 24, 2013).

technologies.[94] None of these facts is disputable. They apply with equal force to plants burning bituminous coal.

Nor can there be any dispute that steam electric units are typically designed to handle a certain coal type or types. A unit designed to burn a subbituminous coal such as PRB coal cannot simply switch to burning bituminous coal. Before any fuel switch, the facility operator would need to consider air pollution controls and permit limitations and operational changes necessary to accommodate the switch. The same is true for lignite plants. Therefore, fuel switching is not the remedy to issues arising from burning a certain variety of coal.

B. The Rule Arbitrarily Ignored the Differences Between FGD Wastewater from Subbituminous Coal and FGD Wastewater from Bituminous Coal

The Rule was based on several mistaken assumptions. Among them, EPA wrongly assumed that subbituminous-burning plants can achieve FGD limits derived using data for plants burning bituminous coals (and limited data at that) because biological treatment systems provide "a mechanism to reduce selenium and nitrate/[nitrite]" and because the selenium and nitrate/nitrite present in FGDW, whether derived from bituminous or subbituminous coal, "is not different."[95] The record refutes this flawed conclusion. The effectiveness and cost of wastewater

[94] Index.47.4-17 (noting pollutant concentrations in FGD scrubber purge vary due to, among other factors, "air pollution control systems operated upstream of the FGD system.").

[95] Index.10080.5-450—5-451.

treatment systems depend on the full pollutant "matrix" – that is, the specific mixture of pollutants as well as their individual characteristics – of the wastewater being treated.

The record demonstrates that FGDW from subbituminous-burning plants is substantially different from FGDW from bituminous-burning plants. The table below summarizes four-day average EPA data for FGDW exiting the chemical precipitation portions of the FGDW treatment systems at Allen and Belews Creek Stations, which burn Eastern bituminous coal, and at Pleasant Prairie Power Plant, which burns PRB coal.[96] The table compares dissolved fractions of constituents after the chemical precipitation system at all three facilities.[97]

For nitrates, the dissolved fraction of Pleasant Prairie's chemical precipitation effluent is more than *8 times* the values for both Allen and Belews Creek. For selenium, Pleasant Prairie's effluent is about *23 times* that of Allen and almost *twice* the Belews Creek value.[98]

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[96] At Belews Creek and Allen, this is a midpoint sample in the wastewater treatment system (chemical precipitation effluent), prior to biological treatment. But at Pleasant Prairie, the sampling point representing chemical precipitation effluent is the end of the FGDW treatment system since it has no biological treatment. Allen and Belews Creek use both chemical precipitation and biological treatment to treat their FGDW (Index.1992.2-2; Index.1954.2-3), while Pleasant Prairie uses a chemical precipitation system (Index.1966.2-3).

[97] *See* Index.1992.4-7–4-10(Table 4-2); Index.1954.4-16–4-18(Tables 4-4,4-5); Index.1966.4-12–4-14(Tables 4-3,4-4).

[98] The record contains additional documentation of the substantial differences in FGD wastewater influent between bituminous and subbituminous plants. *See, e.g.,* EPRI, *Pilot-Scale and Full-Scale Evaluation of Treatment Technologies for the Removal of Mercury and Selenium*

Comparison of 4-Day Average FGDW Treatment After Chemical Precipitation at Allen, Belews Creek, and Pleasant Prairie[99]

Analyte	Unit	4-Day Average Dissolved Effluent, Allen (E. Bituminous)	4-Day Average Dissolved Effluent, Belews Creek (E. Bituminous)	4-Day Average Dissolved Effluent, Pleasant Prairie (PRB)
Aluminum	(ug/l)	NQ[100]	ND	NQ
Arsenic*	(ug/l)	NQ	NQ	4.85
Boron	(ug/l)	58,600	150,000	9,930
Calcium	(ug/l)	1,750,000	3,490,000	639,000
Chloride	(mg/l)	3,300	7,780	1,950
Magnesium	(ug/l)	396,000	738,000	3,560,000
Manganese	(ug/l)	393	NQ	10,800
Mercury	(ng/l)	342	46,200	22.3
Nitrate/Nitrite	(mg/l)	13.3	19.8	160
Selenium	(ug/l)	91.1	1,210	2,080
Sodium	(ug/l)	31,300	48,900	518,000
Sulfate	(mg/l)	1,400	1,380	15,500
TDS	(mg/l)	7,560	20,100	22,400

*The pollutants highlighted are those for which EPA set new BAT limits.

In addition to the pollutants EPA chose to regulate, the values for many pollutants that EPA chose *not* to regulate – but which may affect the efficiency or

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in Flue Gas Desulphurization Water, Index.12102.3-4,3-5,3-8,3-23 (showing much higher selenium and nitrate levels for the subbituminous plant).

[99] Index.1992.4-7–4-10; Index.1954.4-16–4-18; Index.1966.4-12–4-14.

[100] "NQ" means the analyte was measured above the detection limit but below the quantitation limit for all four sampling days. "ND" means the analyte was below the detection limit and could not be quantified.

proper operation of the treatment system – are also quite different. For instance, the 4-day average sulfate level in the Pleasant Prairie influent is more than 11 times that of Allen or Belews Creek. Sulfate levels can affect the operation of the system by causing calcium sulfate scaling, in which mineral deposits build up inside the treatment system's piping and equipment.[101] At Pleasant Prairie, even with lime addition as a pretreatment step, the remaining high sulfate levels necessitate weekly cleaning of the secondary clarifier.[102] Without this regular cleaning, "excessive scale would build up and affect the performance of the clarifier."[103] This scaling issue is likely to impact both the denitrification system[104] EPA added to the model technology treatment chain and the biological treatment system meant to target nitrate/nitrite and selenium removal.

The presence of high TDS also can complicate treatment of FGDW. Within the biological treatment system, high TDS may interfere with attachment sites for bacteria, lessening the effectiveness of treatment.[105] As indicated in the table

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[101] Index.12102.4-3.

[102] Index.11876 (response to Question 19).

[103] *Id.*

[104] EPA has not demonstrated the use of a denitrification system as part of FGD wastewater treatment at any plant burning subbituminous coal, even though it accounted for denitrification costs at Pleasant Prairie and Hatfield's Ferry (which burns a blend of subbituminous and bituminous coals). Index.12264.Worksheet-List_of_Plants. Nonetheless, EPA simply assumes the additional technology will not be subject to operational issues such as scaling.

[105] EPRI, Index.12102.4-4.

above, EPA's 4-day average for Pleasant Prairie demonstrates a TDS level that is about 3 times that of Allen and also higher than Belews Creek. Data in the record show that TDS levels can be as high as 50,000 mg/l,[106] which is approximately *6 times* the Allen 4-day average and almost *2.5 times* the Belews Creek average. EPA tries to negate the TDS issue by pointing to a pilot study at Petersburg Station in which TDS "ranged as high as 27,000 mg/L."[107] But Petersburg burns bituminous coal, so its results are irrelevant for subbituminous- and lignite-burning plants. Moreover, since FGDW influent can contain TDS at levels almost double the amount documented at Petersburg,[108] the pilot study fails to demonstrate that biological treatment systems can handle high TDS levels from subbituminous fuels equally as well as TDS levels from bituminous fuels.

Notably, the table also demonstrates substantial variability between bituminous-burning plants. In particular, the selenium, mercury, and TDS values for Allen and Belews Creek are very different. A review of additional bituminous plants would likely reveal even greater variability.

Without data, it is not reasonable to *assume* – as EPA did – that biological treatment systems will work for all types of FGDW. The feasibility of biological

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[106] Index.126.2-3.

[107] Index.10080.5-365 (citation omitted).

[108] Index.126.2-3.

treatment for subbituminous-, lignite-, and bituminious -burning plants must be demonstrated through actual data that are representative of system variability. Reconsideration will allow just that.

C. Including Old Pleasant Prairie Data Did Not Remedy the Lack of Biological Treatment Data for Subbituminous Plants

Industry members commented extensively on the viability of biological treatment systems for subbituminous-burning plants. We Energies, the owner of Pleasant Prairie, commented that "nothing in the rulemaking record demonstrates that facilities burning subbituminous coal can meet the proposed selenium and nitrate/nitrite limitations."[109] The company urged EPA to "recalculate effluent limitations for FGD wastewater using a more robust set of data that represents the variability of FGD wastewater across the industry" and to include data from at least one plant burning solely subbituminous coals.[110]

In response, EPA explained that, between the proposed and final rules, it decided to use Pleasant Prairie data:[111]

> By including Pleasant Prairie in the dataset, the effluent limitations are based on data that include plants burning bituminous coal, subbituminous coal, and blends of bituminous and subbituminous coals. The record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is

[109] Index.8923.3.

[110] *Id.*; *see also* Index.9778.116 (UWAG).

[111] Index.10084.9-368.

> burned, and in particular those pollutants for which EPA is establishing effluent limitations. See, e.g., the pollutant removal performance for arsenic and mercury.

EPA's response was misleading. Those Pleasant Prairie data were relevant *only* to the mercury and arsenic limits, which are based on chemical precipitation. The facility did not have biological treatment. The performance of Pleasant Prairie's chemical precipitation system as to arsenic and mercury was irrelevant to the performance of the biological treatment portion of the technology. Thus, EPA was wrong that "[t]he record demonstrates that the chemical precipitation plus biological treatment BAT basis is effective at removing the pollutants present in FGD wastewater regardless of the type of coal that is burned."[112]

EPA further misled by claiming: "The data in the record also shows that the biological treatment technology is effective at removing nitrate-nitrite and the different forms of selenium present in FGD wastewater; *that is proven true for every type of coal that has been tested with the technology.*"[113] Note EPA's qualified language: biological treatment is effective for "every type of coal *that has been tested with the technology*." That is the point. As of the final ELG Rule, subbituminous and lignite coal had not been tested with the technology, and thus

[112] Contrary to EPA's assertion, it also has not demonstrated that plants burning a blend of bituminous and subbituminous coals can meet the selenium and nitrate/nitrite limits. The only plant burning a blend of coals during EPA's sampling was Hatfield's Ferry, which had no biological treatment system.

[113] *Id.* (emphasis added).

the *technology is not demonstrated for those coal types.* To set limits without appropriate supporting data was arbitrary and capricious and should be reconsidered.[114]

D. EPA's Theorizing About the Efficacy of Biological Treatment Did Not Satisfy its Obligation to Base Limits on *Demonstrated* Performance

Lacking data, EPA nonetheless declared there is no "theoretical reason" why biological treatment would not be effective at plants burning subbituminous coal.[115] It based its "theoretical" judgment on two specious arguments.

First, EPA said that "[t]here is nothing unique about the form of selenium or nitrate-nitrite that is present in FGD wastewater at plants burning subbituminous (or any other type of coal) …."[116] This statement misses the point. Although the specific types of selenium and nitrate/nitrite in FGDW may generally be the same across coal types, the differences between FGD *wastewater* from bituminous coals and that from subbituminous coals can be significant.[117] As shown by EPA's own

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[114] *See Chemical Mfrs. Ass'n v. EPA,* 885 F.2d 253, 265 (5th Cir. 1989), *cert. denied sub nom. PPG Indus. v. EPA*, 495 U.S. 910 (1990) (EPA failed to demonstrate a "reasonable basis for its conclusion" where it tried to use data from end-of-pipe biological treatment systems to justify in-plant biological treatment systems).

[115] Index.10084.9-368.

[116] *Id.*

[117] And as already noted, EPA failed to capture the variability of FGDW across the industry. Even two plants burning bituminous coal can have very different FGDW characteristics due to differences in coal constituents or differences in operational conditions, such as cycles of concentration within the scrubbers.

data for the Allen, Belews Creek, and Pleasant Prairie plants, the wastewaters differ in material ways.

Nonetheless, EPA simply asserted that "the characteristics of wastewater from subbituminous plants (as evidenced by the data for Pleasant Prairie ...) are similar to the characteristics of wastewater from plants burning bituminous coal (i.e., … Belews Creek …)."[118] It is simply not true that all concentrations and characteristics of FGDW from subbituminous plants are similar to those for bituminous plants.[119] But even if they were "similar," comparing pollutant concentrations is not sufficient for demonstrating that biological treatment is feasible and available for subbituminous and lignite plants.[120]

Second, the Agency claimed it considered and ruled out whether other pollutants or wastewater characteristics unique to subbituminous coal would

[118] *Id.*

[119] *See supra* at 54-58.

[120] At the proposed rule stage, EPA did not include data from Pleasant Prairie, the only subbituminous-burning plant it sampled. EPA, *Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-13-002 (Apr. 2013), EPA-HQ-OW-2009-0819-2257 at 10-6. But for the Final Rule, EPA included mercury and arsenic data from Pleasant Prairie in the dataset used to derive the FGD limits. Analytical Database for the Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640. As a result of including the Pleasant Prairie data, the mercury daily maximum limit rose from 242 to 788 nanograms per liter, and the mercury monthly average rose from 119 to 356 nanograms per liter. Both arsenic limits also increased. The magnitude of the mercury changes are very significant, and indicate that including data from subbituminous-burning plants is essential to deriving appropriate limits.

potentially interfere with biological treatment.[121] With this statement, EPA waved away possible operational difficulties from scaling (as can be caused by high sulfate levels) or from high TDS (which can potentially impact biological treatment performance). Yet, these problems occur at facilities burning subbituminous coals, and EPA's justification was patently inadequate.

It is telling that, when promulgating the Rule, EPA urged all plants to perform site-specific pilot studies before installing FGDW equipment.[122] These studies are necessary, according to EPA, to assess wastewater characteristics and determine the most appropriate technologies and their design (*e.g.*, sufficient capacity and residence time) to handle the variability of the particular FGD wastewater.[123] EPA specified that the studies should be conducted "over a long enough period of time that will include variability in plant operations such as shutdowns, fuel switches (preferably for all fuel types burned at the plant), variability in electricity generating loads, periods with high [oxidation reduction potential], etc."[124] EPA recommended that a plant "identify the 'worst case' scenario and design a sufficient FGDW treatment system that can operate under

[121] Index.10084.9-368.

[122] Index.12006.14–16.

[123] *Id.*

[124] *Id.* at 15–16.

the worst case conditions and achieve the effluent limits."[125] Many of EPA's recommendations would significantly increase the complexity and cost of FGDW treatment.

EPA's own recommendations, and the reasoning underlying them, flatly contradict EPA's assertion that variability among FGD wastestreams among plants, and over time at a given plant, has no effect on the achievability of the limits or the cost of technology. Indeed, pilot studies are necessary *because of the unpredictable variability of FGDW*.[126] EPA was acknowledging the uniqueness of each FGDW at each given plant. This acknowledgement demonstrates that the Rule could not have taken into account all of the site-specific technologies needed to achieve the final effluent limits for FGD wastewater, including technologies needed at subbituminous-burning plants as well as at bituminous-burning plants. And, without a full consideration of site-specific design factors, EPA could not have properly derived costs for FGD compliance at all facilities.[127]

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[125] Index.12006.16.

[126] GE, a vendor of biological treatment systems, acknowledges the "*extreme variability* in effluent quality [i.e., FGD wastewater influent to the treatment system] due to the variety of coal sources, limestone sources, and scrubber operation…." J. Sonstegard, et al., ABMet: Setting the Standard for Selenium Removal, Index.250.2 (emphasis added).

[127] The same is true for derivation of costs for indirect dischargers attempting to meet the FGD limits. Several small public power facilities face daunting costs to comply with the mandated mercury, arsenic, selenium, and nitrates limits.

In responses to comments on the Rule, EPA also retorted that commenters had not provided data to prove subbituminous- or lignite-burning plants would be unable to meet the effluent limitations.[128] This, of course, turned EPA's regulatory obligation on its head. Since no subbituminous- or lignite-burning plants had installed the biological treatment system that EPA claimed is BAT, it would have been difficult indeed to produce such data. But that is beside the point. The burden is not on industry to prove why it should *not* be regulated. The burden is on EPA to justify regulation. Here, by statute, EPA was obliged to establish that the BAT technology is technologically "available" for the whole industrial category, including bituminous-, subbituminous-, and lignite-burning plants.

EPA also contended there is no evidence of possible interferences with biological treatment stemming from FGDW derived from subbituminous coal.[129] But that is a theoretical judgment unsupported by any performance data. It asserted that a "well operated" PRB-burning plant should have no issues meeting the limits.[130] Again, that is all theory, unsupported by any credible analysis.

With as much as 25% of the coal fleet dependent upon subbituminous or lignite coals, EPA's speculation is no small matter. EPA's database does not

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[128] Index.10080.5-166, .10078.3-525.

[129] Index.10084.9-368.

[130] Index.10080.5-148. If, in the absence of data, it is sufficient merely to say that a "well operated" plant should be able to meet a limit, then EPA could justify any conceivable limit.

reflect the true variability of FGDW. Selecting model technologies and setting limits on an incomplete database is not consistent with the regulatory reform agenda. The large range of FGDW variability affects all plants no matter their coal type.

For these reasons, EPA should reconsider the FGDW limits in the Final Rule.

E. New Data Are Likely to Demonstrate that Plants Burning Subbituminous and Bituminous Coal Cannot Comply With The Rule's Limits Through Use of EPA's Model Technology

After EPA published the Final Rule, EPRI initiated a pilot study of the Rule's model biological treatment technology at Pleasant Prairie, a plant burning 100% subbituminous PRB coal. The results of that pilot study are yet to be released, but UWAG believes they will support what industry has reiterated: (1) treating FGDW from plants burning subbituminous coal will be substantially more difficult than treating FGDW from plants burning bituminous coal; and (2) the model biological treatment technology for FGDW treatment is not demonstrated for use with FGDW from subbituminous plants. EPRI is likely to publish the final report within the next few weeks.

Also, new data collected by AEP illustrates that variability in wastewater management can also impact performance at bituminous plants such that additional technologies beyond EPA's model technology will be needed to achieve the limits.

If these new data are indeed contrary to EPA's assumption that biological treatment systems will function equally as well no matter the type of coal being burned, then they will further demonstrate why EPA must reconsider the limits for FGD wastewater.

III. EPA Violated Principles of Data Quality and Transparency in Characterizing Bottom Ash Transport Water

The Final Rule imposed a zero discharge requirement for BATW.[131] Every plant currently discharging any BATW (aside from oil-fired units and units less than 50 megawatts) must convert its systems to prevent any BATW discharge whatsoever.[132] This single requirement exacts a very heavy price. According to EPA, *103 plants must retrofit their BATW systems as a result of the Rule, at a total industry capital cost of over $2.5 billion* and annual operations and maintenance costs of $133 million (2010$).[133] Based on anecdotal reports, UWAG is confident EPA's cost estimate is a gross underestimate. However, the public cannot evaluate

[131] 40 C.F.R. § 423.13(k)(1)(i).

[132] The Rule provides two limited exemptions for discharges of BATW. First, plants can discharge "low volume, short duration" discharges from minor leaks or minor maintenance events. 40 C.F.R. § 423.11(p). Second, plants can discharge BATW if it is reused as makeup water in the FGD scrubber and thus subject to the FGD wastewater discharge limits. 40 C.F.R. § 423.13(k)(1)(i).

[133] TDD at Table 9-10, 9-45.

the estimate because EPA's estimates of plant-specific costs are not available for public review.[134]

EPA should have carefully selected the data used to justify this level of impact. But that was not the case. EPA's BATW data suffers from a plethora of data quality issues, all of which affect EPA's analyses. The following types of flaws infect the BATW data: (1) inconsistencies with EPA's own data acceptance criteria; (2) errors in units of measure; (3) use of unacceptable or obsolete analytical methods; and (4) application of overly conservative methodologies addressing non-detect analytical results. For example, EPA's analytical database uses the wrong units of measure for a mercury datapoint at the Kammer plant. The units should be nanograms per liter (parts per trillion) rather than micrograms per liter (parts per billion).[135] In addition, EPA used detection limits from older analytical methods to estimate pollutant concentrations even though the laboratory reported the pollutants were not detected in the samples. These unacceptable practices resulted in an overestimation of pollutant loadings for BATW. These sorts of errors justify reconsideration.

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[134] *See* EPA's Final ICPR. The portions of that document containing plant-specific costs (EPA-HQ-OW-2009-0819-6472.ATT1, ATT2) have been redacted from the record in their entirety.

[135] Analytical Database for the Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640.

Additionally, EPA chose to include 27 samples of *40-year-old* data from *unidentified sources* as part of its BATW dataset. Because the sources of the data are neither identified nor described with relevant detail, the public cannot determine critical facts that go to the legitimacy of the data. For instance, EPA did not address whether the plants that supplied the data are still operating, whether the ash ponds sampled are still discharging, or whether the materials contained in the particular ash ponds are the same as when sampling occurred. It is impossible for the public to determine the ash pond management practices that would apply to the data or to determine whether, since the data were gathered, practices have changed. In short, there is no way for the public to determine whether the data are representative of *current* industry discharges. This lack of transparency is contrary to the goals of regulatory reform and the Office of Management and Budget's and EPA's own rules on the validity of data.[136]

The quality of the data was also dubious. EPA failed to provide any quality control/quality assurance information for the 27 samples. Moreover, EPA did not disclose either the laboratory methods used to analyze the samples or the actual laboratory reports to substantiate the data. Instead, the 40-year old values are

[136] *See* Exec. Order 13777, 82 Fed. Reg. at 12,286 (Mar. 1, 2017) (requiring evaluation of rules relying in whole or part on "data, information, or methods that are not publicly available or that are insufficiently transparent to meet the standard for reproducibility").

simply copied out of an outdated EPA report – *itself more than 30 years old* – with no proper supporting documentation.

Also, EPA used the poor quality BATW characterization data as a basis for several important purposes, including calculating a cost-effectiveness ratio. Since the underlying BATW characterization data was poor quality, the cost-effectiveness analysis is flawed. An agency has an obligation to base its analysis on acceptable data. In this case, EPA did not do so.

In the 21st century, data unsupported by routine quality control/quality assurance checks and proper documentation are not considered reliable data, and they should not be used to compel expenditures of $2.5 billion or more. Reconsideration of the BATW limits is appropriate.

The following sections explain how EPA selected BATW characterization data and why the data are critical to EPA's BATW decisions.

A. EPA Failed to Gather Current BATW Data

Despite site visits to 68 steam electric plants prior to the proposed ELG rule,[137] EPA collected only one sample of BATW.[138] EPA obtained this sample in 2007, almost 2 years before it decided to revise the steam electric ELGs. The lack of additional BATW samples during the course of the rulemaking was a curious

[137] 78 Fed. Reg. at 34,444.

[138] EPA sampled BATW at the Homer City Power Plant in August 2007. Final Detailed Study at 2-10.

omission that did not go unnoticed. Industry urged EPA to gather more BATW samples, but EPA never did so.

B. EPA Relied on Old Data from Unidentified Sources

The 1973-1976 data EPA used as part of its BATW dataset derive from 27 samples collected at three unidentified Tennessee Valley Authority plants. EPA first presented these data ("old TDD data") in 1980 as part of the proposed Development Document for the steam electric point source category.[139] EPA then incorporated them into Appendix A of the final 1982 Development Document.[140] In a memorandum describing its 2015 review of data for ash transport water, EPA noted that the 1982 Appendix A plants are "unidentified."[141] Incredibly, EPA decided to use the data even though it did not match the data with an individual plant or discharge point, and even though it has other sources of data, such as *current* data supplied by industry.[142]

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[139] EPA, *Development Document for Effluent Limitations Guidelines and Standards for the Steam Electric Point Source Category* (Sept. 1980), EPA-HQ-OW-2009-0819-5450-Att21 at 514-27, 552-56.

[140] EPA, *Development Document for Final Effluent Limitations Guidelines, New Source Performance Standards, and Pretreatment Standards for the Steam Electric Point Source Category* (Nov. 1982), EPA-HQ-OW-2009-0819-2186, Appendix A at 571-84, 609-13.

[141] ERG, *Ash Transport Water Analytical Data Review Methodology Memorandum* (Sept. 30, 2015), EPA-HQ-OW-2009-0819-6349 at 15.

[142] This use of data from unidentified plants is distinct from EPA's general practice of "anonymizing" data used in ELG rulemakings to protect CBI. When EPA uses codes instead of plant names and other identifying information to protect CBI, it nonetheless has identified for itself the plants supplying the data, and therefore the Agency has the means to satisfy itself that the data are representative. In this case, EPA admits that the plants are "unidentified."

In addition to the old TDD data, EPA's BATW analytical database uses more current industry-generated data and EPA's single 2007 sample. However, the old TDD data is a significant and influential component of the database, comprising approximately 28% of all the parameter data points used by EPA to characterize BATW for the Rule.[143]

C. Use of Data from Unidentified Sources Prevents Proper Data Evaluation

Without being able to tie the old TDD data to specific plants, one cannot properly evaluate whether the data are representative because key plant characteristics are unknown. EPA itself acknowledged several operating procedures that can affect BATW characteristics, including:

- adding chemicals to ash ponds to control pH;
- injecting carbon dioxide into the pond to reduce alkalinity;
- adding polymers to the pond to enhance settling; and
- adding acidic wastestreams to the pond, which can increase the metals concentration in the effluent.[144]

Without knowing the plants' identities, it is impossible to tell whether the plants used any of these methods during the sampling period or whether the plants now employ these methods.

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[143] EPA used a total of 2,252 data points to characterize BATW loadings. Of that amount, it derived 632 data points from the old TDD data. EPA, Analytical Database for Steam Electric Rulemaking, EPA-HQ-OW-2009-0819-5640.

[144] Final Detailed Study at 5-13, 5-15.

In sum, there is no way for EPA or the public to know if the data are representative of current industry discharges. EPA admitted that "[t]he processes employed and pollutants discharged by the industry look very different today than they did in 1982."[145] We agree. The processes employed to manage ash ponds – and the ash ponds themselves – have changed since the 1970s, when the old TDD data were collected. The Rule must be reconsidered to use more recent, reliable data in setting BATW limits.

D. The Old TDD Data Are Not Representative Because New Regulations Took Effect in 1974 and 1982

Changing regulations dramatically changed how the industry handled BATW over the years. Old data are therefore not representative of current BATW. The old TDD data, as already noted, were collected and analyzed in 1973-1976. The first steam electric ELGs became effective on November 7, 1974.[146] That rule stayed in effect until EPA revised the steam electric ELGs in 1982.[147]

Since 16 out of the 27 "old TDD data" samples were collected prior to November 7, 1974,[148] those samples do not reflect either the 1974 ELG rule or the 1982 revisions. Under the 1974 rule, existing facilities had to recycle BATW 12.5

[145] 80 Fed. Reg. at 67,840.

[146] 39 Fed. Reg. 36,186, 36,198 (Oct. 8, 1974).

[147] 47 Fed. Reg. 52,290 (Nov. 19, 1982).

[148] EPA lists the dates of the samples on Tables A-2, A-4, and A-13 of Appendix A of the 1982 Development Document, pp. A-5–A8, A-12–A-14, A-43.

times before discharging and were subject to numeric total suspended solids (TSS) and oil and grease limits.[149] New sources faced stricter requirements; they had to recycle BATW 20 times before discharging.[150] The 1974 regulation also set a pH range for all discharges of 6.0-9.0.[151] Because the pH of a pond can affect metal concentrations in the discharge, requiring ash ponds to operate within a pH range likely changed the discharges from the ponds. For these reasons, the 16 samples pre-dating the 1974 rule cannot be representative of current BATW discharges because they do not reflect current discharge limits.

The remaining 11 "old TDD data" samples pre-date the 1982 revisions. In that revision, EPA deleted the existing and new facility requirements to recycle BATW. That change alone is very significant and would have affected how ponds operate. Therefore, whether the old TDD data (both the 16 samples pre-dating the 1974 rule and the 11 samples pre-dating the 1982 revisions) are representative of current industry discharges is unknown.

E. The BATW Characterization Data Were Integral to EPA's Rulemaking Processes

Despite its many flaws, EPA used the BATW analytical data for several critical rulemaking functions. First, it used the sample analytical data to define

[149] 40 C.F.R. § 423.13(d) (1975).

[150] 40 C.F.R. § 423.15(d) (1975).

[151] 40 C.F.R. § 423.12(b)(1) (1975).

"pollutants of concern" or POCs. For BATW, EPA defined POCs as "those pollutants that are confirmed to be present at sufficient frequency in untreated wastewater samples of that wastestream."[152] EPA identified 37 BATW POCs.[153]

Second, using the defined POCs for the particular wastestream,[154] EPA calculated plant-specific loadings for baseline discharges and then totaled them to estimate current industry-wide pollutant loadings for the wastestream.[155] After calculating the baseline discharge, EPA estimated the amount of pollutants removed by the chosen technology option.[156]

Once EPA calculated pollutant pounds removed, it also calculated "toxic weighted pounds equivalent" or TWPEs. As EPA explained:

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[152] 80 Fed. Reg. at 87,647.

[153] TDD, Table 6-16 at 6-25 to 6-26. EPA established several protocols for accepting data used to define POCs. For example, (1) samples must be representative of full-scale plant operations; (2) for BATW, the sample must comprise at least 75% by volume BATW; and (3) source water sample data that are paired with wastewater sample data must be taken within a day of the wastewater sample collection date. TDD at 6-17 to 6-18. But Petitioners cannot substantiate whether EPA followed its own protocols as to BATW POC data because documents detailing EPA's POC evaluation are redacted in their entirety from the record available for public review. *See Memorandum-Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology* (EPA-HQ-OW-2009-0819-6049); *Analysis-Source Water Ash Treatment Analysis Final* (EPA-HQ-OW-2009-0819-6048); and *Analysis-Pollutants of Concern Ash Treatment Analysis Final* (EPA-HQ-OW-2009-0819-6050).

[154] "The industry-level baseline loadings presented in Table 10-14 include only those pollutants identified as POCs…." TDD at 10-34.

[155] EPA lowered the numbers of plants with bottom ash ponds from 115 to 84 to account for the effect of the Clean Power Plan. *Cf.* TDD Table 10-14 to Table 10-15 at 10-34–10-36. Again, Petitioners cannot substantiate either number because EPA's underlying analysis is not part of the record available for public review. And, of course, any change in the CPP Rule will affect the number of plants likely to be affected by the ELG Rule.

[156] TDD, Tables 10-16 and 10-17 at 10-37.

> EPA uses toxic weighting factors (TWFs) to account for differences in toxicity across pollutants.... EPA calculated a toxic-weighted pound-equivalent (TWPE) value for each pollutant discharged to compare mass loadings of different pollutants based on their toxicity. To perform this comparison, EPA multiplied the mass loadings of pollutant in pounds/year by the pollutant-specific TWF to derive a "toxic-equivalent" loading (lb equivalent/yr), or TWPE.[157]

Using pounds of pollutant removed and/or TWPE calculations, EPA completed several essential elements of its rulemaking analysis:

1. It compared the pollutant removal efficacy of the technology options for BATW.

2. It used the baseline loading and estimated pollutant removals as a major input to the Environmental Assessment, a 513-page document prepared "to evaluate the environmental impact of pollutant loadings released under current (*i.e.*, baseline) discharge practices and assess the potential environmental improvement from pollutant loading removals under the final rule."[158]

3. It calculated the cost-effectiveness of the Rule as the cost per pound of TWPEs removed, for comparison to the cost-effectiveness of other effluent guidelines rulemakings.

4. It compared the total estimated costs of the Rule to the total estimated benefits (*i.e.*, benefits based on EPA's estimate of the pounds of pollutants removed from receiving waterbodies).[159]

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[157] TDD at 10-3.

[158] EPA, *Environmental Assessment for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-006 (Sept. 2015), EPA-HQ-OW-2009-0819-6427 at 1-1.

[159] *See* EPA, *Benefit and Cost Analysis for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-15-005 (Sept. 2015), EPA-HQ-OW-2009-0819-5856.

Despite their serious flaws, the BATW characterization data, therefore, were critical building blocks for much of the Agency's rulemaking processes.

F. EPA's Cost-effectiveness Analysis for BATW is Flawed

EPA's cost-effectiveness analyses illustrate the importance of selecting the right BATW characterization data. The flawed dataset that EPA used for BATW characterization affected EPA's cost-effectiveness analysis by increasing the amount of pollutant loadings attributable to BATW. While EPA was quick to note that a cost-effectiveness analysis is "not required by the CWA, and not a determining factor for establishing BAT,"[160] this analysis allowed EPA to compare the effectiveness of candidate technologies while factoring in the costs of those technologies. Using this metric also allowed EPA to compare the cost-effectiveness of a portion or the Rule (or the entire Rule) to recently promulgated BAT limitations for other industries, which range from less than $1 per TWPE to $404 per TWPE.[161]

In the proposed ELG Rule, EPA estimated that a zero discharge approach to BATW would cost $107 per TWPE.[162] At the proposed rule stage, UWAG

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[160] 80 Fed. Reg. at 67,881.

[161] *Id.*

[162] EPA, *Technical Development Document for the Proposed Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category*, EPA-821-R-13-002 (April 2013), EPA-HQ-OW-2009-0819-2257 at 8-34; see also 78 Fed. Reg. at 34,474 col. 1.

challenged EPA's BATW cost-effectiveness analysis on several grounds, including the use of old or otherwise invalid data.[163] When UWAG calculated its own cost-effectiveness ratio for BATW, using better quality characterization data and more realistic capital costs, it ranged from $1,635 to $16,492 per TWPE.[164] Therefore, UWAG's estimate for the ELG Rule was *4 to 41 times greater than $404 per TWPE,* the highest historical BAT cost-effectiveness ratio that EPA had ever used.

In the Final Rule, EPA adjusted the characterization data it used for BATW to eliminate some of the data that UWAG pointed to as old and invalid. But it substituted in other old 1970s-1980s data from unidentified plants, as well as newer data that in some cases were misinterpreted. Based on the new dataset, EPA calculated a new cost-effectiveness ratio for BATW of $314-457 per TWPE, or about 3 to 4 times its original estimate.[165] Nonetheless, EPA found that the cost-effectiveness of the total final rule was in the range of $136-149 per TWPE.[166]

Even after EPA's adjustments for the final rule, the BATW characterization dataset is of unacceptable quality, for the many reasons previously noted, which resulted in a significant overestimation of pollutant loadings attributed to BATW. Having undertaken to consider cost-effectiveness – and having used it as a primary

[163] UWAG Sept. 2013 Comments at 79.

[164] *Id*.

[165] 80 Fed. Reg. at 67,882.

[166] *Id.*

tool across multiple effluent guidelines rules – EPA had an obligation to use acceptable data in its analysis. It failed to do so.

Whether or not the CWA requires EPA to perform a cost-effectiveness analysis of BAT determinations, it is good administrative practice to do so. Since EPA's cost-effectiveness analysis depends on the quality of the underlying pollutant loading data and those data are derived from BATW characterization data, if the characterization data are flawed, then the whole cost effectiveness analysis is flawed and should be reconsidered.

The lack of transparency is reason alone to reevaluate an EPA decision that the Agency admits will cost *at least $2.5 billion*. When coupled with the serious concerns about the representativeness and accuracy of the data, it is clear that reconsideration is appropriate and that an administrative stay during reconsideration is likewise appropriate.

IV. New Data Also Demonstrate that the Rule's IGCC Limits are Technologically Infeasible

Sufficiency of data is another core requirement for sound regulation.[167] For IGCC plants, EPA badly missed the mark. The IGCC limits in the Rule were based on an insufficient and unrepresentative dataset. Newly available data prove

[167] "Each agency shall base its decisions on the best reasonably obtainable scientific, technical, economic, and other information concerning the need for, and consequences of, the intended regulation." Executive Order 12866, *Regulatory Planning and Review* (Sept. 30, 1993), 58 Fed. Reg. 51,735, 51,736 (Oct. 4, 1993).

that industry's concerns about the limits were justified. The new data show that the limits for IGCC wastewater cannot reliably be met. Indeed, a brand new, state-of-the-art IGCC facility cannot meet the limits, *even though it employs what EPA deemed to be "model" technology.*

The record is clear that EPA relied on incomplete and inappropriate data in setting the IGCC limits. The new facility – Duke Energy Indiana's Edwardsport[168] – uses a two-stage gasification wastewater treatment system. Two-stage treatment produces far less wastewater, but that residual wastewater (known as "crystallizer effluent") has higher pollutant concentrations than does the wastewater from one-stage treatment (known as "vapor compression effluent"). Duke commenced construction of Edwardsport in 2008, and commercial operations began in June 2013, the same month in which EPA published the proposed ELG Rule.

To develop the gasification wastewater limits, EPA gathered gasification wastewater characterization data from two other IGCC facilities that had been in operation for many years: Wabash River (which used one-stage treatment and which has since closed) and Polk (which uses two-stage treatment). Despite

[168] Edwardsport qualifies under the Rule as an "existing facility," not a "new" facility, because it commenced construction long before the ELG Rule was proposed, much less finalized.

having limited data from only two facilities,[169] EPA discarded Polk's crystallizer effluent data because the Agency believed Polk's crystallizer was malfunctioning at the time of sampling.[170] With that decision, EPA rejected its only crystallizer effluent data (*i.e.*, data most likely to be similar to the crystallizer effluent that the state-of-the-art Edwardsport plant would generate). Notwithstanding the data shortcomings, EPA did not seek to obtain replacement data from Polk. Despite comments from industry expressing concern about the lack of sufficient IGCC-specific data in the record[171] and the numerous technical differences between the limited number of IGCC facilities in operation,[172] EPA used only vapor compression effluent data from Polk (representing one-stage treatment) to set the final limits for arsenic and mercury.[173]

Data from Edwardsport demonstrate that a state-of-the-art plant with two-stage treatment cannot meet the limits. EPA set gasification wastewater limits for arsenic, mercury, selenium, and TDS. The summary table below compares

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[169] The dataset collected by EPA included only four daily effluent samples from each facility. In Polk's case, there were four daily samples of effluent from the intermediate vapor compression step and four samples of final effluent from the crystallizer.

[170] Index.2920.13-20; Index.12840.13-26-13-27.

[171] Index.8684. 78-81 (Duke Energy) (discussing inadequacies of data set for setting reliably achievable gasification wastewater limits), Index 9778.289-91 (UWAG) (discussing inadequacies of gasification wastewater data set).

[172] Index.8684.77-78; Index.9778.287-89.

[173] The effluent data from Wabash River were also used by EPA in setting ELG limits for selenium and TDS. However, it is the ELG limit for mercury that poses Edwardsport's greatest compliance challenge.

Edwardsport arsenic, mercury, and TDS data from May 2013- October 2015 to the ELG limits.[174]

Parameter	Edwardsport Daily Maximum	ELG Daily Maximum	Edwardsport 30-day Average	ELG 30-day Average
Arsenic, total ug/L)	15	4	--	--
Mercury, total (ng/L)	12.8	1.8	9.1[a]	1.3
Total dissolved solids (TDS) (mg/L)	222	38	67.2[b]	22

a=September 2015 average (highest 30-day average)
b=October 2015 average (highest 30-day average)

Since 2015, Edwardsport gasification wastewater effluent continues to exceed the arsenic, mercury, and TDS limits. According to its renewed wastewater discharge permit, the new ELG limits will be applicable to Edwardsport in April 2021.

Because the existing $120 million gasification wastewater treatment system cannot consistently meet the limits, Edwardsport was forced to file a request for a fundamentally different factor variance[175] and is awaiting a response from EPA Region V. Variances from ELG limits are very rarely granted – none thus far have been granted under the Rule. If Edwardsport is denied a variance, its options will

[174] The Edwardsport data are based on 27 samples, as documented in Appendix 1 to Duke Energy Indiana, LLC's Application for a Fundamentally Different Factor Variance, Edwardsport IGCC Station, NPDES Permit IN0002780, submitted to EPA Region V and Indiana Dept. of Environmental Management (April 27, 2016) ("Duke FDFV Application"), attached as Exhibit 3 to this Petition.

[175] Duke FDFV Application.

be to (1) identify, design, and install one-of-a-kind wastewater treatment technologies in the hope of achieving consistent compliance; or (2) stop operating. By statute, BAT must be based on "available" technologies. Companies should not be forced *after* an ELG is issued to explore new and untested technologies in the hope of meeting the limits.

This is how a rule based on woefully insufficient data penalizes industry and imposes excessive costs on society. Duke – despite its substantial efforts to design, construct, and operate a costly state-of-the-art IGCC facility – has been forced into an uncertain position as a result of the Rule's unreasonable and unsubstantiated limits. Well-developed rules are supported by appropriate data and do not cause lingering uncertainties; they allow businesses to make efficient, cost-effective decisions. The limits for IGCC facilities are an example of the worst type of regulatory outcome: requirements that (1) are technologically infeasible and (2) increase costs and exacerbate business stagnation due to uncertainty.

V. Cumulatively, the ELG Rule and Other Rules Are Having Devastating Economic Impacts

It is undeniable that the convergence of the ELG Rule and other rules affecting coal-fired power plants is causing adverse economic impacts. The other rules include the CCR rule, the CPP rule, and the CWIS rule. First, the cumulative compliance costs are massive. As a result, the rules will cause and contribute to

plant closures and job losses. Second, the lack of coordination among the rules (and in particular the compliance deadlines they set) magnifies business uncertainty and expense. Third, the CPP and the CCR rule have seen their status change since promulgation of the ELG Rule. Both are in litigation and subject to further changes, thus exacerbating uncertainty about the costs and plant closures attributable specifically to the ELG Rule and whether and how the rules can be harmonized.

The cumulative impact of all these rules makes the ELG Rule a prime candidate for reconsideration to promote regulatory reform policies.

A. For Coal-Fired Units, the Cumulative Compliance Costs and Job Losses From EPA Rules Are Staggering

EPA's own estimates[176] of the costs of the ELG, CCR, CPP, and CWIS rules demonstrate the adverse economics the coal-fired fleet is facing. EPA claims the *annualized* total social costs of the ELG and CWIS rules will be $471.2-479.5 million (2013$) and $274.9 million (2011$), respectively.[177] The Agency estimates the total *annualized* incremental costs of the CCR rule will be $509-735 million (2013$) (over 100 years).[178] The CPP alone is projected to cost billions per year. EPA predicts annual illustrative compliance costs of $1.4-2.5 billion (2020),

[176] Again, industry does not accept EPA's estimates. In fact, industry believes EPA grossly underestimated the costs of many of these rules.

[177] 80 Fed. Reg. at 67,865 (ELG Rule); 79 Fed. Reg. at 48,415 (CWIS Rule).

[178] 80 Fed. Reg. at 21,309.

$1.0-3.0 billion (2025), and $5.1-8.4 billion (2050) (all in 2011$).[179] Cumulatively, these rules are projected annually to cost the coal-fired industry (and their customers) billions of dollars for many years.

While the CPP and the CCR rules are being substantially changed, UWAG members are incurring the heavy costs of complying or planning to comply with the ELG rule. Dynegy Inc. recently estimated its costs of compliance to total approximately $308 million, with $41 million to be spent in less than one year and $178 million to be spent within 3 years.[180] Dynegy's costs are not unique. NRG, another UWAG member, anticipates that its total ELG costs will be approximately $200 million.[181] AEP has included in its total projected environmental investments for 2018 through 2025 ELG Rule compliance costs ranging from $400-$550 million through 2023.[182]

Smaller, local utilities are likewise experiencing high compliance costs relative to their lower numbers of ratepayers. For instance, City Utilities of Springfield, Missouri is a community-owned utility. It is a component of the City of Springfield and is overseen by a board of local citizens. It operates electric

[179] 80 Fed. Reg. at 64,680-81.

[180] Dynegy Inc., Form 10-K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 27, 2017) at 18.

[181] NRG, Form 10-K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 28, 2017) at 32.

[182] AEP, Inc. Form 10K, filed with the U.S. Securities and Exchange Commission for the fiscal year ended December 31, 2016 (Feb. 28, 2017) at 14.

generating capacity of 1,120 MW, providing electricity to approximately 112,000 customers over a 320-square mile area. To comply with the ELG Rule, City Utilities has already spent $4 million in capital costs and will need to spend an additional $3 million in capital costs if the "zero discharge" BATW requirement stands, exclusive of additional annual operating costs. This is in addition to the significant costs to comply with the CCR Rule at an estimated total cost of $14 million.

Since the ELG Rule phases in compliance from November 1, 2018, through December 31, 2023,[183] prompt reconsideration of the Rule offers a potential of relief from some of these costs.[184]

Unit and facility closures based on the cumulative impact of these rules are inevitable. In 2015, when EPA promulgated another rule affecting coal-fired power plants (the Mercury and Air Toxics Standards rule), utilities were forced to retire almost 14 gigawatts of coal-fired generation.[185] That represented more than

[183] 80 Fed. Reg. at 67,854.

[184] Some public power utilities are experiencing especially acute impacts from the Rule's deadlines because they are indirect dischargers. Instead of phased-in compliance deadlines, they face a fixed deadline of November 1, 2018, as indirect dischargers subject to Pretreatment Standards for New Sources ("PSNS") and Pretreatment Standards for Existing Sources ("PSES"). Thus, those dischargers are making significant capital investment decisions without knowing the ultimate fate of the CPP or CCR rules (or, indeed, the ELG Rule itself if this petition is granted). Reconsideration, coupled with a suspension of the deadline, is imperative for them.

[185] U.S. Energy Information Admin., *Coal made up more than 80% of retired electricity generating capacity in 2015,* (available at www.eia.gov.todayinenergy/detail.php?id=25272).

80% of all 2015 retirements.[186] Similar impacts from the current batch of rules are likely. EPA itself estimated that, due to the CPP rule alone, 47 plants and another 19 units that otherwise would be subject to the ELG Rule would close or be repowered.[187]

Job losses are a natural consequence of unit and facility closures. Even for those power plants repowered with natural gas, there will be job losses, because a coal-fired unit employs more personnel than a comparably sized natural-gas fired unit.[188] For the CPP alone, the Energy Information Administration (EIA) estimated severe job losses. By 2030, EIA forecasts that, if the CPP is implemented, there would be about *376,000 fewer non-farm jobs than if there were no CPP.*[189] The U.S. Chamber of Commerce, among many others, asked the Supreme Court to stay the CPP because of economic concerns, including localized issues in rural or economically distressed areas of the country. Its stay application included many declarations from potentially affected communities. For example, a

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[186] *Id.*

[187] TDD, Table 4-18 at 4-45.

[188] Buchsbaum, L., *Supporting Coal Power Plant Workers Through Plant Closures,* Power Magazine, June 1, 2016 (available at www.powermag.com/supporting-coal-power-plant-workers-plant-closures) (quoting AEP spokesperson that a "good-size" natural gas plant requires about 25 workers, as compared to 100-200 for a "good-size" coal-fired plant) (last visited March 18, 2017).

[189] Institute for 21st Century Energy, U.S. Chamber of Commerce, *EPA Clean Power Plan: EIA's Forecast Shows Benefits Fall Well Short of Costs … Again* (June 2016) at 10, *citing* EIA, Annual Energy Outlook 2016.

school superintendent from Oliver County, North Dakota, described the likely impact to his District upon closure of one of two units at a nearby coal-fired station and the resulting 40% reduction in employment at a local coal mine. About 25% of the student population of the District are students whose families are dependent on the energy sector for their jobs, and the loss of those students would devastate the District:

> [T]he closure of the Coal Creek and Minnkota units and reduced production at the Falkirk Mine would result in significant financial harm to the District. One of the most important sources of income for the District is local property taxes. As families move away in response to the closures and reduced production at the mine, the size of the tax base will shrink, thus cutting funding for the District. Our local taxable evaluation will decrease with flooding of houses on the market and the lack of prospective home buyers .... This loss of funding would force the District to lay off staff, cut vital programs, or both.[190]

The business manager for a local chapter of the International Brotherhood of Boilermakers also submitted a declaration in support of the U.S. Chamber of Commerce's application for stay. He predicted that one station's closure would cost the local's members over $8,000,000 in wages and benefits in 2016 and the

[190] Declaration of Curtis Pierce, District Superintendent, Center-Stanton Public School District, Exhibit 7-H to U.S. Chamber of Commerce's Application for Immediate Stay of Final Agency Action Pending Appellate Review, para. 10 at 4, *West Virginia v. EPA*, No. 15-A-787 (Sup. Ct. Jan. 27, 2016).

closure of one of two units at another facility would mean the loss of $13-14,000,000 in wages and benefits.[191]

The ELG Rule's costs contribute to the threat of job losses, particularly when it is added on top of the impacts of other rules. The right course, therefore, is to reconsider the ELG Rule and its impacts on the economy as a whole and on local communities.

B. Lack of Coordination Among the Rules Causes Economic Inefficiencies and Uncertainties

EPA purported to analyze the impact of the final CCR rule and the proposed CPP rule on the ELG Rule. EPA agreed that the CPP was a major new rule affecting the same plants targeted by the ELG Rule; that is why EPA conducted its analysis. But it did not release its CPP analysis for public comment, and thus the industry had no way of evaluating it during the ELG rulemaking.

Had EPA's analysis of the CPP been released for comment, the industry would have demonstrated to EPA that the Final Rule's deadlines should be synchronized with the CPP's, to avoid unnecessary waste of resources and compliance costs. As issued, the Rule specifies that the new limits become

[191] Declaration of Luke Voigt, Business Manager, International Brotherhood of Boilermakers Local 647, Exhibit 7-C to U.S. Chamber of Commerce's Application for Immediate Stay of Final Agency Action Pending Appellate Review, paras. 8 and 10 at 4, 5, *West Virginia v. EPA*, No. 15-A-787 (Sup. Ct. Jan. 27, 2016).

applicable "as soon as possible."[192] Although permitting authorities have discretion to consider the CPP in deciding what constitutes "as soon as possible" for a given facility,[193] industry is experiencing wide variations in applicability dates. In any event, the ELG Rule requires application of the new limits "no later than" December 31, 2023. Consequently, the Rule's deadlines are inconsistent with the CPP's requirements to achieve greenhouse gas performance rates between 2022 and 2030.[194]

Competing deadlines will necessarily have an impact on EPA's analysis of the respective costs of the rules. More importantly, competing deadlines increase uncertainty for the industry members attempting to comply. And these uncertainties and complications increase costs, as industry struggles to harmonize its decisions on all of the pending rules at once.

A similar lack of harmony exists between the CCR rule and the ELG Rule. As a part of the CCR rule litigation,[195] EPA sought and was granted voluntary remand of portions of the rule.[196] Two of the remanded provisions have significant

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[192] *See, e.g.*, 80 Fed. Reg. at 67,894-95 (to be codified at 40 C.F.R. § 423.13(g)(1)(i)) (requiring compliance with the new FGD wastewater limits "as soon as possible beginning November 1, 2018, but no later than December 31, 2023").

[193] *See id.* at 67,894 (to be codified at 40 C.F.R. § 423.11(t)(2)(ii)).

[194] 80 Fed. Reg. at 64,664.

[195] *Utility Solid Waste Activities Group ("USWAG") v. EPA,* No. 15-1219 (D.C. Cir. filed July 15, 2015).

[196] Order, *USWAG v. EPA* (June 14, 2016), ECF No. 1619358.

consequences for discharges from ponds governed by the ELG Rule. Under those provisions (40 C.F.R. § 257.103(a) and 40 C.F.R. § 257.103(b)), a facility required to cease sending CCRs to a pond has to begin closing the pond within 30 days after ceasing its use for CCR waste.[197] But many industry ponds are used for both CCR and non-CCR wastewater. Therefore, EPA remanded these provisions so that it could consider whether to extend the CCR rule's alternative closure provisions to ponds that cease receiving CCR wastes but continue receiving non-CCR wastewater. [198]

EPA's decision on this point is critical to management of many existing ponds. If those ponds need to cease receiving both CCR and non-CCR wastewaters, many industry facilities will have to develop whole new wastewater management systems, and in many cases that involves rethinking the entire water balance and wastewater characteristics for each wastestream. If a pond may have to cease receiving non-CCR wastewater as a result of the CCR rule, then it makes no sense to retrofit treatment systems for purposes of the ELG Rule without considering that impact. It is inefficient in the extreme to undertake enormous system retrofits for purposes of the ELG Rule, and then have to rethink those retrofits – at considerable expense and system down-time – when EPA acts on the

[197] *See* 40 C.F.R. § 257.102(e).

[198] Respondent EPA's Unopposed Motion For Voluntary Remand of Specific Regulatory Provisions, Section II.E at 8-9, *USWAG v. EPA* (Apr. 18, 2016), ECF No. 1609250.

remanded CCR provisions. Through reconsideration of the ELG Rule and an administrative stay, these inefficiencies caused by the mandates of multiple rules can be addressed.

C. The Changed Status of the CPP and the CCR Rule Warrants Reconsideration of EPA's Cost Analysis

Even if EPA's analyses of the CPP and CCR impacts on the ELG Rule were accurate when the ELG Rule was finalized (and they were not), they cannot be accurate now. For the ELG Rule, EPA developed two separate economic analyses: one including the CCR rule, and one including both the CCR rule and the CPP. Given recent developments, analyzing the ELG Rule's impacts to industry and society through the lens of the CPP and CCR rules as finalized is inappropriate.

In February 2016, the Supreme Court stayed the CPP rule pending the outcome of judicial challenges.[199] Moreover, the President appears poised to issue an executive order requiring EPA to reconsider and potentially repeal the CPP.[200] These new circumstances provide strong reason to reconsider EPA's cost analysis for the ELG Rule. That analysis assumed unit closures or retrofits to gas caused by the CPP according to the CPP's original schedule. But, because of the stay, CPP

[199] Order, *Chamber of Commerce v. EPA*, No. 15-A-787 (Sup. Ct. Feb. 9, 2016).

[200] *The Clean Power Plan is gone – and there's no 'replace',* E&E News (Mar. 9, 2017), available at http:/www.eenews.net/stories/1060051196 (last visited March 9, 2017).

implementation – if it occurs at all – could be years behind schedule. As a result, the true cost implications of the ELG Rule are not reflected in any EPA analysis.

As already described, the CCR rule also is being challenged in court,[201] and EPA has been granted a voluntary remand of portions of the rule. The remaining litigation issues could be decided by the court, possibly by the end of this year. Additionally, Congress recently enacted legislation that affected a major change in the CCR rule implementation.[202] The legislation allows states to assume responsibility for overseeing CCR rule implementation within their jurisdictions. Thus, substantial changes also may occur with the CCR rule.

Given the extreme uncertainties that were not present when EPA analyzed the cost impacts of these rules on the ELG Rule, it is incumbent upon EPA to reconsider the true costs of the ELG Rule and provide its analysis to the public for proper review and comment.

REQUEST FOR IMMEDIATE AGENCY ACTION TO SUSPEND OR DELAY COMPLIANCE DEADLINES

UWAG hereby requests an administrative stay pursuant to 5 U.S.C. § 705. When judicial review is pending and when "justice so requires," this section

[201] *USWAG v. EPA*.

[202] Water Infrastructure Improvements for the Nation Act, Pub. L. 114-322, Sec. 2301 (amending § 4005 of the Solid Waste Disposal Act (42 U.S.C. § 6945) to allow state programs for control of coal combustion residuals).

confers discretion upon an agency to "postpone the effective date of action taken by it." *Id.* For all the reasons above, justice dictates a stay here.

In addition, EPA should take all other administrative actions that may be necessary to assure the immediate suspension or delay of the Rule's fast-approaching compliance deadlines while EPA works to reconsider and revise, as appropriate, the substantive requirements of the current Rule pursuant to notice and comment rulemaking.[203] Notably, there are many options available for EPA to suspend or extend the compliance deadlines in order to preserve the status quo and avoid irreparable harm pending the completion of the reconsideration proceeding.[204]

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[203] Suspending the deadlines for indirect dischargers, among others, is particularly critical because they face a hard deadline of November 1, 2018, to meet the PSES/PSNS standards for several wastestreams. Accordingly, those dischargers are in the process now of making costly decisions that may be greatly affected by reconsideration.

[204] These options for EPA action include the following: (1) fast-tracked issuance of a new rule that rescinds or extends the compliance deadlines through an expedited notice and comment rulemaking, *see, e.g.*, National Emissions Standards for Hazardous Air Pollutants for Stationary Combustion Turbines; Final Rule; Stay, 69 Fed. Reg. 51,184 (Aug. 18, 2004) (pausing effective dates of a rule on the basis that the agency was in the process of amending the underlying rule); (2) prompt issuance of an interim final rule without notice and comment under the "good cause" exemption set forth in the APA at 5 U.S.C. § 553(b)(3)(B), *see* Oil Pollution Prevention and Response; Non-Transportation-Related Onshore and Offshore Facilities; Interim Final Rule, 68 Fed. Reg. 1348 (Jan. 9, 2003) (postponing requirements that had gone into effect in August 2002 without notice and comment under the good cause exemption on the basis of impending deadlines that would no longer be appropriate once EPA finished revising the underlying rule); and (3) the prompt issuance of informal EPA guidance confirming that permitting authorities have broad discretion to set compliance deadlines under the Rule spanning the *entire* compliance window based on the four factors enumerated in 40 C.F.R. § 423.11(t) and are not obligated to impose a compliance deadline based on the initial deadline of November 1, 2018, due, in part, to EPA's decision to reconsider the substantive requirements of the Rule.

CONCLUSION

For all the foregoing reasons, EPA should grant this Petition, stay the Final ELG Rule and/or take other action to suspend the Rule's existing compliance deadlines, and promptly undertake to initiate a new rulemaking.

Dated: March 24, 2017

UTILITY WATER ACT GROUP

By _____
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EXHIBITS

Exhibit 1 H.M. Johnson, III, Hunton & Williams. Letter to M. McDermott, U.S. Dept. of Justice - Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (Feb. 17, 2016)

Exhibit 2 M. McDermott, U.S. Dept. of Justice. Letter to H.J. Johnson, III, Hunton & Williams – Response to Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (Mar. 17, 2016)

Exhibit 3 Appendix 1 to Duke Energy Indiana, LLC's Application for a Fundamentally Different Factor Variance, Edwardsport IGCC Station, NPDES Permit IN0002780, submitted to EPA Region V and Indiana Dept. of Environmental Management (April 27, 2016)

Exhibit 1

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February 17, 2016

Via E-Mail and U.S. Mail

Martin F. McDermott, Esq.
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Re: Request for Disclosure of Information Withheld As Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule

Dear Martin:

As you know, I represent the Utility Water Act Group, Southwestern Electric Power Company, and Union Electric Company (d/b/a Ameren Missouri) (collectively, "Industry Petitioners") in challenges to EPA's promulgation of the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (the "ELG Rule" or "Rule") under the Clean Water Act ("CWA"). This letter requests the disclosure of EPA's methodologies and analyses supporting the ELG Rule that have been improperly withheld as confidential business information ("CBI"). In addition, our review reveals that EPA has "over-redacted" many documents, with the result being that important non-CBI information has been improperly withheld from the public record. We request such non-CBI information as well. Attachment A is a preliminary list of documents in the public record that withhold information to which Industry Petitioners are entitled and that have been identified so far in our review of the record. As discussed in detail below, EPA is required to disclose all this information.

Judicial review of agency decisions under the Administrative Procedure Act ("APA") is based upon the "whole record," which includes all the material "considered" by the agency

decisionmaker. *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 419 (1971). Since publishing the final ELG Rule in the *Federal Register* on November 3, 2015, EPA has publicly released many of the documents it considered when promulgating the Rule. However, EPA determined that many critical documents and other information it considered are CBI. As a result, EPA has withheld these materials from inclusion in the public record for the ELG Rule, impeding Industry Petitioners' right to challenge to the Rule and thereby frustrating judicial review of the same.

I recognize that CBI is ordinarily protected from disclosure under applicable law. For instance, the Freedom of Information Act ("FOIA") exempts CBI from mandatory disclosure. *See* 5 U.S.C. § 552(b)(4). But, on the other hand, the CWA authorizes the disclosure of CBI "when relevant in any proceeding under" the CWA. 33 U.S.C. § 1318(b). EPA's FOIA regulations go on to provide that a "proceeding," in the context of the CWA, includes "any rulemaking...conducted by EPA," such as the promulgation of the ELG Rule. 40 C.F.R. § 2.302(a)(4); *see id.* at § 2.302(g) (prescribing procedures for release of "relevant" CBI).

In any event, Industry Petitioners do not specifically seek the disclosure of CBI provided to EPA by the public in the course of the ELG rulemaking. Instead, Industry Petitioners request only the disclosure of the methodologies and analyses EPA relied upon in promulgating the Final Rule (as well as non-CBI information that has been withheld). In past rulemakings, EPA has recognized its obligation to present its methodologies and analyses in the public record, even when it used CBI to develop or apply them. It has done so by employing techniques to ensure that the bases for its decisions were fully explained without the need to disclose the CBI itself. EPA has not employed those techniques here. Not only has the CBI been withheld, but the methodologies and analyses themselves have been withheld.

EPA has a strong interest in making these methodologies and analyses public, because it must rely on and justify the ELG Rule in the courts based on the public record standing alone. Courts have shown a particular reluctance to permit EPA to withhold crucial information from a public rulemaking record on the basis that it is CBI. When EPA makes such claims, it must still provide adequate explanation in the public record to support the rulemaking through the use of non-CBI data, methodologies, and analyses that satisfy the standard upon review. *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 565 (D.C. Cir. 2002). To satisfy this requirement, it is appropriate for EPA to compile the CBI in the rulemaking record into a composite, non-CBI format that is made part of the public record and discussed by the agency "at some length." *Natural Resources Defense Council v. Thomas*, 805 F.2d 410, 418 n. 13 (D.C. Cir. 1986). At bottom, the public record must be sufficient for petitioners "to mount a challenge

to EPA's rulemaking," Order, *Nat'l Wildlife Fed'n*, Feb. 2, 2000, Attach. B, and "to provide the reviewing court with a way to know the agency's methodology." *Nat'l Wildlife Fed'n*, 286 F.3d at 564 (internal quotation and citation omitted).

The public record here falls far short of the requirements under the APA, CWA, EPA regulations, and case law. EPA has designated data and analyses that are crucial to understanding the ELG Rule, and EPA's methodology in promulgating it, as CBI, and failed to provide sufficient non-CBI data and analyses to support the Rule.

For example, in one document, EPA designated entire sections of a report as CBI. In its Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, Sep. 2015, EPA-HQ-OW-2009-0819-6472, EPA withheld whole sections of the report on General Methodology, Terminology, and Common Cost Elements, FGD Wastewater Cost Methodology, Fly Ash Transport Water Cost Methodology, and Bottom Ash Transport Water Cost Methodology. Based on the document's table of contents, the omitted sections comprise over 260 pages, covering such basic information as descriptions of the technologies analyzed and such critical information as cost methodologies. Consequently, the cost methodologies are a complete mystery. It is unclear why the *entirety* of these sections would be classified as CBI or not made available in a manner to avoid disclosing CBI.

In another example, in its Technical Development Document for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, EPA references a memorandum produced by the Eastern Research Group, entitled "Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology," to explain its review of "bottom ash transport water and fly ash transport water using the general data quality review criteria described in this section, *as well as more specific criteria listed in the memorandum.*" EPA-HQ-OW-2009-0819-6432, at 6-23 (emphasis added). Nevertheless, EPA has withheld the *entire* memorandum from the public record as CBI, *see* EPA-HQ-OW-2009-0819-6049, making it impossible for the public to know what criteria EPA employed to identify POCs for bottom ash and fly ash transport water.

The record is replete with other examples and the Industry Petitioners continue their review of the record to identify examples in addition to these and those listed in Attachment A. In each case, EPA has violated the law by failing to release the basic and fundamental methodologies and analyses that support the ELG Rule. With the public record as it currently stands, it is a complete mystery to the public and reviewing courts how EPA reached its conclusions on

critical issues. EPA should have employed techniques to protect the CBI while simultaneously making available to the public the methodologies and analyses on which EPA made its decisions. Instead, it decided to improperly withhold critical methodologies and analyses in their entirety, presumably because they contain or discuss some amount of CBI. And even where EPA did manage to release redacted versions of documents, such as discussed above regarding the Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, it still failed to produce non-CBI versions of the redacted methodologies and analyses to support the ELG Rule without revealing CBI.

The FGD wastewater limits are an example of EPA's failure to disclose its methodologies. We have been unable to locate any document explaining how EPA calculated those limits. Whether or not its non-disclosure is the result of over-designating CBI, this methodology is fundamental to the ELG rule. Industry Petitioners request its disclosure as part of the record.

As explained above, all of the methodologies and analyses sought by the Industry Petitioners should be in the public record whether in redacted form or in a form that otherwise protects the CBI. I respectfully ask EPA to compile the methodologies and analyses it considered in the ELG rulemaking and present them in a manner that allows the public and reviewing courts to review EPA's compliance with the CWA, APA, and other applicable law, without improperly disclosing CBI. In addition, EPA should withhold from the public record only actual CBI, not non-CBI data and information. We ask that EPA review its redactions and remove those redactions that improperly conceal non-CBI information.

I would further suggest that the parties agree to continue to hold the case in abeyance until the public record is complete.

This request applies to EPA's methodologies and analyses in the final ELG Rule, as well as any data that are necessary to explain those methodologies and analyses. The Industry Petitioners do not waive their rights to challenge whether various data or documents meet the requirements of CBI, or to expand the list of documents sought as reflected in Attachment A.

HUNTON&
WILLIAMS

I would greatly appreciate a response by February 29, 2016, so that the Industry Petitioners can decide how to proceed. In the meanwhile, please do not hesitate to contact me if you wish to discuss. Best regards.

Sincerely,

Harry M. Johnson, III

Enclosure

Attachment A

Document Title	Docket Number	Docket Abstract
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 5 – General Methodology, Terminology, and Common Cost Elements DCN SE05831	EPA-HQ-OW-2009-0819-6023[1]	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 6 –FGD Wastewater Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 7 – Fly Ash Transport Water Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Chapter 8 – Bottom Ash Transport Water Cost Methodology DCN SE05831	EPA-HQ-OW-2009-0819-6023	CBI Final Draft of the Steam Electric Incremental Costs and Pollutant Loadings report. This version of the report contains confidential business information.
Incremental Costs and Pollutant Removals: Attachment A-CBI Appendix A to the Costs and Loads Report – DCN SE05831A1	EPA-HQ-OW-2009-0819-6023-Att 1	CBI_Appendix A to the Costs and Loads Report includes plant-level estimated compliance costs and pollutant removals that incorporate the CCR rule and the CPP rule.

[1] To the extent that any of the redacted content of the "sanitized" version of this document and its attachments (EPA-HQ-OW-2009-0819-6472 and attachments) differs from the content of the CBI version and its attachments (EPA-HQ-OW-2009-0819-6023 and attachments), we also request release of the redacted content of the sanitized version and its attachments.

Document Title	Docket Number	Docket Abstract
Incremental Costs and Pollutant Removals: Attachment B-CBI Appendix B to the Costs and Loads Report – DCN SE05831A2	EPA-HQ-OW-2009-0819-6023-Att 2	CBI_Appendix B to the Costs and Loads Report includes plant-level estimated compliance costs and pollutant loadings reflecting only ELGs costs and loads and costs and loads with the CCR rule incorporated.
CBI GE ABMet Pilot Study Report – DCN SE06361	EPA-HQ-OW-2009-0819-6456	CBI Report from GE Water describing results of a pilot study conducted using its ABMet biological treatment system. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Notes from Call with GE Water on April 14, 2014 – DCN SE05692	EPA-HQ-OW-2009-0819-5735	CBI_Call with GE discussing ORP treatment at a coal-fired power plant. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Memorandum to the Steam Electric Rulemaking Record: Water Quality Module: Plant and Receiving Water Characteristics – DCN SE04513	EPA-HQ-OW-2009-0819-6450	CBI Memorandum documenting the identification of immediate receiving waters for the steam electric power plants in the Final EA Report and incorporation of water body characteristics for use in EA analyses, including the national-scale immediate receiving. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Email from Bill Bonkowki; RE: Clarification on Updated ABMet Costs from June 2014 – DCN SE04234	EPA-HQ-OW-2009-0819-5718	This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register. CBI Documentation of follow up questions provided to GE regarding some outstanding questions based on their updated costing data for the ABMet system. GE provided updated costs for the ABMet system via email in June 2014 (SE04230). EPA and ERG responded

Document Title	Docket Number	Docket Abstract
CBI GE ABMet Backwash Information – DCN SE00751	EPA-HQ-OW-2009-0819-5691	This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 1 – DCN SE05839A1	EPA-HQ-OW-2009-0819-5681-Att 1	CBI Development of methodology to estimate missing FGD wastewater flow rates for plants currently operating wet FGD scrubbers. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 2 – DCN SE05839A2	EPA-HQ-OW-2009-0819-5681-Att 2	CBI Documentation of process used to identify those plants discharging FGD wastewater and determination of FGD wastewater flow rate. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 6 – DCN SE05839A6	EPA-HQ-OW-2009-0819-5681-Att 6	CBI Identification of plants that incur back-up silo and pugmill or redundancy compliance costs associated with fly ash handling. Also includes a comparison of O&M costs associated with dry fly ash handling and traditional wet sluicing systems. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 11 – DCN SE05839A11	EPA-HQ-OW-2009-0819-5681-Att 11	CBI Development of methodology to estimate dollar per ton costs to transport and dispose of treatment solids to an off-site landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 13 – DCN SE05839A13	EPA-HQ-OW-2009-0819-5681-Att 13	CBI Plant-specific assessments and determinations of FGD wastewater treatment in place. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 15 – DCN SE05839A15	EPA-HQ-OW-2009-0819-5681-Att 15	CBI Development of annual FGD wastewater treatment flows for plant operating chemical precipitation; development of capacity factor used to size FGD wastewater treatment systems This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 16 – DCN SE05839A16	EPA-HQ-OW-2009-0819-5681-Att 16	CBI Development of factor used to determine the flow rate of sludge generated by chemical precipitation as a function of FGD wastewater flow This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 37 – DCN SE05839A37	EPA-HQ-OW-2009-0819-5681-Att 37	CBI Assessment of materials of construction for wastewater treatment tanks This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 39 – DCN SE05839A39	EPA-HQ-OW-2009-0819-5681-Att 39	CBI Development of an algorithm to determine whether chemical storage tanks are required (as opposed to onsite storage in chemical totes), and if so, the tank size requirements This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 44 – DCN SE05839A44	EPA-HQ-OW-2009-0819-5681-Att 44	CBI Development of an algorithm to estimate lime storage requirements and lime storage silo size. Development of a cost equation for lime feed system purchase costs This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 45 – DCN SE05839A45	EPA-HQ-OW-2009-0819-5681-Att 45	CBI Chemical feed system specifications provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 54 – DCN SE05839A54	EPA-HQ-OW-2009-0819-5681-Att 54	CBI Development of the design basis and treatment in place methodology for clarifiers This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 56 – DCN SE05839A56	EPA-HQ-OW-2009-0819-5681-Att 56	CBI Filter press information and purchase costs provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 58 – DCN SE05839A58	EPA-HQ-OW-2009-0819-5681-Att 58	CBI Filter press specifications provided by a vendor This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 63 – DCN SE05839A63	EPA-HQ-OW-2009-0819-5681-Att 63	CBI_Development of cost factors used to estimate total direct capital costs (i.e., installation, site prep, buildings, land, and instrumentation and controls) as a function of purchased equipment. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 65 – DCN SE05839A65	EPA-HQ-OW-2009-0819-5681-Att 65	CBI Development of a cost equation for operating labor costs This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 66 – DCN SE05839A66	EPA-HQ-OW-2009-0819-5681-Att 66	CBI Development of cost factors used to estimate labor and maintenance materials costs as a function of annual FGD wastewater flow This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 67 – DCN SE05839A67	EPA-HQ-OW-2009-0819-5681-Att 67	CBI Development of chemical dosage rates This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 68 – DCN SE05839A68	EPA-HQ-OW-2009-0819-5681-Att 68	CBI Chemical purchase costs provided by vendors This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 72 – DCN SE05839A72	EPA-HQ-OW-2009-0819-5681-Att 72	CBI Development of an equation to estimate chemical precipitation dewatered sludge generation as a function of FGD wastewater flow. Estimation of density of dewatered chemical precipitation dewatered sludge This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 73 – DCN SE05839A73	EPA-HQ-OW-2009-0819-5681-Att 73	CBI Development of equation to estimate ABMet backwash flow rate and backwash solids generation. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 75 – DCN SE05839A75	EPA-HQ-OW-2009-0819-5681-Att 75	CBI Correspondence with General Electric (GE) regarding costing information for their ABMet biological treatment system. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 76 – DCN SE05839A76	EPA-HQ-OW-2009-0819-5681-Att 76	CBI Summary of correspondence with General Electric (GE) regarding updated costing information for their ABMet biological system as of 2014. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 78 – DCN SE05839A78	EPA-HQ-OW-2009-0819-5681-Att 78	CBI Derivation of ORP Monitor costing methodology. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 79 – DCN SE05839A79	EPA-HQ-OW-2009-0819-5681-Att 79	CBI Summary of correspondence with ABB regarding capital costs and O&M requirements associated with an ORP Monitor. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register
CBI Supplemental Costs and Loadings Attachment 83 – DCN SE05839A83	EPA-HQ-OW-2009-0819-5681-Att 83	CBI Development of factor used to calculate costs associated with purchasing materials used for maintaining the biological treatment system.
CBI Supplemental Costs and Loadings Attachment 84 – DCN SE05839A84	EPA-HQ-OW-2009-0819-5681-Att 84	CBI Compilation of data from GE and HPD regarding costing information for the vapor compression evaporation system. Cost curves and equations developed from vendor data were used to estimate system level costs for installing and operating a vapor compres

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 85 – DCN SE05839A85	EPA-HQ-OW-2009-0819-5681-Att 85	CBI Methodology used to estimate O&M costs associated with sodium bisuflite addition. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI supplemental Costs and Loadings Attachment 87 – DCN SE05839A87	EPA-HQ-OW-2009-0819-5681-Att 87	CBI Development of factors and equations for the fly ash handling conveyance capital and O&M costs. These equations and factors include the conveyance equipment capital cost equation, redundant equipment capital cost equations, direct capital cost factor, This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 88 – DCN SE05839A88	EPA-HQ-OW-2009-0819-5681-Att 88	CBI Development of factors and equations for the fly ash handling intermediate capital and O&M costs. These equations and factors include the intermediate storage equipment capital cost equation (for concrete and steel silos), direct capital cost factor, This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 89 – DCN SE05839A89	EPA-HQ-OW-2009-0819-5681-Att 89	CBI Development of the typical moisture content used to calculate the amount of moisture conditioned fly ash to be transported to a landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 92 – DCN SE05839A92	EPA-HQ-OW-2009-0819-5681-Att 92	CBI Development of factors for the bottom ash MDS conveyance O&M costs. These factors include the conveyance operating and maintenance labor rates, operating and maintenance labor hours, maintenance materials cost factor. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 93 – DCN SE05839A93	EPA-HQ-OW-2009-0819-5681-Att 93	CBI Development of factors for the bottom ash intermediate storage O&M costs. These factors include the intermediate storage operating and maintenance labor rates, operating and maintenance labor hours, maintenance materials cost factor, and pugmill energ This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 96 – DCN SE05839A96	EPA-HQ-OW-2009-0819-5681-Att 96	CBI Development of the typical moisture content used to calculate the amount of moisture conditioned bottom ash to be transported to a landfill. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 97 – DCN SE05839A97	EPA-HQ-OW-2009-0819-5681-Att 97	CBI Telecon and email correspondence with bottom ash handling vendor containing information on bottom ash handling conversions and specific costs for bottom ash conversions, drag chain replacement costs, and drag chain replacement frequency. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI Supplemental Costs and Loadings Attachment 98 – DCN SE05839A98	EPA-HQ-OW-2009-0819-5681-Att 98	CBI Development of the equation to estimate the volume of the remote MDS conveyor to estimate the volume of surge capacity required for maintenance. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Supplemental Costs and Loadings Attachment 100 – DCN SE05839A100	EPA-HQ-OW-2009-0819-5681-Att 100	CBI Methodology used to estimate compliance costs for plants discharging IGCC wastewater. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Updated ABMet Cost Curve – DCN SE04230	EPA-HQ-OW-2009-0819-5658	CBI_New cost curve from GE to reflect updated costs for the ABMet system. This new costing data includes updated installed costs based on flow rate as of July 2014. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Memorandum-Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology – DCN SE04745	EPA-HQ-OW-2009-0819-6049	CBI. This memorandum provides details on EPA analysis of ash transport water data to determine pollutants of concern associated with this wastestream.
Analysis – CBI Pollutants of Concern Ash Treatment Analysis – DCN SE04746	EPA-HQ-OW-2009-0819-6050	CBI. This spreadsheet was developed as part 2 of EPA's analysis to identify pollutants of concern in ash transport water. This spreadsheet contains all non-paired ash transport water data accepted by EPA and the results of part 2 of the POC analysis.

Document Title	Docket Number	Docket Abstract
Data – CBI Final Ash Transport Water Analytical Data Review Matrix – DCN SE05575	EPA-HQ-OW-2009-0819-6381	CBI_This MS Excel workbook supporting the review of all data sources identified with ash transport water data. Information about the data source identification, plant identification, wastestream identification, and sample identification were compiled in this matrix to evaluate data usability, representativeness, and characterization. All data sources in the matrix were evaluated with EPA's ash data acceptance criteria.
Data – CBI FGD & Ash Cost Model with and without CCR – DCN SE05841	EPA-HQ-OW-2009-0819-6028	CBI_Database used to calculate compliance costs for FGD, fly ash and bottom ash for populations of plants including and not including CCR.
CBI FGD & Ash Cost Model Database Dictionary – DCN SE05841.A1	EPA-HQ-OW-2009-0819-6028-Att 1	CBI_Data element dictionary for the FGD and Ash Steam Electric Cost Model. This excel file contains descriptions of the tables, field names, and code modules contained within the FGD and Ash Steam Electric Cost Model.
Analysis-CBI Source Water Ash Treatment Analysis Final – DCN SE04744	EPA-HQ-OW-2009-0819-6048	CBI. This spreadsheet was developed as part 1 of EPAs analysis to identify pollutants of concern in ash transport water. This spreadsheet contains all paired source water and ash transport water data accepted by EPA and the results of part 1 of the POC analysis.
CBI Memorandum to the Steam Electric Rulemaking Record: Steam Electric Effluent Guidelines Evaluation of Potential Subcategorization Approaches – DCN SE05813	EPA-HQ-OW-2009-0819-6206	CBI Memorandum describing the evaluation of potential subcategorization and threshold approaches.
Data – CBI Bottom Ash Complete Recycle Estimated Cost for Plants with Remote MDS systems to implement Complete Recycle of Bottom Ash Transport Water Calculation File – DCN SE05960	EPA-HQ-OW-2009-0819-6213	CBI_Calc file used to estimate costs associated with implementing complete recycle of bottom ash transport water at plants with remote MDS installations.

Document Title	Docket Number	Docket Abstract
Data – CBI Draft UCC Ash Handling Documentation Attachments 1 through 8 for UCC Review – DCN SE05922	EPA-HQ-OW-2009-0819-6151	CBI Attachments 1 through 8 to the UCC ash handling documentation. These attachments include fly ash and bottom ash handling conversion data delivered to UCC on September 9, 2015 for review. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Intake Analysis Database for CCR Population – DCN SE05696	EPA-HQ-OW-2009-0819-6003	CBI_This database calculates the percent water reduction for plants using raw water for their FGD, bottom ash, and fly ash systems. Also contains estimates for if plants recycle ash transport water.
Data – CBI Intake Analysis Database for CPP Population – DCN SE05697	EPA-HQ-OW-2009-0819-6005	CBI_This database calculates the percent water reduction for plants using raw water for their FGD, bottom ash, and fly ash systems. Also contains estimates for if plants recycle ash transport water.
CBI Additional GE Response to Post Proposal Questions – DCN SE04208	EPA-HQ-OW-2009-0819-5650	CBI_Answers provided by GE in response to EPA questions regarding issues raised during the comment period. These responses are in addition to the initial responses provided in DCN SE04202.
CBI Supporting Charts for GE's Response to Post Proposal Questions – DCN SE04208A1	EPA-HQ-OW-2009-0819-5650-Att 1	CBI Additional charts provided along with response to questions. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI GE Written Response to Additional Follow Up Questions – DCN SE04222	EPA-HQ-OW-2009-0819-5655	CBI_GE provided written response to the follow up questions that were provided to them in writing (SE04209) and discussed in a meeting with EPA and ERG on April 14, 2014.

Document Title	Docket Number	Docket Abstract
CBI Attachment to GE Written Responses – DCN SE04222A1	EPA-HQ-OW-2009-0819-5655-Att 1	CBI_An updated graph provided as an attachment to the written responses provided by GE. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Leachate Cost Model – DCN SE05842	EPA-HQ-OW-2009-0819-6029	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register. CBI_Database used to calculate compliance costs for leachate.
CBI – Leachate Cost Model Database Dictionary – DCN SE05842A1	EPA-HQ-OW-2009-0819-6029-Att 1	CBI_Data element dictionary for the Leachate Steam Electric Cost Model. This excel file contains descriptions of the tables, field names, and code modules contained within the Leachate Steam Electric Cost Model. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Leachate Loadings Database with CPP – DCN SE05860	EPA-HQ-OW-2009-0819-6039	CBI_Database used to calculate leachate pollutant loadings and removals for the proposed CPP population. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI FGD & Ash Cost Model with Proposed CPP – DCN SE05862	EPA-HQ-OW-2009-0819-6042	CBI_Database used to calculate compliance costs for FGD, fly ash and bottom ash for populations of plants reflecting the proposed CPP. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.

Document Title	Docket Number	Docket Abstract
CBI – FGD & Ash Cost Model with CPP Database Dictionary – DCN SE05862A1	EPA-HQ-OW-2009-0819-6042-Att 1	CBI_Data element dictionary for the FGD and Ash Steam Electric Cost Model with CPP. This excel file contains descriptions of the tables, field names, and code modules contained within the FGD and Ash Steam Electric Cost Model with CPP. This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
CBI Memorandum to the Steam Electric Rulemaking Record: Steam Electric Effluent Guidelines – Evaluation of Potential Subcategorization Approaches – DCN SE05813	EPA-HQ-OW-2009-0819-6206	CBI Memorandum describing the evaluation of potential subcategorization and threshold approaches. This document contains CBI and is not available online or from the EPA Docket Center. Please contact the Document Control Officer listed in the Federal Register.
Data – CBI Subcategorization Threshold Calculation Database – DCN SE05960	EPA-HQ-OW-2009-0819-6220	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register CBI_Database that documents EPA's evaluation of potential subcategorization associated with generating unit size capacity (in MW).
CBI Data Dictionary for the Subcategorization Threshold Calculation Database – DCN SE05960.A1	EPA-HQ-OW-2009-0819-6220-Att 1	This document contains CBI and is not available online or from the USEPA Docket Center. Please contact the Document Control Officer listed in the Federal Register CBI_Database dictionary describing the tables, fields, and queries used in the subcategorization threshold analyses (DCN SE05960).

Attachment B

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 99-1452 **September Term, 1999**

UNITED STATES COURT OF APPEALS
FOR DISTRICT OF COLUMBIA CIRCUIT
FILED FEB 2 2000
CLERK

National Wildlife Federation, et al.,
Petitioners

v.

Environmental Protection Agency and Carol M. Browner, Administrator, Environmental Protection Agency,
Respondents

American Forest and Paper Association Inc.,
Intervenor for Respondent

Consolidated with 99-1454, 99-1455, 99-1456

BEFORE: Ginsburg and Sentelle, Circuit Judges

ORDER

Upon consideration of the motion to dismiss, the responses thereto, and the replies; the motion filed by National Wildlife Foundation, et al. (collectively, NWF), to compel disclosure of information in the administrative record and to stay the briefing schedule until EPA discloses the information, the responses thereto, and the replies; the motions to strike, and the responses thereto; the motion of the Chemical Manufacturers Association and the Coalition for Effective Environmental Information to intervene or to file an amicus brief in opposition to NWF's motion to compel, and the responses thereto, it is

ORDERED that the motion to dismiss be referred to the merits panel to which these consolidated petitions for review are assigned. The parties are directed to include in their briefs the arguments raised in the motion to dismiss rather than incorporate those arguments by reference. It is

FURTHER ORDERED that the motions to strike be dismissed as moot. It is

No. 99-1452 **September Term, 1999**

FURTHER ORDERED that the motion to intervene or to file an amicus brief be denied. It is

FURTHER ORDERED that the motion to compel and to stay the briefing schedule be denied. The confidential business information NWF seeks is the type of sensitive information and confidential or trade secret information that EPA can properly withhold from public view. See Natural Resources Defense Council v. Thomas, 805 F.2d 410, 418 n.13 (D.C. Cir. 1986). The material contained in the public record appears sufficient for NWF to mount a challenge to EPA's rulemaking. See MD Pharm., Inc. v. DEA, 133 F.3d 8, 13-14 (D.C. Cir. 1998) (distinguishing agency actions in which documents relied on are "a complete mystery" and those in which the documents have been identified but not disclosed because they contain sensitive material).

The Clerk is instructed to process these consolidated cases for briefing and argument in the ordinary course.

Per Curiam

Exhibit 2

U.S. Department of Justice

Environment and Natural Resources Division

Martin McDermott
Environmental Defense Section
P.O. Box 7611
Washington, DC 20044

Telephone (202) 514-4122
Facsimile (202) 514-8865

March 17, 2016

Re: Response to Request for Disclosure of Information Withheld as Confidential Business Information From the Public Record for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule

Dear Pete:

This letter responds to your letter of February 17, 2016, requesting that EPA disclose certain documents withheld as confidential business information ("CBI") related to analyses for the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category Final Rule (the "Rule"). A careful review of the entire record demonstrates that EPA adequately explained its rationale for the Rule in documents that do not disclose information claimed as CBI. EPA is confident that the public record presents the methodologies and analyses the Agency used to reach its final determination in sufficient detail so that stakeholders as well as any reviewing court can consider whether the Agency's decisions were reasonable.

As noted in your letter, EPA removed from public view those documents that steam electric power generating facilities and others claimed as CBI. EPA is statutorily obligated to protect from disclosure all information claimed as CBI. *See Nat'l Wildlife Fed'n v. EPA*, 286 F.3d 554, 564-65 (D.C. Cir. 2002) ("EPA cannot be faulted for keeping [CBI] confidential" in a rulemaking record because CBI "may not be publicly disclosed" pursuant to CWA section 308(b).) The protocols that EPA used to identify and protect the CBI obtained or developed during this rulemaking are described in several documents in the record, including Section 3.8 of the publicly-available non-CBI version of Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category ("Costs and Pollutant Removals Report"). Document Control Number (DCN) SE05832; EPA-HQ-OW-2009-0819-6472. To prevent disclosing CBI, the Agency found it necessary to withhold from the public docket all information claimed as CBI as well as some additional data that, although not claimed as CBI, could inadvertently release CBI if made public. Where possible when dealing with CBI, EPA attempted to make information publicly available, using techniques such as aggregating certain data in the public docket, presenting

ranges of values, or masking plant identities to prevent CBI disclosure. The Agency's approach to protecting CBI ensures that the data in the public docket present the basis for the Rule and provide the opportunity for public comment, without compromising data confidentiality.

The public record contains a complete account of the methodologies and analyses underlying the Rule, notwithstanding EPA's protection of CBI. Your letter states that "the cost methodologies are a complete mystery" because EPA omitted 260 pages from the Costs and Pollutant Removals Report. Letter at 3. Yet your letter does not mention the "Non-CBI" version of the Costs and Pollutant Removals Report that EPA prepared for the proposed rule, which was available for review during the public comment period and remains publicly available. DCN SE03581; EPA-HQ-OW-2009-0819-2256; *see also* the Costs and Pollutant Removals Report for the Final Rule, DCN SE05832; EPA-HQ-OW-2009-0819-6472. These documents present the cost methodologies in great detail.

Other documents available to the public also discuss the cost methodologies used for the Rule. Section 9 of the Technical Development Document ("TDD") describes the cost methodologies used to analyze the technology options for each of the waste streams. DCN SE05904; EPA-HQ-OW-2009-0819-6432. Changes made to the cost estimates following proposal in response to public comments are presented in section V.D of the Federal Register notice for the final Rule. More detailed explanations of specific changes EPA made are included in EPA's comment response document, "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category: EPA's Response to Public Comments" ("Comment Response Document"), *see, e.g.*, Comment Codes 10b, 14b and 16b. DCN SE05958; EPA-HQ-OW-2009-0819-6469. In addition, at the time of proposal EPA made available to power companies certain CBI and CBI-deducible data related to their power plants so that they could review the plant-specific input and output data used by EPA's models to estimate costs and pollutant removals.

Your letter also states that CBI redactions, particularly the redaction of the "Bottom Ash and Fly Ash Transport Water Pollutants of Concern (POC) Analysis Methodology" memorandum, "make it impossible for the public to know what criteria EPA employed to identify POCs for bottom ash and fly ash transport water." Letter at 3. On the contrary, the record contains ample documentation of the criteria EPA employed to identify pollutants of concern for bottom ash and fly ash transport water. Section 12 of the non-CBI version of the "Incremental Costs and Pollutant Removals for the Final Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category" provides a comprehensive description of the criteria employed. DCN SE05832; EPA-HQ-OW-2009-0819-6472. The criteria are presented elsewhere as well, including in Section 6.6.4 of the TDD, "Pollutants of Concern: Ash Transport Water POCs," and discussed in response to specific comments in Part 6 of the Comment Response Document.

Finally, the suggestion in your letter that EPA has "fail[ed] to disclose its methodologies" for calculating the flue gas desulfurization (FGD) wastewater limits is inaccurate. The methodologies EPA used to calculate the effluent limitations for FGD wastewater are carefully described in the Section 13 and Appendix B of the TDD. EPA's data and methodologies are also explained elsewhere in the record, including in the "Statistical Support Document: Effluent Limitations for FGD Wastewater, Gasification Wastewater, and Combustion Residual Leachate for the Final Steam Electric Power Generating Effluent Limitations Guidelines and Standards,"

DCN SE05733, EPA-HQ-OW-2009-0819-6430, and in response to specific comments in Comment Code 31 in the Comment Response Document.

In compiling the record for this Rule, EPA balanced the privacy claims of steam electric power generating facilities, as well as vendors and others who provided EPA valuable data, with its commitment to a transparent and accountable rulemaking process. Although EPA did not disclose every document submitted to the Agency in order to appropriately protect confidentiality, the thousands of documents accessible in the public record provide ample explanation of the Agency's decisions.

In light of the robust public record for this Rule, there is no reason to defer litigation over it. Now that the period for filing petitions for review has concluded, EPA plans to file a certified index to the record. The Agency hopes that challenges can proceed expeditiously in order to maximize both industry certainty and the Rule's benefits to public health and the environment.

Sincerely,

Martin F. McDermott, Trial Attorney

Exhibit 3

Appendix to Application of Duke Energy Indiana, LLC For a Fundamentally Different Factor Variance

Appendix 1

2013 and 2015 Data from Edwardsport IGCC Grey Water Treatment System

Appendix 1: 2013 and 2015 Data from Edwardsport IGCC Grey Water Treatment System

	Mercury, ng/l			Arsenic, ug/l			TDS, mg/l		
	Filtered	Influent	Effluent	Filtered	Influent	Effluent	Filtered	Influent	Effluent
ELG daily max / 30-day avg.			1.8 / 1.3			4 / -			38 / 22
5/9/2013						<0.06			
5/23/2013						<0.06			
6/6/2013						<6			
6/13/2013						<6			
7/22/2013			2.08						
7/24/2013						2			
7/31/2013						<0.6			
8/2/2013						<0.6			
8/8/2013			9.58						
8/25/2013						15			
9/5/2013						<0.06			
9/25/2013						<0.06			
10/3/2013			2.53						
10/8/2013						<0.6			
10/17/2013						<0.6			
9/8/2015	0.540	6.55	12.8	<1.0	1,100	<1.0	300	2,540	20
9/10/2015	<0.50	15.8	5.25	<1.0	120	<1.0	300	3,020	40
9/15/2015	<0.50	10.8	10.3	<2.0	120	<2.0	120	2,560	<10
9/17/2015	<0.50	21.2	6.55	<2.0	130	<2.0	280	2,090	20
9/22/2015	<0.50	22.0	10.8	<1.0	31	<1.0	324	2,200	10
9/24/2015	<0.50	23.4	11.5	<1.0	63	<1.0	322	2,140	<10
9/29/2015	<0.50	44.4	6.40	<1.0	67	<1.0	420	2,700	32
10/1/2015	<0.50	7.35	3.92	<1.0	42	<1.0	336	2,980	20
10/6/2015	<0.50	15.6	2.40	<1.0	33	<1.0	340	2,680	20
10/8/2015	<0.50	11.8	5.79	<1.0	38	<1.0	380	1,660	14
10/13/2015	<0.50	30.4	3.05	<1.0	210	<1.0	320	2,230	222
10/15/2015	<0.50	59.5	0.877	<1.0	230	<1.0	340	2,120	60
Maximum	**0.54**	**59.5**	**12.8**	**<2.0**	**1,100**	**15**	**420**	**3,020**	**222**
Average	**<0.50**	**22.4**	**6.3**	**<1.2**	**182**	**1.9**	**315**	**2,410**	**39.8**
Minimum	**<0.50**	**6.55**	**0.9**	**<1.0**	**31**	**<0.1**	**120**	**1,660**	**<10**
Count	**12**	**12**	**15**	**12**	**12**	**24**	**12**	**12**	**12**