

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 Group¹ (“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 litigation³ 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 Act⁶ 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

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

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 costs²⁸ 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:

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.

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.

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.

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.

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.

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 Document⁷⁰ 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.

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
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5.3.1	Technology Description.....	5-9
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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

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

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 Prairie⁹⁹

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

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 system¹⁰⁴ 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

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

¹⁰⁶ Index.126.2-3.

¹⁰⁷ Index.10080.5-365 (citation omitted).

¹⁰⁸ Index.126.2-3.

treatment for subbituminous-, lignite-, and bituminous -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

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

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

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.

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

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.

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:

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

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 of 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

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 Edwardsport¹⁶⁸ – 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 record¹⁷¹ 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

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 variance¹⁷⁵ 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 estimates¹⁷⁶ 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

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

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

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)



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February 17, 2016

Via E-Mail and U.S. Mail

Martin F. McDermott, Esq.
United States Department of Justice
601 D Street, NW
Suite 8104
P.O. Box 23986
Washington, DC 20026-3986

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

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