ORAL ARGUMENT NOT SCHEDULED
Case No. 12-1272

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC, *et al.,*

Petitioners,

v.

U.S ENVIRONMENTAL PROTECTION AGENCY,

Respondent.

On Petition for Review of *National Emission Standards for Hazardous Air Pollutants from Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units,* 77 Fed. Reg. 9,304 (Feb. 16, 2012)

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

A. Parties and Amici

1. Parties, Intervenors, and Amici Who Appeared in District Court.

This case involves petitions for review of final agency action, not appeals from the ruling of a district court.

2. Parties to this Case.

Petitioners:

White Stallion Energy Center, LLC

Sunflower Electric Power Corporation

Tri-State Generation & Transmission Association, Inc.

Power4Georgians, LLC

Deseret Power Electric Cooperative

Tenaska Trailblazer Partners, LLC

Respondent:

U.S. Environmental Protection Agency

Intervenors:

The following entities are Intervenors in this case:

Utility Air Regulatory Group, Intervenor for Petitioner

Calpine Corporation, Intervenor for Respondent

Oak Grove Management Company, LLC, Intervenor for Petitioner

Exelon Corporation, Intervenor for Respondent

Gulf Coast Lignite Coalition, Intervenor for Petitioner

National Grid Generation, LLC, Intervenor for Respondent

Chase Power Development, LLC, Intervenor for Petitioner

Public Service Enterprise Group, Inc., Intervenor for Respondent

Edgecombe Genco, LLC, Intervenor for Petitioner

American Academy of Pediatrics, Intervenor for Respondent

Spruance Genco, LLC, Intervenor for Petitioner

American Lung Association, Intervenor for Respondent

State of Michigan, Intervenor for Petitioner

American Nurses Association, Intervenor for Respondent

State of Alabama, Intervenor for Petitioner

American Public Health Association, Intervenor for Respondent

State of Alaska, Intervenor for Petitioner

Chesapeake Bay Foundation, Inc., Intervenor for Respondent

State of Arizona, Intervenor for Petitioner

Citizens for Pennsylvania's Future, Intervenor for Respondent

State of Arkansas, Intervenor for Petitioner

Clean Air Council, Intervenor for Respondent

State of Florida, Intervenor for Petitioner

Conservation Law Foundation, Intervenor for Respondent

State of Idaho, Intervenor for Petitioner

Environment America, Intervenor for Respondent

State of Indiana, Intervenor for Petitioner

Environmental Defense Fund, Intervenor for Respondent

State of Kansas, Intervenor for Petitioner

Izaak Walton League of America, Intervenor for Respondent

State of Mississippi, Intervenor for Petitioner

Natural Resources Council of Maine, Intervenor for Respondent

State of Missouri, Intervenor for Petitioner

Natural Resources Defense Council, Intervenor for Respondent

State of Nebraska, Intervenor for Petitioner

Ohio Environmental Council, Intervenor for Respondent

State of North Dakota, Intervenor for Petitioner

Physicians for Social Responsibility, Intervenor for Respondent

State of Ohio, Intervenor for Petitioner

Sierra Club, Intervenor for Respondent

State of Oklahoma, Intervenor for Petitioner

Waterkeeper Alliance, Intervenor for Respondent

Commonwealth of Pennsylvania, Intervenor for Petitioner

State of California, Intervenor for Respondent

State of South Carolina, Intervenor for Petitioner

Commonwealth of Massachusetts, Intervenor for Respondent

State of Utah, Intervenor for Petitioner

State of Connecticut, Intervenor for Respondent

Commonwealth of Virginia, Intervenor for Petitioner

State of Delaware, Intervenor for Respondent

State of West Virginia, Intervenor for Petitioner

State of Illinois, Intervenor for Respondent

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State of New Mexico, Intervenor for Respondent

Railroad Commission of Texas, Intervenor for Petitioner

State of New York, Intervenor for Respondent

Wolverine Power Supply Cooperative, Inc., Intervenor for Petitioner

State of North Carolina, Intervenor for Respondent

Eco Power Solutions (USA) Corporation, Intervenor for Petitioner

State of Oregon, Intervenor for Respondent

National Black Chamber of Commerce, Intervenor for Petitioner

State of Rhode Island, Intervenor for Respondent

Institute for Liberty, Intervenor for Petitioner

State of Vermont; District of Columbia; City of Baltimore; City of New York; National Association for the Advancement of Colored People, Intervenors for Respondent

3. ***Amici* in this Case**

At present, there are no *amici curiae*.

4. Circuit Rule 26.1 Corporate Disclosure for Petitioners

A corporate disclosure for each Petitioner is included, below.

B. Rulings Under Review

Petitioners seek review of final agency action taken by EPA at 77 Fed. Reg. 9,304 (Feb. 16, 2012), titled "National Emissions Standards for Hazardous Air

Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units."

C. Related Cases

Petitioners are aware of only one related case which is pending before this Court: *White Stallion Energy Center, LLC, v. U.S. Environmental Protection Agency,* Case No. 12-1100 (filed Feb. 16, 2012). This related case consolidated numerous petitions for review that were filed in this Court challenging the same final EPA rules listed above. The instant case was severed from the related case and assigned a new case number by the Court's Order dated June 28, 2012 (Doc. No. 1381112).

RULE 26.1 DISCLOSURE STATEMENTS

Sunflower Electric Power Corporation ("Sunflower") certifies that it is a not-for-profit, wholesale, electric generation and transmission utility, which is owned and governed by six member distribution cooperatives, serving customers in central and western Kansas. Neither Sunflower, nor its member cooperatives issue stock, and therefore no publicly-traded company owns 10% or more of their stock.

Tenaska Trailblazer Partners, LLC ("Tenaska") certifies that it is a privately-owned limited liability company, which intends to construct and operate a baseload, sub-bituminous coal fired electric power generating facility near Sweetwater, TX. Tenaska is owned by privately-held affiliates of Tenaska, Inc., a privately-held corporation and by Arch Coal, Inc., which is publicly-traded on the New York Stock Exchange under the symbol "ACI".

Deseret Power Electric Cooperative ("Deseret") certifies that it is a nonprofit, regional generation and transmission cooperative, owned by its six member systems, serving approximately 45,000 customers in Utah, Colorado, Wyoming, Nevada, and Arizona. Neither Deseret, nor its member cooperatives issue stock, and therefore no publicly-traded company owns 10% or more of their stock.

White Stallion Energy Center, LLC ("White Stallion") is a limited liability company organized under the laws of the State of Texas engaged in the business of energy development and production. White Stallion has no parent companies, and no publicly-held corporation has a 10% or greater ownership interest in it.

Power4Georgians, LLC ("P4G") certifies that it is a limited liability company organized under the laws of the State of Georgia, engaged in the business of energy development and production. P4G has no parent companies, and no publicly-held corporation has a 10% or greater ownership interest in it.

Tri-State Generation & Transmission Association, Inc. ("Tri-State") is a wholesale electric power supply cooperative which operates on a not-for-profit basis and is owned by 1.5 million member-owners and 44 distribution cooperatives that serve customers in a 250,000 square-mile territory including New Mexico, Colorado, Nebraska, and Wyoming. The mission of Tri-State is to provide our member systems with a reliable, cost-based supply of electricity while maintaining high environmental

standards. Tri-State issues no stock and has no parent corporation. Accordingly, no publicly held corporation owns 10% or more of its stock.

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TABLE OF AUTHORITIES

Authorities upon we chiefly relied on are marked with asterisks.

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GLOSSARY

BAT	best available technology
BDL	below detection limits
CAA	Clean Air Act
CEMS	continuous emission monitoring system
EGU	electric utility steam generating unit
EPA	Environmental Protection Agency
fPM	filterable particulate matter
GHG	greenhouse gas
HAP	hazardous air pollutant
HCl	hydrogen chloride
ICR	information collection request
IGCC	integrated gasification combined cycle
MACT	Maximum Achievable Control Technology
MATS	Mercury and Air Toxics Standards
MMBtu	one million British thermal units
MWh	megawatt hour of energy
NESHAP	National Emission Standards for Hazardous Air Pollutants
PM	particulate matter

RDL	representative detection limit
RTC	Response to Comments
SO_2	sulfur dioxide
UPL	upper prediction limit

STATUTES AND REGULATIONS

The text of 42 U.S.C. § 7412 and the proposed and final regulations at issue here are reproduced in the Statutory Addendum, separately bound, and filed herewith.

JURISDICTIONAL STATEMENT

The Environmental Protection Agency ("EPA" or "Agency") published its final rules, "National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units," 77 Fed. Reg. 9,304, on February 16, 2012 ("MATS rule"). This court has jurisdiction to review EPA's nationally applicable regulations pursuant to Section 307(b)(1) of the Clean Air Act ("CAA"), 42 U.S.C. § 7607(b)(1). Petitioners timely filed their petitions for review of this final rule between February 16 and April 16, 2012, and these petitions were consolidated with other petitions for review *sub nom White Stallion Energy Center v. EPA*, No. 12-1100.

In an order dated June 28, 2012, the Court severed from Nos. 12-1100, *et al.,* the issues identified in Petitioners' May 9, 2012 Notice of Further Clarification and Modification of Relief Requested, and assigned them new docket No. 12-1272, *White Stallion Energy Center v. EPA*. The issues severed are identified below in the Statement of Issues.

STATEMENT OF ISSUES

1. Whether EPA's new-source standards are arbitrary and capricious because EPA failed to demonstrate that those standards were "achieved in practice" by the units that EPA used to set the standards, as required by Section 112(d)(3) of the CAA, 42 U.S.C. § 7412(d)(3).

2. Whether EPA's new-source standards violate Section 112(d)(3) of the CAA, 42 U.S.C. § 7412(d)(3), because EPA used a "pollutant-by-pollutant" approach to set MACT floors, in which it selected different units as the "best controlled" unit for each individual pollutant, rather than identifying the single source that is "best controlled" for all the pollutants to be regulated.

INTRODUCTION

EPA set limitations for the emissions of hazardous air pollutants ("HAPs") by new sources that, contrary to the requirements of CAA § 112(d),[1] have neither been achieved in practice by any existing facility nor are they achievable by any new facility, including those Petitioners seek to develop. No technical expertise is required to understand why this is the case. EPA's errors are open and obvious: The Agency has admittedly ignored relevant test data that contradict the basis of the standards, and, contrary to the Agency's own record statements as to how these standards should be set, EPA has used only inadequate hours-long stack test data to set standards that

[1] Henceforth in this brief, citations to the CAA shall be to that statute only. Parallel citations to the United States Code are provided in the Table of Authorities.

must be met continuously over the long term. Now, more than five months after EPA issued the standards and stymied Petitioners in their efforts to commence construction of their projects (and only after this Court granted expedited review), EPA has recognized that these analytical flaws undermine the validity of the new-source standards by announcing the Agency will, in the future, reconsider those standards. This Court's task in vacating the standards should not be difficult.

STATEMENT OF THE CASE AND FACTS

I. General Background

The CAA requires the Administrator to promulgate emission standards for sources of HAPs listed in the Act. CAA § 112(d)(1). These standards are frequently called Maximum Achievable Control Technology, or "MACT," standards. Under CAA § 112(c), EPA is required to create a list of categories of "major" and "area" sources of the HAPs that are listed in CAA § 112(b). Under CAA § 112(d), EPA is required to establish MACT standards for the listed source categories.

The 1990 CAA Amendments adopted special provisions for the regulation of HAP emissions from electric utility steam generating units ("EGUs") by mandating that EPA complete a series of steps before regulating EGU HAP emissions. Congress required EPA to "perform a study of the hazards to public health reasonably anticipated to occur as a result of emissions by [EGUs] of [HAPs]." CAA § 112(n)(1)(A) ("Utility Study"). Congress also required EPA to study "mercury emissions from EGUs." CAA § 112(n)(1)(B) ("Mercury Study"). If EPA found the

regulation of a particular HAP from EGUs was "appropriate and necessary after considering the results of the [Utility Study,]" EPA was instructed to regulate EGU emissions of that HAP under § 112. CAA § 112(n)(1)(A). EPA issued the Utility Study in 1998, 65 Fed. Reg. 79,825, 79,826 (Dec. 20, 2000), and the Mercury Study in 1997. *Id.* at 79,827.

On December 20, 2000, EPA deemed that "regulation of HAP emissions from coal- and oil-fired [EGUs] under CAA § 112 of the CAA is appropriate and necessary" for mercury emissions from coal-fired boilers and nickel emissions from oil-fired boilers and added these EGUs to the list of source categories subject to regulation under CAA § 112(c). *Id.* at 79,826. Prior to issuing MACT standards for EGUs, however, EPA changed course, removing EGUs from the source category list based on its finding that additional regulations that EPA was then undertaking and other information made regulation of EGUs under CAA § 112 neither appropriate nor necessary. 70 Fed. Reg. 15,994 (Mar. 29, 2005). This Court vacated EPA's 2005 "delisting" action in *New Jersey v. EPA*, 517 F.3d 574, 583 (D.C. Cir. 2008), *cert. denied* 555 U.S. 1169 (2009), *subsequent appeal*, 2012 U.S. App. LEXIS 14878 (D.C. Cir 2012), and remanded the case to EPA.

The MATS rule under review by this Court was published as a proposal on May 3, 2011, 76 Fed. Reg. 24,976 (May 3, 2011), and as final rules on Feb. 16, 2012, 77 Fed. Reg. 9,304 (Feb. 16, 2012). In the rules, EPA now determined that it was

"appropriate and necessary" to regulate a number of different HAP emissions from coal- and oil-fired EGUs and set MACT standards for such units.[2]

Numerous petitions for review of the MATS rule were filed with this Court and consolidated *sub nom White Stallion Energy Center v. EPA*, No. 12-1100. The Court later severed two issues relating to the new-source MACT standards identified in Petitioners' May 9, 2012 Notice of Further Clarification and Modification of Relief Requested, and expedited its review of those issues. *See* Order of June 28, 2012. The issues severed are identified above in the Statement of Issues.

II. Background Specific to the Issues Here

In establishing emissions standards under CAA § 112(d) for new and existing EGUs, EPA followed the two-step process set forth in a series of cases in this Court. *See, e.g., Mossville Environmental Action Now v. EPA*, 370 F.3d 1232, 1235-36 (D.C. Cir. 2004) and cases cited therein. First, under CAA § 112(d)(3), EPA conducted a "MACT floor" analysis to determine the minimum standards for the HAPs to be regulated. Then, under CAA § 112(d)(2), EPA determined, for each HAP to be regulated, whether a more stringent "beyond the [MACT] floor" standard was justified. *See* 77 Fed. Reg. at 9,331. EPA determined that more stringent "beyond the [MACT] floor" standards were not appropriate for new sources and set the new-source standards at the MACT floor levels. *See* 77 Fed. Reg. at 9,369.

[2] In an action not relevant here, the MATS rule also set new source performance standards for EGUs under CAA § 111.

CAA § 112(d)(3) provides the MACT floor for new sources "shall not be less stringent than the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator." CAA § 112(d)(3)(A) provides the MACT floors for existing sources shall be no less stringent than "the average emission limitation achieved by the best performing 12 percent of the existing sources" (subject to certain qualifications not applicable here).

EPA collected data to establish both the new-source and existing-source standards with two information collection requests ("ICR") pursuant to CAA § 114. In one, known as "ICR Part II," EPA asked all sources potentially affected by the rules for all relevant stack tests conducted since January 1, 2005. In the other, known as "ICR Part III," EPA required each of a smaller group of sources—those EPA determined to be the lower-emitting facilities—to conduct a stack test consisting of a series of three individual test "runs" of several hours each conducted over a period ranging from one to, at most, three consecutive days. The ICR data were reported to EPA in 2010. *See* "Final Rule MACT Floor Memo" at 3, JA__.[3]

Based on this information, EPA set standards for four subcategories of sources relevant here: facilities using coal, facilities using "virgin" (low-heating value) coal

[3] EPA drafted MACT Floor Memos to describe the methodology for developing the MACT floors in the proposed and final rule. *See National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) Floor Analysis for Coal- and Oil-fired Electric Utility Steam Generating Units* (May 18, 2011) ("Proposed Rule MACT Floor Memo"), JA__-__, and the memorandum of the same name dated December 16, 2011 ("Final Rule MACT Floor Memo"), JA__.

produced at adjacent or nearby coal mines (this subcategory applies to mercury emissions only), facilities using solid oil fuels (petroleum coke), and integrated gasification combined cycle ("IGCC") facilities. For each of these subcategories, EPA set standards for mercury, hydrogen chloride ("HCl") as a surrogate for acid gases (because pollution control equipment that will capture HCl will also capture other acid gases), and filterable particulate matter ("fPM") as a surrogate for non-mercury trace metals (because non-mercury trace metals are constituents of fPM). *See* Table 3, 77 Fed. Reg. at 9,367.[4]

EPA created a series of spreadsheets to show how it used the ICR data to calculate the MACT floors for each pollutant to be regulated from each subcategory of new and existing sources.[5] Because the final standards were set at the MACT floors, the spreadsheets show how the final new-source standards were calculated. These spreadsheets show that, for the coal subcategory—which is the applicable subcategory for each of the Petitioners here—EPA considered the Logan Generating Station Unit 1 in Swedesboro, New Jersey to be the "best controlled similar source" for HCl, and the Chambers Cogeneration Boiler 2 in Carney's Point, New Jersey to be

[4] EPA also set alternative trace metal standards for individual trace metals and alternative acid gas standards using sulfur dioxide ("SO_2") as the surrogate. *See* 77 Fed. Reg. at 9,368-69.

[5] *See* MACT Floor Analysis-Coal HG, JA__-__, MACT Floor Analysis-Coal acid gas, JA__-__, MACT Floor analysis-Coal HAP metals, JA__-__, MACT Floor analysis-IGCC, JA__-__, MACT Floor analysis-Petroleum Coke, JA__-__.

the "best controlled similar source" for fPM.[6] The spreadsheets record that EPA had six sets of test results available to it both for Logan's HCl and Chambers' fPM emissions.[7] Although EPA does not state which of these sets of test results were received under ICR Part II or Part III, EPA only mandated a single set of tests under Part III; hence, for both Logan and Chambers, one of these sets of test results was received under ICR Part III and the other five were received under ICR Part II.

The results of each of these six sets of three-run tests obtained for Chambers for fPM emissions are set forth in these spreadsheets[8] and are shown in the following Table 1. The results in the Table are averages of the three test runs performed for each test expressed in pounds per megawatthour.[9]

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[6] *See* MACT Floor Analysis-Coal acid gas spreadsheet, tab for HCL-New-MW, column B, JA__, and MACT Floor analysis-Coal HAP metals, spreadsheet tab for fPM_New-MW, column B, JA__.

[7] *See* MACT Floor analysis-Coal HAP metals, spreadsheet tab for fPM_Avg_MW, column B, JA__, and MACT Floor Analysis-Coal acid gas spreadsheet, tab for acid gas_Avg_MW, column B.

[8] *See* MACT Floor Analysis-Coal HAP metals spreadsheet tab for fPM_Avg_MW, column B, JA__.

[9] As stated, EPA required one test consisting of three runs as a part of the ICR Part III. Because ICR Part II asked for the results of any similar stack tests that units had performed for determining compliance with other regulations, and because compliance testing typically requires three runs per test, it is likely that the information on these spreadsheets that is ICR Part II data is also an average of three tests.

Table 1[10]

0.00223090
0.012512
0.032444
0.032444
0.058400
0.087600

The results of each of these six sets of three-run tests obtained for Logan for acid gas (HCl) emissions, also expressed as averages of each of the three runs, are shown in the EPA spreadsheets[11] and are set forth in the following table expressed in pounds per megawatthour:

Table 2

0.0001127
0.0036105
0.0016413
0.00103660
0.00068890
0.00068353

EPA also determined that for the coal new-source subcategory for mercury emissions, the Logan unit's emissions qualified it as the "best controlled similar source."[12] For Logan's mercury emissions, however, EPA's only data was the single three-run ICR Part III test, because Logan did not report any previous mercury tests under ICR Part II.

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[10] As can be seen, the lowest value in both Tables 1 and 2 is the one on top.

[11] *See* MACT Floor Analysis-Coal acid gas spreadsheet, tab for acid gas_Avg_MW, column B, JA__.

[12] *See* MACT Floor Analysis-Coal HG spreadsheet, tab for HG_Avg_>8300 Btu_MW, column F, JA__.

EPA recognized that all of the test data it received under ICR Parts II and III consisted only of short-term test results that did not necessarily reflect the emission profile of the tested sources over the continuous rolling 30-day average periods for which EPA intended to require compliance with its standards.[13] *See* "EPA's Response to Public Comments on EPA's *National Emission Standards for Hazardous Air Pollutants from Coal-and Oil-Fired Electric Utility Steam Generating Units*" (Dec. 15, 2011), Volume 1 of 2 (hereafter "RTC") 4A02, 85-88 ("EPA understands that stack data and 30-day averages don't seem to be compatible"), JA__. EPA also recognized that it was legally obligated to base the new-source standards on the emissions level that the "best controlled similar source" achieved "in practice," CAA § 112(d)(3), and that this in turn obligated the Agency to ensure that the standards accounted for the variable emissions profile of the "best controlled similar source" over time, given possible variations in the input fuel used or other varying operating conditions that could affect emissions. RTC 4A01, 31, JA__ ("The EPA believes it is appropriate to consider variability in establishing standards that apply at all time, and we believe our approach for establishing MACT floors is reasonable as explained in the proposed

[13] Both the existing and new-source emission limits must be complied with continuously. The MATS rule contains compliance options. If an owner elects to install a continuous emission monitoring system ("CEMS"), then compliance with the emission limit is based on 30-day rolling averages. Thus, if as measured on any 30-day period, the unit fails to meet the emission limit, the unit is deemed to be in violation. Alternatively (except for mercury), an owner can elect to use stack tests to demonstrate compliance. If this option is chosen, stack tests must be conducted on a quarterly basis. 77 Fed. Reg. at 9,371-73.

rule. *See Mossville Environmental Action Now v. EPA,* 370 F.3d 1232, 1242 (D.C. Cir. 2004) (holding that MACT floors may legitimately account for variability because 'each [source] must meet the [specified] standard every day and under all operating conditions.')"). Variability includes operations "'under most adverse circumstances which can reasonably be expected to recur.'" *Sierra Club v. EPA*, 167 F.3d 658, 665 (D.C. Cir. 1999) (quoting *National Lime Ass'n v. EPA*, 627 F. 2d 416, 431 n.46 (D.C. Cir. 1980)).

EPA attempted to account for variability in emissions of fPM from the Chambers unit and HCl and mercury from the Logan unit by applying a statistical analysis to determine what EPA termed the 99% Upper Prediction Limit ("UPL") of emissions from the source analyzed. *See* 76 Fed. Reg. at 25,041-46, 25,047-48 and Final Rule MACT Floor Memo at 4-9, JA__. According to EPA, the UPL analysis yields an emissions limit such that "a facility whose emissions are in line with the best performers has [only] one chance in 100 of exceeding." Final Rule MACT Floor Memo at 5, JA__.

Critically, however, even though EPA was attempting to determine Chambers' fPM and Logan's HCl emissions variability, the Agency did not apply its UPL analysis to all six sets of test data it had for Chambers' fPM emissions and Logan's HCl emissions. Instead, EPA chose the lowest of the six sets of Chambers fPM test

results and Logan HCl test results.[14] Having only one set of Logan mercury test results, EPA used those results for its UPL analysis.[15]

Applying the UPL methodology to the lowest set of emissions test results for Chambers fPM emissions yielded a value of 4.14×10^{-3} lbs/MWh.[16] Applying that methodology to the lowest set of Logan HCl emission test results yielded a value of 2.39×10^{-4} lbs/MWh.[17] Applying that methodology to the only set of test results

[14] The spreadsheet "MACT Floor analysis-Coal HAP metals," spreadsheet tab for fPM_New_MW, shows how EPA calculated the fPM MACT floor, JA__. As can be seen, the analysis begins with the three test run results shown on lines 5-7. These three test run results are the lowest set of test run results from the six sets of Chambers fPM test run results. The average of this set of test run results, along with the average of the other five sets of Chambers fPM test run results, is shown in the spreadsheet "MACT Floor analysis-Coal HAP metals," spreadsheet tab fPM_Avg_MW, JA__, and in Table 1 above. The same is the case for acid gases. The spreadsheet "MACT Floor analysis-Coal acid gas," spreadsheet tab for fPM_New_MW, shows how EPA calculated the acid gas MACT floor, JA__. As can be seen, the analysis begins with the three test run results shown on lines 5-7. These three test run results are the lowest set of test run results from the six sets of Logan HCl test results. The average of this set of test run results, along with the average of the other five sets of Logan acid gas test run results, is shown in the spreadsheet "MACT Floor analysis-Coal acid gas," spreadsheet tab acid gas_New_MW, JA__, and in Table 2 above.

[15] *See* spreadsheet MACT Floor Analysis-Coal HG, tab for HG_New_>8300 Btulb_MW, line 100, JA__.

[16] *See* spreadsheet "MACT Floor analysis-Coal HAP metals," spreadsheet tab for fPM_Avg_MW, line 100.

[17] *See* spreadsheet "MACT Floor analysis-Coal acid gas," spreadsheet tab for Acid Gas_Avg_MW, line 100. JA__.

available for Logan mercury emissions yielded a value of 1.19 x 10^{-7} lbs/MWh, which EPA rounded to 2.0 x 10^{-7} lbs/MWh.[18]

In the case of fPM and HCl, the values that EPA derived from its UPL analysis were below the detection limits of the devices used to measure those emissions. *See* Final Rule MACT Floor Memo at 9-10, JA__. This is because most of the data from which EPA started its analysis was below detection limits: two of the three test runs from the Chambers test that EPA used and all three of the test runs from the Logan HCl test that EPA used were below the detection limit of the respective methods used to measure emissions. *Id.* This caused EPA to question whether the values from the tests that EPA used (the lowest tests for Logan HCl emissions and Chambers fPM emissions) were real numbers or simply "noise" and whether even the UPL-adjusted values based on those tests were so low that they could not be accurately detected. *Id.* As a result, EPA decided to set the fPM and HCl emission limits for those two pollutants at three times what EPA determined to be the respective measurement method's "representative detection limit" ("RDL"). *See id.* at 9-10 & Table 2, JA__. This yielded a final fPM standard of 7.0 x 10^{-3} lbs./MWh and a final acid gas (HCl) standard of 4.0 x 10^{-4} lbs/MWh.[19] The final mercury standard was set at 2.0 x 10^{-7}

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[18] *See* spreadsheet MACT Floor Analysis-Coal HG, tab for HG_New_>8300 Btulb_MW, line 100, JA__.

[19] The spreadsheet "MACT Floor analysis-Coal HAP metals," spreadsheet tab for fPM_Avg_MW, lines 102-04, shows how EPA replaced the final value from the UPL analysis for fPM with a new and higher value set at three times RDL. Lines 6 and 7 of

lbs/MWh, which was the UPL-adjusted value determined from the single set of Logan mercury test data.[20]

Despite these adjustments, EPA's final standard for fPM was still up to an order of magnitude lower than the emissions results of the five Chambers tests that EPA did not use (compare final standard of 7.0 x 10^{-3} lbs/MWh with the five other test runs shown on Table 1, which range from 1.25 lbs x 10^{-2} lbs/MWh to a high of 8.76 lbs x 10^{-2} lbs/MWh). The same is the case with EPA's final HCl standard (compare final standard of 4.0 x 10^{-4} lbs/MWh with the five other tests shown on Table 2, which range from a low of 6.84 x 10^{-4} lbs/MWh to a high of 3.61 x 10^{-3} lbs/MWh). *In other words, in five out of six available test results, the Chambers and Logan units failed to meet the standard that EPA concluded these units could meet 99% of the time*. There is no way to determine whether the Logan unit, in fact, could meet the mercury standard that EPA set based on that unit's mercury emissions performance 99% of the time, or even more than once, because EPA used only a single emission test to set that mercury standard.

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this spreadsheet show that two of the three test run values from the lowest Chambers test used to set the fPM standard were below detection limits ("BDL"). JA__. The spreadsheet "MACT Floor analysis-Coal acid gas," spreadsheet tab for Acid Gas_Avg_MW, lines 102-04, shows how EPA replaced the final value from the UPL analysis for the acid gas standard with a new and higher value set at three times RDL. Lines 5-7 show that all three of the test run values from the lowest Logan test used to set the acid gas standard were below detection limits. JA__.

[20] *See* spreadsheet MACT Floor Analysis-Coal HG, tab for HG_New_>8300 Btulb_MW, line 100, JA__.

In comments, pollution control experts informed EPA that its statistical analysis did not properly account for variability. *See, e.g.*, Memorandum of Ralph L. Roberson, attached to comment EPA-HQ-OAR-2009-0234-18035, JA__ . These commenters explained that, even with the UPL and RDL adjustments, EPA set the standards below the level that pollution control measurement equipment is capable of detecting and, as a result, emissions control equipment vendors would not guarantee that their equipment can perform to the level of EPA's standards. *Id.* Thus, commenters asserted that not only were the standards not achieved in practice by the applicable units whose emissions were used to set the standards, the standards could not even be met by new units. EPA, however, disregarded those comments.[21] *Id.*

EPA also rejected comments that EPA erred by setting standards on a pollutant-by-pollutant basis without regard to whether any single unit could meet all of the standards. *See, e.g.,* comment EPA-HQ-OAR-2009-0234-18035, at 80-86, JA__. EPA maintained that it was not legally prohibited from setting standards on a pollutant-by-pollutant basis. *See* 77 Fed. Reg. at 9,386-88, 9,391. In any event, although EPA did not make this claim in its proposed rule, EPA claimed in the final rulemaking that the Logan unit "is meeting all three final" new-source standards. *Id.*

[21] As shown in Petitioners' declarations supporting standing, however, pollution control vendors have, in fact, told EPA that they will not guarantee their equipment to the level of EPA's standards. *See, e.g.,* Penrod Decl., ¶ 14 and Attachments 1 and 2 thereto.

at 9,390-91; RTC 4A01, 46-62, JA__. EPA, however, did not provide any analysis to support this conclusion. *See id.*

SUMMARY OF ARGUMENT

EPA's new-source standards are arbitrary and capricious because, contrary to the requirements of CAA § 112(d)(3), none of these standards is "achieved in practice" by the facility that EPA selected as the "best controlled similar source" in setting each such standard. As interpreted by this Court, CAA § 112(d)(3) requires that a new-source standard be based on the emissions performance of the "best controlled similar source" "'under most adverse circumstances which can reasonably be expected to recur.'" *Sierra Club v. EPA*, 167 F.3d at 665 (quoting *National Lime Ass'n v. EPA*, 627 F. 2d 416, 431 n.46 (D.C. Cir. 1980)). EPA violated this requirement by starting with a very limited data set and then using only the lowest of six test results available from the applicable best controlled units in setting the new-source standards for fPM and acid gases. The other five results, which were included in EPA's own spreadsheets demonstrating how the new source standards were calculated, show that these units would fail to meet the applicable standards. EPA never explained how a standard that a facility failed to meet in five out of six tests can possibly reflect the emissions performance of that facility "in practice."

Because EPA set the mercury standard based on only one test result, that standard also is not reflective of the emissions performance of that unit over time "in practice." Moreover, for all three standards, EPA's use of a single hours-long test to

set a standard that must be met continuously is contradicted by the Agency's own record acknowledgement that a single test cannot be considered to be representative of continuous performance, and by the Agency's use of all available test data to set the existing-source standards. EPA also ignored other concrete evidence that these single short-term test results are not representative.

The Agency evidently agrees that it did not follow the requirements of CAA § 112(d) in setting the new source standards. It has now announced that it will reconsider these standards based on "measurement issues related to the mercury standard and the data set to which the variability calculation was applied when establishing the new source standards for particulate matter and hydrochloric acid." *See* Letter from Gina McCarthy, EPA Assistant Administrator, to Patricia Barmeyer, Counsel for Power4Georgians, LLC (July 20, 2012), Attachment A to EPA Mot. to Hold Case in Abeyance; (Doc. No. 1384888). These appear to be the same problems captured by the first issue in this case.

Further, EPA's new-source standards violate the explicit language of CAA § 112(d)(3) because they were established using a pollutant-by-pollutant approach—in which a different unit was selected as the best controlled source for each individual pollutant to be regulated—as opposed to the statutorily required methodology of determining the single "best controlled similar source" for all of the pollutants to be regulated. As a result, EPA's standards are not "achievable" by any single new source as required by CAA § 112(d)(2).

STANDING

Although Petitioners' standing should be "self-evident," *Sierra Club v. EPA*, 292 F.3d 895, 900 (D.C. Cir. 2002), Petitioners attach in an Addendum declarations supporting their standing. As shown in those declarations, Petitioners all propose to construct new electric generating stations that are subject to the new-source standards set forth in the MATS rule. Petitioners are therefore directly regulated by the standards and are the "object of the action…at issue." *Id.* As shown in the declarations in the attached Addendum, the MATS rule causes Petitioners injury because EPA set the new-source standards at a level that is so low that pollution control technology vendors have told EPA that they will not guarantee that their equipment can control emissions to the level of the standards. Without such guarantees, Petitioners will be unable to obtain financing for their projects and so will be prevented from undertaking development.

STANDARD OF REVIEW

Under the CAA, the MATS rule new-source standards must be reversed if this Court finds that the standards are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or if they are "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right." CAA §§ 307(d)(9)(A) and (C). Under the arbitrary and capricious standard, the Agency must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choices made." *Motor*

Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (internal quotation marks omitted). Whether the MATS rule is contrary to the CAA must be determined under the familiar *Chevron* two-step doctrine. *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.,* 467 U.S. 837, 837-843 (1984). Under *Chevron*, the Court "must decide (1) whether the statute unambiguously forbids the Agency's interpretation, and, if not, (2) whether the interpretation, for other reasons, exceeds the bounds of the permissible." *Barnhart v. Walton*, 535 U.S. 212, 218 (2002).

ARGUMENT

I. None of the Three New-Unit Standards Is Met "in Practice" by the Facility that EPA Selected as the "Best Controlled Similar Source" for Each Standard

Recognizing that agencies don't have perfect information, this Court has ruled that "EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem." *Sierra Club*, 167 F.3d at 662. Nevertheless, under CAA § 112(d)(3), "EPA's method of setting emission floors must reasonably estimate the performance of the relevant best performing plants." *National Lime Ass'n v. EPA,* 233 F.3d 625, 632 (D.C. Cir. 2000), amended by 2001 U.S. App. LEXIS 3037 (D.C. Cir. 2001). *See also Sierra Club*, 167 F.3d at 662 (EPA must show there is a "rational relationship" between the methodology it uses to calculate the MACT floor and "'the reality it purports to represent,'" quoting *Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, 923 (D.C. Cir. 1998)); *see also Mossville,* 370 F.3d at 1242 (EPA must meet "its burden of establishing that its standards reasonably estimate the performance of

the top performing units"). Thus, EPA must "demonstrate with substantial evidence—not mere assertions—" that its MACT approach is "a reasonable means of satisfying the statute's requirements." *Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855, 866 (D.C. Cir. 2001).

EPA's methodology for setting the new-source standards fails to meet these requirements, for three independent reasons. ***First***, for each of the three pollutants that EPA chose to regulate, EPA derived a final standard that EPA deemed to be representative of the performance of these units 99% of the time--and therefore indicative of the emissions from these units over their lifetime of operation, as required by CAA § 112(d)(3)--based on a single set of three hours-long stack test runs. Yet even the limited test data in EPA's possession showed that the units that EPA selected as the "best controlled similar source" for the fPM and acid gas standards failed to meet those standards in five out of six tests. EPA's conclusion that these units can meet the standards 99% of the time is directly contrary to the evidence, and so is arbitrary and capricious. *Sierra Club v. EPA,* 479 F.3d 875, 882 (D.C. Cir. 2007) (although EPA "has some evidence" to back the predictive value of its methodology, "it has failed to show" that the data it used "actually predict the range of emissions levels achieved by the best performers").

Second, EPA reiterated time and again in the record that the use of all available data was necessary to account for variability and that a single set of test run results cannot account for emissions variability over time; indeed, statements in the

record by EPA claim incorrectly that it did use all available data. Yet the Agency discarded five out of six test results for Chambers' fPM emissions and for Logan's HCl emissions, and decided to set the fPM, HCl and mercury standards based on a single set of test results. The Agency thus contradicted its own methodology for properly accounting for variability, further rendering its decision arbitrary and capricious. *See Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C. Cir. 1987) (finding agency action arbitrary and capricious because it was "internally inconsistent and inadequately explained").

Third, EPA ignored concrete evidence that the discrete hours-long test results it used to set the three standards were not representative of the continuous emissions profile of the tested units. EPA thus had "considerable reason" to doubt that it had correctly set the standards, yet it arbitrarily ignored those reasons. *See Cement Kiln*, 255 F.3d at 866.

A. EPA's Conclusion that Its New-Source Standards Were Achieved in Practice Is Refuted by the Agency's Own Data

Inexplicably, EPA somehow missed the fact that the fPM test data reported for Chambers and the HCl test data reported for Logan, as shown in Tables I and II above, demonstrate that those units would have failed to meet the final fPM and HCl standards. Chambers and Logan would have failed to meet those standards even though EPA derived those standards by adjusting the lowest test results upwards twice, once through its UPL analysis and again to account for the fact that the

emissions value that resulted from the UPL analysis was still below measurement detection limits. *See* Final Rule MACT Floor Memo at 4-10, JA__.

Nowhere in the record does EPA even attempt to explain how Chambers and Logan can possibly be expected to meet EPA's standards for fPM and HCl, respectively, 99% of the time, or over the continuously rolling 30-day average periods for which compliance is required, when they didn't meet it in five out of six hours-long tests. And it is not as though these test results were hidden from the Agency: they appear in the very spreadsheets that EPA created to report how it set the MACT floors, which EPA posted on its MATS rule website.[22] The spreadsheets were derived from the ICR Parts II and III data that EPA required utilities to report.

Nor is it the case that EPA rejected the test results because they were of suspect quality. EPA never claimed that the results were rejected for that reason and indeed never even acknowledged that it had failed to use those test results at all. In fact, EPA specifically said that it "disagrees that the Part II data should not be used to assess variability, particularly given that we have only one set of data for each of the EGUs required to test under Part III of the 2010 ICR." *See* RTC 4A02, 111, JA__.

Thus, EPA's methodology for determining the new-source standards flunks the basic test of "reasonably estimat[ing] the performance of the relevant best performing

[22] *See* Air Toxics Standards for Utilities, http://www.epa.gov/ttn/atw/utility/utilitypg.html. The spreadsheets are the fourth through the ninth links under the heading MATS ICR data on this website.

plants." *National Lime Ass'n ,* 233 F.3d at 632. *See also Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1053 (D.C. Cir. 2001) ("model assumptions must have a 'rational relationship' to the real world" (citing *Chemical Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1265 (D.C. Cir. 1994))); *Sierra Club v. Costle*, 657 F.2d 298, 333 (D.C. Cir. 1981), *rev'd on other grounds*, 463 U.S. 680 (1983) (There must be "a rational connection between the factual inputs, modeling assumptions, modeling results and conclusions drawn from these results"). Given the test results, no possible basis exists to conclude that these units could meet the standards "under most adverse conditions which can reasonably be expected to recur." *National Lime Ass'n*, 627 F. 2d at 431 n.46 (D.C. Cir. 1980). EPA's new-source standards are therefore arbitrary and capricious and must be vacated.

It is not just the acid gas and fPM standards that must be vacated for this reason, but the mercury standard as well. With only one stack test available for Logan's mercury emissions, there is no way to confirm that EPA's mercury standard does, in fact, reflect Logan's mercury emissions over time. Furthermore, EPA used the same methodology to determine the variability of Logan's mercury emissions as it did to determine the variability of Logan's acid gas emissions and the variability of Chambers' fPM emissions, and that methodology failed abysmally in the latter two

instances. This methodology works no better for Logan's mercury emissions than it did for determining variability for acid gas or fPM.[23]

B. EPA Disregarded Its Own Conclusions that All Reliable Data Should Be Used in Determining the Variable Emissions Profile of the Units It Selected as the "Best Controlled Similar Source" and that EPA Should not Rely on a Single Test Result.

EPA's decision to exclude five out of six test results in setting the fPM and HCl standards is repeatedly contradicted by EPA's own record statements. EPA maintained that, in setting the MACT floors, the Agency "believes that all data should be used in the analyses. Absent use of all of the data, the EPA would have no basis for addressing variability." RTC 4A01, 89, JA__. EPA went on to say that "[w]hen a small dataset is the only source of information available to determine the floor value, it is almost impossible to separate the different sources of variability… The UPL results are more robust if the datasets are large…." RTC 4A02, 57, JA__. Further, EPA does "not agree, as commenter appears to suggest, that we should exclude data from best performing units. We do not think such an approach is consistent with the statute or otherwise warranted." RTC 4A01, 120, JA__. EPA goes so far as to claim, incorrectly, that it "has calculated the MACT floor using all available data." RTC 4A02, 4-29, JA__(responding to comments maintaining that limited and very short-term test data cannot be used to predict unit variability over longer periods).

[23] For the same reason, EPA's new-source standards for IGCC and petcoke facilities must be vacated. The same methodology was used to determine those standards (the explanation in the Final Rule MACT Floor Memo as to how EPA set the MACT floors applies to all the subcategories).

In describing the approach EPA says it used in setting the *existing-unit* standards, the Agency explained that while it used the "single lowest emission average reported for a pollutant from each EGU in the MACT floor pool" to determine the best performing units, its variability analysis "included other pollutant-specific test emission averages from data collected" through ICR Parts II and III. Proposed Rule MACT Floor Memo at 9, JA __. And as EPA stated in its Response to Comments on the final rule, "[t]he EPA has used the lowest emissions for a given EGU in establishing the 'average of the top performing 12 percent' and then has used additional data available to it for the top performing 12% of sources for any given HAP to assess the variability." RTC 4A01, 31, JA__. In fact, EPA's Final Rule MACT Floor Memo at 7, JA __, stated that EPA should not rely on a single set of emissions results in setting standards: "For some data sets, a single floor average per source or unit was available; analysis based solely in these single per unit observations will not reflect any possible within-source variability."

Without any explanation in the record, however, EPA did not use all of the information available to it through ICR Part II or III to assess variability in setting the *new-source* standards. Despite its admonition in its own memorandum that "single per unit observations will not reflect any possible within-source variability," Final Rule MACT Floor Memo at 7, JA__, EPA nevertheless used a single test to assess variability for each of its new-source standards.

Deliberately ignoring available data in setting the new-source standards, while saying it used all available data in setting the existing-source standards, defies logic. To set the existing-source mercury standard for the coal sub-category, EPA used data from 47 units, and to set the existing-source fPM and HCl standards for the coal sub-category EPA used data from 130 units. *See* Final MACT Floor Memo at 4, JA__. EPA never explained why it would say it should include all data to assess the variability of emissions in setting the existing-source data given the relative plentitude of data for that purpose, while excluding data in assessing variability for the new-source standards given the dearth of data available for that purpose (just six sets of short-term test results for two of the new-source standards and one set for one of the new-source standards). *See* RTC 4A02, 4-29 (discussing the range of data available to assess variability for setting the existing-source standards and concluding "[t]he diversity of sources and range of the data suggests that the variability [of] sources mentioned above are being considered when calculating the MACT floors"), JA__.[24]

In sum, (a) EPA repeatedly stated in the record that all available data should be used to assess variability and that a single test result does not account for variability, (b) EPA said it used all available data in setting the existing-source and new-source

[24] In fact, EPA seems to have tried to gloss over its exclusion of data in setting new-source standards. The discussion quoted above from the MACT Floor Memos that the best performing units were selected using the lowest emissions values, while other emissions values were used to assess variability, facially applies both to setting new- and existing-source standards. EPA, however, did not use the non-lowest emissions values in assessing variability in connection with the new-source standards.

standards, and (c) without explanation, EPA arbitrarily excluded nearly all of a limited set of data when setting the new-source standards for fPM and acid gases. As a result, EPA set the new-source standards for those pollutants and for mercury using only a single set of test results, an outcome EPA itself said would not reflect variability. EPA's failure to consistently consider the data or to explain or even acknowledge this inconsistency renders its new-source standards arbitrary and capricious. *See Sierra Club*, 167 F.3d at 663 (although EPA believes the data it used to set the MACT floor is representative, "it never adequately explained *why* it believed this") (emphasis in original); *see also Business Roundtable v. SEC*, 647 F.3d 1144, 1153 (D.C. Cir. 2011) (agency's reasoning "is internally inconsistent and therefore arbitrary").

C. EPA Ignored "Considerable Reasons" Indicating that the Limited Data Were Not Representative of the Units' Performance Over Time

No statistical analysis, including EPA's UPL analysis, can predict a facility's continuous emissions performance based on a single hours-long emissions test unless that test is representative of its continuous performance. Statistical analysis is not alchemy; the validity of any prediction based on statistical analysis depends on having sufficient data available or a basis for believing that a sample is representative of a larger population.

Intervenor-Petitioners' brief will address the specific reasons why the UPL analysis of the extremely limited available test results is not appropriate to predict the variability in the emissions performance of the units at issue. For purposes of this

Petitioners' brief, it suffices to show that the test results on which EPA relied were not representative, that EPA knew the data were not representative, and that EPA nonetheless used those limited results to set the new-source standards. *See Motor Vehicle Mfrs. Ass'n*, 463 U.S. at 43 (agency must "examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choices made'"). Thus, apart from the fact that, as shown above, the test results that EPA discarded conclusively show that the data were not representative of the units' performance over time, EPA had additional "considerable reason" to conclude that the standards it set were not representative of the longer-term emissions performance of the units used to set the standards, yet the Agency ignored those reasons. *See Cement Kiln*, 255 F.3d at 866.

First, as stated above, EPA decided to use the lowest test results for Chambers fPM emissions, even though two out of three of the runs making up this test yielded values below the detection limits of the measurement method, and the Agency decided to use the lowest test results for Logan's HCl emissions, even though all three of the runs making up this test yielded values below the detection limits of the measurement method. The fact that the test data were below detection limits should have been a red flag to the Agency that the test data it was using was unreliable and that it must use the additional data it had available. This bright flag should have been even more apparent after EPA's "UPL adjustments" for fPM and HCl still yielded numbers that were below detection limits. And even EPA's method of addressing the

detection limit issue—simply multiplying what EPA determined to be a "representative detection limit" by an arbitrary factor of three—still yielded values lower than those reported in the other five tests.

Second, EPA admitted that the stack test results it used were not "normally distributed," meaning not in and of themselves reflective of what longer term testing would produce. RTC 4A02, 41, 42, JA__ and __. Moreover, EPA acknowledged that the validity of its analysis depended both on having a sufficiently large number of test results (in EPA's words, a "medium to large sample size") and data collected from the same source at different times (explaining that "data from the same source" collected at "different time points will be independent because there shouldn't be correlation between data collected days or months apart"). *Id.* Thus, EPA had good reason to expand the data it used to include all available empirical information as to the units' emissions instead of relying on a single test consisting of three runs collected over a short period of time.

Third, EPA's Part III stack testing request required EGUs to conduct the testing during periods when the unit was operating at peak capacity and with their operating parameters held as constant as possible, RTC 4A05, 1-15, JA__, resulting in the unit operating as efficiently and with the lowest emissions as possible. Thus, EPA had reason to believe the stack tests would reflect better-than-average results that failed to capture emissions during all operating conditions.

Fourth, because the Part III tests were conducted over several consecutive days, only a single type of coal was likely to have been used as fuel. EPA-HQ-OAR-2009-0234-18035 at 92, JA__ . Most coal-fired EGUs in the United States, however, use multiple sources of coal, and the emissions from a coal-fired EGU will vary with the different coal used. *Id.* The failure of the stack tests to account for all coal burned in a unit does not necessarily bias the test results towards lower-than-average emissions, but it does mean that EPA lacks a basis to say that the test results reflect the true operational variability of the unit.

Fifth, confirming the previous errors, commenters provided data to demonstrate to EPA that the single sets of test results that EPA relied on were not representative of the applicable units' emissions performance over longer periods of operation (for example, 30-day rolling averages). Utilities provided PM emissions data collected from the CEMS on six different units to one of commenter's experts, a professional engineer with more than 40 years of experience in evaluating pollution control systems.[25] *See* EPA-HQ-OAR-2009-0234-18035, attached Roberson

[25] There is no question as to the reliability of CEMS data, as EPA requires utilities to operate CEMS to monitor their emissions as a part of other CAA requirements, *See,* Continuous Emission Monitoring-Information, Evidence, etc. *available at* http://www.epa.gov/ttn/emc/cem.html, and use of CEMs for that purpose is one of the compliance options in the MATS rule, 77 Fed. Reg. at 9,371-72. EPA stated in the instant docket that it "has recently evaluated the association between CEMS and stack data for several sources and industries. Results led to the conclusion that both sets of data would have led to similar results for the MACT floor." RTC 4A02, 65, JA__.

Memorandum, JA __. The expert plotted a series of rolling 30-day averages for each unit's PM emissions and compared these averages with the ICR Part III data (the average of the 3-run tests) for those units. The results are displayed in the six graphs attached as Appendix B to the Roberson Memo, JA__-__. The x axis of each graph is the PM emissions rate calculated as a rolling 30-day average from the CEMS data and the y axis is the cumulative distribution of these rolling 30-day averages. Thus, in Figure B-1, the unit's 30-day rolling average was 0.005 lbs/MMBtu for about 80% of the rolling 30-day average periods calculated.

The graphs also show where on the graph of rolling 30-day averages that unit's PM emissions fell as measured by the average of the three test runs reported as a part of ICR Part III. These results provide compelling evidence that the ICR Part III data are not representative of these units' actual performance over rolling 30-day average periods. For instance, Figure B-1 shows that the referenced unit's emissions over 30-day average periods were almost always higher than was measured in the ICR test data. Conversely, Figure B-2 shows that another unit frequently operates over 30-day average periods at the emissions rate reflected in the ICR data. Interestingly, these two units, as reported by the expert, are "sister" units at the same electric generating station, use identical coal, and have the same PM emissions control equipment, further calling into question the accuracy of the measurement equipment at these extremely low emissions rates. JA __. The other figures similarly show that there is no reason to believe that the ICR single-test data are representative of 30-day rolling

average performance (e.g., the unit in Figure 3 almost never replicates the emissions performance in the ICR data over 30-day periods, whereas the unit in Figure B-4 almost always does).

These data illustrate EPA's more systematic error in adopting standards that will be enforceable with continuous monitors based on data sampled from discrete test runs. This Court has long made clear that "a significant difference between techniques used by the agency in arriving at standards, and requirements presently prescribed for determining compliance with standards, raises serious questions about the validity of the standard." *Portland Cement v. Ruckelshaus*, 486 F.2d 375, 396 (D.C. Cir. 1973), *cert. denied* 417 U.S. 921 (1974).

Sixth, EPA seems to believe that by requiring compliance with the new-source standards on a continuous rolling 30-day average basis, at least as one compliance option for the fPM and HCl standards, EPA provided an extra margin for units to achieve the standards. This argument is raised only indirectly in the final regulatory preamble, where EPA, in the context of explaining why it allowed separate units within a single electric generating station to average their emissions for the purpose of determining compliance, states that it prepared a memorandum "illustrat[ing] why a longer-term average results in a lower limit." 77 Fed. Reg. at 9,385. This point was picked up in EPA's response to comments, where EPA says the UPL analysis was EPA's main method for accounting for unit variability, but the 30-day rolling average

provides "an additional allowance for variability" for units using CEMS to monitor compliance. RTC 4A01, 99 and RTC 4A02, 32-34, JA__ and JA__.

But, Garrison Keillor notwithstanding, just as all children in Lake Wobegon cannot truly be above average, a unit's average performance is not the same as a unit's best performance. That is particularly true here, where the fPM and HCl standards were set using only Chambers' and Logan's, respectively, best emissions test and the data show that these units failed to meet those standards five out of six times.

* * *

For all of these reasons, EPA's new-unit standards are arbitrary and capricious and must be reversed.

II. EPA's Pollutant-by-Pollutant Approach Violates Section 112(d)'s Command that the MACT Floor Be Based On the Level of Control Achieved By the Single Best Controlled Similar Source

EPA violated CAA § 112(d)(3) by setting new source standards on a "pollutant-by-pollutant" basis rather than on the basis of what the "best controlled similar source" actually achieved for the suite of HAPs emitted. EPA set the MACT floor based on the source it deemed to be "best" for each individual pollutant—the Chambers unit for fPM and the Logan unit for mercury and HCl. As a result, the MACT floor for new EGUs consists of an amalgamation of limits that are not based on the performance of any single unit. It is as if EPA determined the "best" baseball player by determining the player with the highest batting average, the highest fielding percentage and the lowest earned run average—no such player exists in reality. This

act of cherry-picking contravenes Congress's clear intent as ascertained using traditional tools of statutory construction; and even if the applicable statutory language is ambiguous as EPA claims, EPA's interpretation is unreasonable. *Chevron U.S.A. Inc.,* 467 U.S. at 842-43.

A. EPA's Approach Violates the Plain Language of Section 112

EPA justifies its pollutant-by-pollutant approach by claiming that the relevant statutory terms are ambiguous and that EPA's approach is reasonable and therefore permissible under *Chevron* step two. *See* 77 Fed. Reg. at 9,387; RTC 4A01, 1-25, JA__. EPA's *Chevron* analysis is simply incorrect. The statutory text is plain and unambiguous, and so EPA's pollutant-by-pollutant approach cannot survive under *Chevron* step one.

Under *Chevron* step one, this Court must determine whether Congress has directly spoken to the issue in question: "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress." *Chevron*, 467 U.S. at 842-43. "In this initial inquiry into congressional intent, the court is 'not required to grant any particular deference to the agency's parsing of statutory language or its interpretation of legislative history.'" *Transbrasil S.A. Linhas Aereas v. Dep't of Transp.*, 791 F.2d 202, 205 (D.C. Cir. 1986) (quoting *Rettig v. Pension Benefit Guar. Corp.*, 744 F.2d 133, 141 (D.C. Cir. 1984)).

1. EPA's Pollutant-by-Pollutant Approach Cannot Be Squared with the Plain Text

Contrary to EPA's claim of ambiguity, the plain language of CAA § 112(d)(3) directs EPA to set the MACT floor for new sources based on the actual emissions of the single "best controlled similar source." The plain language is clear and the statutory direction is specific to the use of a singular source. Nothing in this provision leaves room for EPA to establish MACT floors for new EGUs based on the emissions of multiple "*sources*." *See, e.g.*, *United States v. Hayes*, 555 U.S. 415, 421-22 (2009) (explaining that Congress's use of "the word 'element' in the singular … suggests that Congress intended to describe only one required element," and that Congress "would have used the plural 'elements,' as it has done in other … provisions" if it did not intend the singular form); *Blackman v. District of Columbia*, 633 F.3d 1088, 1091 (D.C. Cir. 2011) (rejecting construction of the words "an attorney" and "party" to include "attorneys" and "parties" as contrary to "the plain and unambiguous language of the statute"); *Nat. Res. Defense Council v. EPA*, 915 F.2d 1314, 1320 (9th Cir. 1990) (holding at *Chevron* step one that "[b]y using the plural 'lists,' Congress foreclosed EPA from restricting the scope" of the section in question to a single "list," explaining that "Congress ha[d] spoken directly" to the question "in unambiguous terms"); *cf. Friends of the Earth v. EPA*, 446 F.3d 140, 144 (D.C. Cir. 2006) (holding that "daily" in the phrase "total maximum daily load" unambiguously means "daily," not "seasonal," "annual" or some other period).

Nor does the CAA permit EPA to set the MACT floor based on the level of control "achieved in practice *for each pollutant*." CAA § 112(d)(3) (emphasis added.) Congress well knows how to require EPA to set emission standards on a pollutant-by-pollutant basis when it so intends, as it has done in neighboring sections of the CAA. *See* 42 U.S.C. § 7409(a)(1)(A) (requiring EPA to set standards "for each air pollutant"). When Congress uses different words in related statutory provisions, agencies and courts must give effect to the different meanings expressed. *See, e.g.*, *Burlington N. & Santa Fe Ry. Co v. White*, 548 U.S. 53, 62 (2006) ("We normally presume that, where words differ [in a statute], Congress acts intentionally and purposely in the disparate inclusion or exclusion."). EPA's attempt to re-write CAA § 112(d)(3) to achieve its desired approach should be rejected. *See Landstar Exp. Am., Inc. v. Fed. Maritime Comm'n*, 569 F.3d 493, 498 (D.C. Cir. 2009) (an agency may not "rewrite a statute's plain text" to achieve its desired outcome); *Chevron*, 467 U.S. at 843.

2. EPA's Approach Is Inconsistent with the Structure and Purpose of Section 112

EPA's pollutant-by-pollutant approach is plainly inconsistent with the text and purpose of CAA § 112(d). *See United States Nat'l Bank v. Indep. Ins. Agents of Am.*, 508 U.S. 439, 455 (1993) ("in expounding a statute, we must not be guided by a single sentence or member of a sentence, but look to the provisions of the whole law, and to its object and policy"). The entire premise of CAA § 112(d) is to establish a minimum level of reduction that all new sources can and must meet. Thus, CAA § 112(d)(2)

requires that the Administrator establish standards based on "the maximum degree of emission reduction" that she "determines to be achievable." CAA § 112(d)(2) and (3) set forth a two-step process to accomplish that result.

In step one of the analysis directed by CAA § 112(d)(3), in determining "[t]he maximum degree of reduction in emissions that is deemed achievable for new sources," EPA must set MACT floors based on the level of emissions control "achieved in practice by the best controlled similar source." Setting the floor in this manner makes sense because a standard for new sources that has been achieved by an existing source can be achieved by a new source. *See Sierra Club v. EPA*, 353 F.3d 976, 980 (D.C. Cir. 2004) (in setting the MACT floor, EPA must "set limits that, as an initial matter, require all sources in a category to at least clean up their emissions to the level that their best performing peers have shown can be achieved"). In step two of the analysis directed by CAA § 112(d)(2), EPA may make those standards more stringent so long as they are still "achievable" by new sources. *See Sierra Club*, 167 F.3d at 660 ("The statute of course authorizes EPA to establish still stricter standards [than the MACT floor] if it finds them 'achievable'"). This step also makes sense because technological advances may justify more stringent standards than an existing source has achieved.

This two-step process works, however, only if EPA cannot, as it has done here, set MACT floors that are unachievable by new units. If EPA sets MACT floors that are unachievable by new sources, EPA cannot make those standards achievable by

new sources in step two. Step two only allows EPA to make standards more, not less, stringent. *Nat'l Lime Ass'n*, 233 F.3d at 629 ("Once the Agency sets statutory floors, it then determines…whether stricter standards are 'achievable'"). Hence, because the ultimate MACT standards must be achievable by new sources, CAA § 112(d)(3) cannot be read as authorizing EPA to set MACT *floors* that are themselves unachievable.

While acknowledging that it cannot set MACT floors that are unachievable, EPA concedes, as it must, that its pollutant-by-pollutant approach could lead to MACT floors that are "not technologically possible" for new sources to meet.[26] 77 Fed. Reg. at 9,388; RTC Vol. I at 433, JA__. Yet that is exactly the result that EPA's pollutant-by-pollutant approach has led to for EGUs and could lead to for other source categories. In Petitioners' *Chevron* step two discussion below, Petitioners show why, on the facts here, EPA's pollutant-by-pollutant approach led it to establish unachievable MACT floors in this case, but Petitioners' *Chevron* step one analysis here does not depend on the fact that EPA's EGU MACT floors are unachievable. CAA § 112(d) applies to many more source categories than EGUs, and there must be one consistent interpretation of CAA § 112(d) that makes sense given the varying circumstances that may exist for the many different source categories for which EPA

[26] As Intervenor-P will explain, there is a reason that a source that is best performing for one standard may not be the best performing for another standard. The pollution control equipment that is selected to significantly reduce emissions of one pollutant may prevent the unit from maximizing reductions of emissions of another pollutant.

sets MACT standards. The only consistent interpretation of CAA § 112(d) is that the MACT floor must be established based on the performance of the single best controlled existing source. If an existing source is achieving that floor, the standard is necessarily achievable for new sources. If EPA then determines that new sources can achieve a more stringent standard than the floor, the Agency can set a more stringent standard under CAA § 112(d)(2). But under EPA's pollutant-by-pollutant approach, the Agency would be free—or even compelled, depending on the emissions reductions that have been achieved in practice for different pollutants in a source category—to set a MACT floor that has not been achieved by any single source and is unachievable by a new source. Such a result is contrary to the clear intent of CAA § 112(d).

B. EPA's "Pollutant-by-Pollutant" Approach is Unreasonable

Even if Section 112 were ambiguous, the Court should still reject EPA's approach as unreasonable "in light of the Act's text, legislative history, and purpose." *S. Cal. Edison Co.* v. *FERC*, 116 F.3d 507, 511 (D.C. Cir. 1997); *see also Chevron*, 467 U.S. at 843.

1. There Is No Basis for EPA's Conclusion That Any Source "Is Meeting" All of the New Source Standards

While asserting that the CAA does not "require[] the EPA to articulate how a future plant can comply with all of the proposed standards," and maintaining that identifying an actual unit that meets all new source standards is not "a statutory

requirement," RTC 4A01, 1-25, 67-81, JA__, EPA attempts to validate its pollutant-by-pollutant approach by nakedly asserting that it has "identified at least one source that is meeting all of the new source MACT limits in the final rule." 77 Fed. Reg. at 9,391; RTC 4A01, 1-25, JA__. The record is conspicuously silent, however, as to why EPA believes this to be so. The unit EPA is referring to is the Logan unit (which EPA only identified in response to comments), but neither in its response to comments nor anywhere else in the record does EPA provide an explanation as to the basis for its stated conclusion. *See Southern Co. Services, Inc. v. FERC*, 416 F.3d 39, 47 (D.C. Cir. 2005) (agency must "articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made,' " quoting *Motor Vehicle Mfrs. Ass'n of the United States, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)).

In fact, the record provides no basis for EPA to conclude that Logan "is meeting all of the new source MACT limits in the final rule." For the reasons set forth above, EPA cannot even show that Logan is meeting "in practice" the new source limits for HCl and mercury that were set based on Logan's performance. As discussed above, Logan failed to meet the HCl standard in five out of six tests, and the single Logan test result that EPA used to set the mercury standard is not representative of Logan's continuous performance.

As to the third standard, fPM, although EPA doesn't say so, EPA may be relying on the one Logan fPM test result shown in the MACT floor spreadsheets.[27] Although this one test result is below the fPM standard EPA set based on Chambers' emissions, EPA has no better reason to rely on a single isolated test result to determine that Logan can meet the fPM standard on a continuous compliance basis than it does to rely on a single isolated Logan mercury test result to set the mercury standard. As EPA has previously recognized in similar rulemaking efforts, "a distinction must be made between an emission level that has been 'observed' and an emission limitation that can be continuously 'achieved.'" Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Hospital/Medical/ Infectious Waste Incinerators, 72 Fed. Reg. 5,510, 5,524 (Feb. 6, 2007). There, EPA explained that it would be "unreasonable for EPA to base the MACT floors solely on the lowest levels of emissions observed without an assessment of whether those observed levels could be met on a continuous basis." *Id.* at 5,522. The same is true here: A single stack test yielding one "observed" value, standing alone, does not—and cannot—demonstrate that Logan "is meeting" the fPM limits in the final rule on a continuous basis.

[27] *See* "MACT Floor analysis-Coal HAP metals," spreadsheet tab for fPM_Avg_MW, column H, JA__.

2. The "Whole-Plant" Approach Would Not "Gut the Standards"

In support of its preferred construction, EPA claims that the "whole plant approach likely yields least common denominator floors—that is, floors reflecting limited or no control," 77 Fed. Reg. at 9,387, and that this interpretation is inconsistent with the purpose of CAA § 112 because Congress intended to impose "strict technology-based emission controls," RTC 4A01, 1-25, JA__. Apart from EPA's failure to cite any record support for the conclusion that the controls would be mediocre or nonexistent here, EPA's justification ignores the fact that Congress expressly authorized EPA in CAA § 112(d)(2) to set limits that are *more stringent* than what the "best controlled similar source" actually achieved. Given this express grant of authority by Congress, there is no reason that setting initial minimum levels of reduction based on the levels of control actually achieved by a real source would "gut the standards" as EPA suggests, because EPA can adjust the final standards up to the level that EPA believes is achievable for new sources, subject to the criteria of CAA § 112(d)(2). Finally, to the extent there are real differences between sources that result in divergent emissions profiles, EPA has ample authority to create subcategories within a category as necessary to address differing mixtures of HAPs. *See, e.g.*, CAA § 112(d)(1).

3. Neither EPA's "Longstanding Approach" Nor *Chemical Manufacturers Association v. EPA* Supports EPA's Interpretation

EPA offers two other justifications for its pollutant-by-pollutant approach, neither of which is persuasive. First, EPA's claim of a "long-standing interpretation" of the CAA "that the existing and new source MACT floors are to be established on a HAP-by-HAP basis," RTC 4A01, 1-25, JA__, sheds no light on whether that interpretation is reasonable. While EPA may have applied this approach before, it has never been endorsed by a court.[28]

Second, EPA relies on the Fifth Circuit's decision in *Chemical Manufacturer's Association v. EPA*, 885 F.2d 253 (5th Cir. 1989), as "upholding technology-based standards based on best performance for each pollutant by different plants, where at least one plant met each of the limitations but no single plant met all of them." 77 Fed. Reg. at 9,388; RTC 4A01, 1-25, JA__. But that case, which interpreted the Clean Water Act's requirement that dischargers utilize the "best available technology" to reduce discharges of certain pollutants, offers no support for EPA's approach to setting MACT floors under CAA § 112(d)(3) of the CAA. *See Chem. Mfrs. Ass'n*, 885 F.2d at 261 (addressing "best available technology" or "BAT" limits on petitions for rehearing); *Chem. Mfrs. Ass'n v. EPA*, 870 F.2d 177, 243 (5th Cir. 1989) (panel decision).

[28] Two court decisions failed to reach the issue based on waiver. *See, e.g.*, *Portland Cement Ass'n v. EPA*, 665 F.3d 177, 189 (D.C. Cir. 2011); *Med. Waste Inst. & Energy Recovery Council v. EPA*, 645 F.3d 420, 426-27 (D.C. Cir. 2011).

The "best available technology" provision of the Clean Water Act at issue in *Chemical Manufacturer's Association* differs from CAA § 112(d)(3) in that it provides for a one-step process for setting limits. The Clean Water Act requires EPA to set effluent limits based on its determination that they are "*achievable*." *See* 33 U.S.C. § 1311(b)(2)(A) (requiring EPA to set effluent limitations "which shall require application of the best available technology economically *achievable* for such category or class" of discharges (emphasis added)); *see also Chem. Mfrs. Ass'n*, 870 F.2d at 243. In contrast, as explained above, CAA § 112(d)(3) provides for a two-step process. EPA first sets a MACT floor based on what existing sources have "achieved in practice" and then EPA can set more stringent standards based on what is "achievable." Thus, in the end, a final MACT standard under CAA § 112(d)(2) can be (as under Clean Water Act Section 301) more stringent than any existing source has achieved, so long as a new source can meet the standard (that is, it is "achievable"). That being so, *Chemical Manufacturer's Association* provides no support for interpreting CAA § 112(d)(3) to authorize EPA's pollutant-by-pollutant approach.

III. Vacatur of the New-Source Standards Is the Appropriate Remedy

This Court determines whether the remedy of vacatur is appropriate by balancing two factors: "whether (1) the agency's decision is so deficient as to raise serious doubts whether the agency can adequately justify its decision at all; and (2) vacatur would be seriously disruptive or costly." *See N. Air Cargo v. United States Postal Serv.*, 674 F.3d 852, 861 (D.C. Cir. 2012) (citing *Allied-Signal, Inc. v. U.S. Nuclear*

Regulatory Comm'n, 998 F.2d 146, 150-51 (D.C. Cir. 1993)). This two-part test strongly favors granting vacatur here.

For the reasons discussed above, EPA's new-source standards are so deficient that they cannot be fixed. The data show that the standards EPA set are not reflective of the emissions performance that the applicable units achieved "in practice," a fact EPA has apparently recognized in its decision to reconsider the standards. Thus, the standards must be changed. *See Comcast Corp. v. FCC*, 579 F.3d 1, 8 (D.C. Cir. 2009) ("In the past we have not hesitated to vacate a rule when the agency has not responded to empirical data or to an argument inconsistent with its conclusion. *Ill. Pub. Telecomm. Ass'n v. FCC (Ill. Pub. I*), 117 F.3d 555, 564 (D.C. Cir. 1997); *see also Ill. Pub. Telecomms. Ass'n v. FCC* (*Ill. Pub. II*), 123 F.3d 693, 693-94 (D.C. Cir. 1997)."). Moreover, the new-source standards are based on EPA's flawed pollutant-by-pollutant methodology, providing further reason why the standards must be revised.

In contrast, the "threat of disruptive consequences" is minimal, if not non-existent. In the first place, the threat of disruptive consequences cannot save a rule where, as here, its fundamental flaws "foreclose EPA from promulgating the same standards on remand." *Natural Res. Def. Council v. EPA,* 489 F.3d 1250, 1261-62 (D.C. Cir. 2007). Moreover, as set forth in Plaintiffs' declarations supporting their standing attached in the Addendum, Petitioners have all received air quality permits that either set forth stringent "case-by-case MACT" emission limitations representing the permitting agency's view of the maximum achievable control technologies for the

applicable HAPs, or these permits have defined Petitioners' facilities as non-major sources of HAPs given the emissions controls Petitioners intend to install.[29] Thus, there is no risk that the facilities will be built with less than the best control systems or any public health concern presented by vacating these standards.

On the other hand, *not* vacating the standards creates the threat of disruptive consequences for the reasons set forth in Petitioners' motion to sever and expedite. Under EPA's proposed rule regulating greenhouse gas ("GHG") emissions from new EGUs, including Petitioners' projects, Petitioners must commence construction by April 12, 2013 or their projects will become subject to GHG emission-reduction requirements that EPA conceded Petitioners cannot meet. *See* Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392, 22,422 (Apr. 13, 2012). The regulatory dilemma that EPA has created for Petitioners—being subject to unlawful and unachievable MACT standards while the clocks ticks away to commence construction by April 12, 2013—remains unless the new source standards are vacated. *See* Joint Motion by Developers of Solid-Fueled Electric Generating Units to Sever and

[29] *See* Alford Decl. ¶ 14, Rotondi Decl., ¶ 12, 15, Penrod Decl., ¶ 8, all in the attached Addendum of declarations supporting standing. Under CAA § 112(g)(2)(B), where EPA has listed a source category under CAA § 112(c) but not yet established MACT standards, state agencies permitting new projects within that category must include in the permit "case-by-case" MACT limits if the project is a major source of HAP emissions.

Expedite Consideration of Issues Germane to Hazardous Air Pollutants Standards Applicable to New Units, Doc. No. 1371309, at 5-10.

CONCLUSION

For at least the foregoing reasons, the MATS rule new-source standards should be vacated and the matter remanded.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

In accordance with Circuit Rule 32(a) and Rule 32(a)(7) of the Federal Rules of Appellate Procedure, the undersigned certifies that the accompanying brief has been prepared using 14-point Garamond Roman typeface, and is double-spaced (except for headings and footnotes).

The undersigned further certifies that the brief is proportionally spaced and contains 12,095 words exclusive of the certificate required by Circuit Rule 28(a)(1), table of contents, table of authorities, glossary, signature lines, and certificates of service and compliance. The undersigned used Microsoft Word 2003 to compute the count.

/s/Peter S. Glaser
Peter S. Glaser

CERTIFICATE OF SERVICE

I hereby certify that on this 27th day of July, 2012, I electronically filed the foregoing Petitioners' Brief with the Clerk of the Court using the CM/ECF System, which will send notice of such filing to all registered CM/ECF users.

DATED: July 27, 2012

/s/Peter S. Glaser
Peter S. Glaser

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT A

Declaration of Wayne E. Penrod on behalf of Sunflower Electric Power Corporation

Declaration of Wayne E. Penrod
Executive Manager, Environmental Policy,
SUNFLOWER ELECTRIC POWER CORPORATION
IN SUPPORT OF MOTION FOR EXPEDITED REVIEW

1. My name is Wayne Penrod and I am the Executive Manager, Environmental Policy, for Sunflower Electric Power Corporation (Sunflower) and serve in a similar capacity for Mid-Kansas Electric Company, LLC (Mid-Kansas), both of which are located in western Kansas. Sunflower and Mid-Kansas are not-for profit electric generation and transmission cooperative corporations owned and operated by the rural electric distribution cooperatives to which they supply electricity. These distribution cooperatives, in turn, are owned by their members who are electric consumers—families, farms, and other businesses. These electric consumers select their distribution cooperative board members through democratic elections, and those board members in turn appoint the board members of Sunflower and Mid-Kansas.

2. Sunflower is owned by members Lane-Scott Electric Cooperative, Inc., Dighton, KS; Prairie Land Electric Cooperative, Inc., Norton, KS; Pioneer Electric Cooperative, Inc., Ulysses, KS; The Victory Electric Cooperative Association, Inc., Dodge City, KS; Western Cooperative Electric Association, Inc., WaKeeney, KS; and Wheatland Electric Cooperative, Inc., Scott City, KS.

3. Mid-Kansas Electric Company, LLC, is made up of five rural electric cooperatives and one wholly-owned subsidiary: Lane-Scott Electric Cooperative, Inc., Dighton, KS; Prairie Land Electric Cooperative, Inc., Norton, KS; Southern Pioneer Electric Company, Ulysses, KS (a wholly-owned subsidiary of Pioneer Electric Cooperative, Inc.); The Victory Electric Cooperative Association, Inc., Dodge City, KS; Western Cooperative Electric Association, Inc., WaKeeney, KS; and Wheatland Electric Cooperative, Inc., Scott City, KS.

4. Together, the electrical power provided by Sunflower and Mid-Kansas to these distribution cooperatives and more than 25 municipalities within their service areas meets the electricity requirements of more than 400,000 people in central and

western Kansas. The people served at retail by the distribution cooperatives include more than 64,000 people (16%) above the age of 65 and more than 48,000 people (12%) whose annual household income is below the federal poverty level. Thus, approximately a fourth of the all the people served face economic challenges. Because Sunflower, Mid-Kansas, and their distribution cooperative members operate on a not-for-profit basis, the cost of compliance with the MATS rule flows directly through to our customers.

5. The generation assets owned by Sunflower and Mid-Kansas are diverse and include coal, natural gas, and wind. Holcomb 1, the single coal unit operated by Sunflower, commenced commercial operation in 1983 and has extensive pollution control devices in place including low-NO_X burners, an over-fire air system, a spray dry atomizing (dry) SO_2 scrubber, and a fabric filter for particulate matter control. These control systems serve to substantially limit SO_2, NO_X, particulate emissions, acid gases, and non-mercury trace metals. Holcomb 1 is not a major source of HAPs; however, as a result of the Environmental Protection Agency's (EPA's) Mercury and Air Toxics (MATS) rule, Holcomb 1 will be installing a powdered activated carbon injection system or other emission control technology to limit the emission of mercury.

6. Sunflower initiated an extensive mercury control test program at Holcomb 1 in 2004. This test program, managed by ADA-ES, was jointly funded by the U.S. Department of Energy (DOE), the Electric Power Research Institute (EPRI), and many other utilities in Kansas and in the surrounding region. In addition to demonstrating that Holcomb 1 could be made to control mercury emissions by approximately 90% by the addition of halogenated-PAC, the test program demonstrated that Holcomb 1 was very well controlled for acid gases and trace metals such as are regulated by the MATS rule. Sunflower thus has a great deal of knowledge about controlling mercury and other hazardous air pollutants that are regulated by the MATS rule.

7. An additional coal-fueled electric generating unit is currently under development at the Holcomb site. Sunflower originally submitted a Prevention of

Significant Deterioration (PSD) preconstruction air quality permit application to build the Holcomb Expansion Project (HEP) in February 2006. Sunflower submitted a revised PSD permit application for Holcomb 2 on January 16, 2010. Following public comment and response to comments, the PSD permit for Holcomb 2 was issued by the Kansas Department of Health and the Environment (KDHE) on December 16, 2010. This permit action is now on appeal before the Kansas Supreme Court.

8. Holcomb 2 was evaluated to determine whether it was a major source of HAPs early in the permit application process. Additional testing was performed in years subsequent to the test program identified in paragraph 6 above. All subsequent test information confirms that Holcomb 2 will not be a major source of HAPs and KDHE concurred in this conclusion. Accordingly there is no case-by-case maximum achievable control technology (MACT) analysis performed as would otherwise be required under § 112(g)(2); therefore, no such analysis was performed. Nonetheless, Sunflower recommended and KDHE placed emission limitations into the construction permit, including coal sampling requirements and initial stack testing and reporting requirements to confirm the non-major source status determination within 180 days of initial operation. Further, an ongoing non-major status verification is also required based upon emission estimates determined by ongoing fuel and stack sampling and analysis.

9. KDHE issued a stay tolling the expiration date of the PSD permit on July 20, 2011. Under the terms of the stay, the stay will be lifted following a decision by the Kansas Supreme Court and thereafter construction of Holcomb 2 must commence within 12 months. A successful conclusion of the Supreme Court appeal is projected for early 2013.

10. Tri-State Generation and Transmission Association, Inc. (Tri-State) is the construction manager for Holcomb 2 and also will receive a substantial share of the energy generated from it. Like Sunflower, Tri-State is a member-owned generation and transmission cooperative and serves members located primarily in Colorado,

Nebraska, Wyoming, and New Mexico. Tri-State has commissioned the engineering firm of Black and Veatch to complete the front end engineering and design for Holcomb 2. Black and Veatch solicited and received air quality control system (AQCS) proposals for the project in 2011 and 2012 and is now examining the proposals received.

11. EPA's publication of its proposed New Source Performance Standards for Greenhouse Gas emissions from coal-fueled electric generation (GHG NSPS) on April 13, 2012, would effectively place a moratorium on the construction of new coal-fueled generation, such as Holcomb 2, unless that construction is commenced by April 12, 2013. Further, unless EPA alters this action, or unless the rule is overturned in Court, this standard effectively forecloses Holcomb 2 from proceeding in its current form and for the foreseeable future by requiring a CO_2 control technology that EPA acknowledges is not yet commercially available. There are moreover significant regulatory and liability issues surrounding the transportation of captured CO_2 to potential underground storage sites and the long-term sequestration of the captured CO_2 at those potential sites. For this and other reasons, there are no commercial CO_2 pipelines or storage facilities at the present time that could be used even if it were commercially feasible to capture CO_2 from Holcomb 2.

12. EPA did propose in the GHG NSPS proposal a "transition" unit category to which the 1000 lb-CO_2/MWh performance standard would not apply if the unit holds a PSD air quality permit and commences construction by April 12, 2013. EPA identified Holcomb 2 as a potential transition unit, and thus the owners must undertake construction by April 12, 2013 or they will be unable to do so in its currently permitted configuration.

13. EPA further proposed an interim standard of 1800 lb-CO_2/MWh which can be applied for the first ten years of operation, to be followed by a 600 lb-CO_2/MWh standard to be applied thereafter. This proposal does not help Holcomb 2. Clearly a developer cannot finance a coal-fueled facility that, in the future, will be required to install CO_2 control technology when it is not known whether and when such technology

will become commercially feasible and at what cost and when there are no certain means to transport and store the CO_2.

14. Although KDHE has issued a permit for the construction of the Holcomb 2, the owners will not be able to secure financing to undertake construction because, as the AQCS vendors have determined, the MATS rule mercury limitation is unachievable. The technical consultant on pollution control technology, Ralph E. Roberson, is also filing a declaration in support of the motion for expedited consideration. The Babcock & Wilcox Company and the Institute of Clean Air Companies (which association includes the potential AQCS vendors for Holcomb 2) have filed petitions for reconsideration with EPA, and they have identified that the MATS rule mercury limitation is unachievable: See attachments 1 and 2.

15. Holcomb 2 thus faces a regulatory dilemma at the hands of EPA. On the one hand, the unit must begin construction within one year or face a commercially infeasible CO_2 control requirement. On the other hand, the unit cannot be financed or built because of AQCS vendor positions relating to the MATS rule. Moreover, even without the CO_2 control requirement, construction of the unit within a year could not commence, again because of the uncertainty arising from MATS rule.

16. As evidenced by their reconsideration petition, the inability of vendors to proffer acceptable commercial performance guarantees to meet MATS limitation requirements has caused the owners to stand-down on further refinement of the air quality control system development that is required for Holcomb 2. Very limited further efforts are being undertaken in the face of this vendor uncertainty.

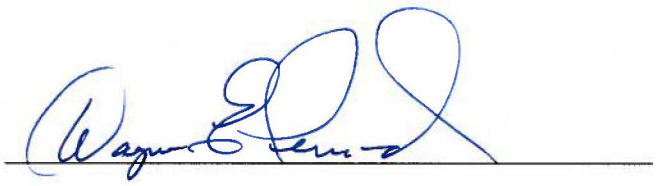
17. Expeditious resolution of the MATS rule appeal is also necessary to ensure that Holcomb 2 does not lose its customers. Holcomb 2 expects to provide energy through power purchase arrangements with other Kansas cooperatives. Further, several Kansas municipal utilities are expected to also purchase electricity from Holcomb 2. If Holcomb 2 cannot come on line as scheduled, these entities must

pursue other less favorable power purchase arrangements to meet the existing and future capacity and energy requirements of their customers.

18. Notwithstanding the losses of other owners, Sunflower has expended approximately $23 million and seven years of work in the development of Holcomb 2, all of which can be lost because of EPA's MATS rule. Further, the lost economic opportunities associated with not constructing what had been determined to be the most cost effective energy resource in response to the impending shortfall for our consumer-owners in Kansas remains; a loss for which there is no opportunity for them to recover.

I, Wayne E. Penrod, declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: July 25, 2012



Wayne E. Penrod,
Executive Manager, Environmental Policy
Sunflower Electric Power Corporation
P O Box 1020
Hays, KS 67601

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT A

Attachment 1 to Declaration of Wayne E. Penrod
Babcock & Wilcox Power Generation Group, Inc., Request for Partial Consideration

babcock & wilcox power generation group
• 20 south van buren avenue • p.o. box 351 • barberton, oh 44203-0351 usa
• phone 330.860.2612 • fax 330.860.1057 • www.babcock.com

J. Randall Data
President & Chief Operating Officer

April 16, 2012

Administrator Lisa P. Jackson
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(jackson.lisa@epa.gov)

Assistant Administrator Gina McCarthy
U.S. Environmental Protection Agency
Office of Air and Radiation
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(mccarthy.gina@epa.gov)

RE: Request for Partial Reconsideration of EPA's *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units,* 77 Fed. Reg. 9,304 (February 16, 2012) (Docket No. EPA-HQ-OAR-2009-0234) (Mercury and Air Toxics Standards Rule ("MATS Rule" or "Rule"))

Dear Administrator Jackson and Assistant Administrator McCarthy:

As a leading supplier of HAPs emissions control equipment as well as emissions monitoring systems for the US electric utility industry, Babcock & Wilcox Power Generation Group, Inc. (B&W) asserts that the particulate matter (PM), HCl and mercury emission limits established for new units are not measurable with sufficient accuracy for reliable control of the emissions reduction systems and sustainable long term emissions compliance. The extractive sampling techniques used in the ICR to establish the emission limits are not amenable to use for real-time process control. The ability to continuously and accurately measure emissions at levels below the regulatory limit is necessary to provide electric utility generators with an operating margin to assure compliance. To maintain a 30-day rolling average emissions level, the operating set points for control of the emissions reduction systems must typically be 20 to 30% below the limit, which further challenges the application of proven continuous emissions monitoring systems (CEMS). The current state of the art CEMS technologies available and referenced in the MATS rule are not capable of measuring emissions levels needed to comply with the new unit limits.

Continuous Emissions Monitoring

A comparison of MATS emission limits for new electric generating units with the capabilities of proven CEMS technologies follows.

MATS Pollutant	PM			Hg			HCl		
Unit Type	Emission Limit (Note 1)		CEMS Detection Limit (Note 2)	Emission Limit		CEMS Detection Limit (Notes 4,5)	Emission Limit		CEMS Detection Limit (Note 3)
	lbs/MWh	mg/scm	mg/scm	lbs/GWh	µg/scm	µg/scm	lbs/GWh	ppmv	ppmv
Coal >8300 Btu/hr	0.007	1.2	0.75	0.0002	0.034	0.1	0.4	0.04	0.79
Coal <8300 Btu/lb	0.007	1.2	0.75	0.04	6.84	0.1	0.4	0.04	0.79
IGCC	0.07	12.1	0.75	0.003	0.61	0.1	2	0.19	0.79
Cont. Oil	0.07	NA	0.75	0.0001	0.018	0.1	0.4	0.04	0.79
Solid Oil	0.02	3.4	0.75	0.002	0.343	0.1	0.4	0.04	0.79

NOTES:

1. Conversion of lb/MWh or lb/GWh to mg/scm or µg/scm basis assumes a new unit heat rate of 9500 BTU/kWh

2. Reference –Detection Limit of 0.75 mg/scm is from SIRA Certificate Sira MC 040039/01 renewed 2009 for SICK FWE200 (light scattering – wet stack extractive) and 101. SIRA Certification of SICK SP100 PM (light scattering – dry stack) monitor shows a measurement uncertainty of 0.39 mg/scm. (http://www.siraenvironmental.com/UserDocs/mcerts/MCERTSCertifiedProductsCEMS.pdf)

3. Reference – SIRA measurement uncertainties for NEO LaserGas (TDL) 0.2 mg/Nm^3 or 0.13 ppm. ABB FTIR-NT (FTIR analyzer) is 1.18 mg/Nm^3 or 0.79 ppm. Sick-Maihak MCS-100 is 0.58 ppm. The MATS limits are based on FTIR technology for HCl.

4. Based on mercury CEMS continuous measurement (not Hg Sorbent trap).

5. Mercury CEMS have a detection limit of 0.1 µg but a MATS daily drift specification of 1.0 µg and a relative accuracy requirement of 1.0 µg. So the noise of the instrument is between 0.1-1.0 µg.

Particulate Matter (PM)

The MATS PM limit for new coal-fired units is above, but close to, the analytical accuracy of a PM CEMS. These PM emission rates are very close to the detection limit of current PM CEMS technology.

Mercury

Compliance with the MATS mercury emissions limit may be demonstrated using either a mercury CEMS or mercury sorbent trap. Currently available mercury CEMS have an accuracy limit of between 0.1 to 1.0 µg/scm. The MATS emission limit for new non low rank virgin coal-fired electric generating units (0.0002 lb/GWh) is equivalent to a concentration in the flue gas of approximately 0.034 µg/scm. This low emission limit effectively eliminates the use of mercury CEMS technology for demonstration of continuous compliance for new units. Mercury sorbent trap systems may be used for compliance demonstration. However, this approach does not provide any continuous feedback for process control. In fact, sorbent trap sampling durations as long as 14 days are permitted and may be necessary to collect adequate mercury for analysis. This delay in feedback makes optimization of the emissions control system impractical.

Mercury CEMS are well proven in utility boiler applications at mercury levels above 0.5 to 1.0 µg/scm. A mercury emissions limit equivalent to a concentration of 0.5 to 1.0 µg/scm in the flue gas can be monitored with mercury CEMS which provides a more practical means for compliance demonstration and process control. Industry efforts to explore and establish the feasibility of long term mercury CEMS emission measurement and variability of same at flue gas mercury levels below 0.5 µg/scm should be encouraged and supported by the US EPA. This information is necessary to determine what emission level is sustainable long term and what levels of "noise" can be expected in the measurements.

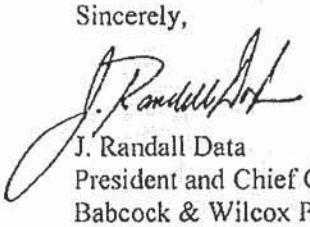
HCl

The MATS HCl limits are well below the accuracy of any available CEMS technologies. Thus continuous monitoring for compliance is not a realistic option. Quarterly testing using Method 26A may be used for compliance demonstration, but this method provides no performance feedback for process control and optimization. The new coal-fired boiler emission limit is very close to the noise of the reference method. B&W estimates the method detection limit for Method 26A as 0.02 ppmv HCl in the flue gas based on the analytical detection limit for HCl of 0.2 µg/ml published for the reference test method. The MATS limit for new, non low-rank virgin coal units is equivalent to approximately of 0.04 ppmv HCl. In practice, at only two times the method detection limit, this HCl emission level is too low to measure reliably. A practical limit based on the use of HCl CEMS technology would be equivalent to a concentration of HCl in the flue gas above 0.1 ppmv.

As a technology supplier, B&W must assess the combined risks of equipment performance and emissions measurement in establishing the performance guarantees necessary for new electric generating unit projects to secure financing and move forward. The current MATS limits for PM, mercury and HCl for new, non low-rank virgin coal generating units present significant challenges to

the electric utility industry. B&W respectfully requests EPA to consider a partial reconsideration of the MATS rule to reflect emission limits which may be reliably measured using CEMS technology for both compliance and emissions reduction process control.

Sincerely,



J. Randall Data
President and Chief Operating Officer
Babcock & Wilcox Power Generation Group

ADDENDUM OF DECLARATIONS SUPPORTING STANDING
PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT A

Attachment 2 to Declaration of Wayne E. Penrod
Institute of Clean Air Companies, Request for Partial Consideration

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VIA HAND DELIVERY AND ELECTRONIC MAIL

April 16, 2012

Administrator Lisa P. Jackson
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RE: Request for Partial Reconsideration of EPA's *National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units*, 77 Fed. Reg. 9,304 (February 16, 2012) (Docket No. EPA-HQ-OAR-2009-0234)

Dear Administrator Jackson and Assistant Administrator McCarthy:

The Institute of Clean Air Companies ("ICAC") hereby requests that the Environmental Protection Agency ("EPA") reconsider certain Maximum Achievable Control Technology ("MACT") standards for mercury ("Hg") established for new sources in the recently promulgated Mercury and Air Toxics Standards ("MATS") Rule. ICAC is the industry association representing the approximately 100 companies that comprise nearly all the suppliers of air pollution control equipment and systems as well as measurement and detection equipment. ICAC and its member companies have been the leading force in the advancement of air pollution

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control technologies for over 50 years, ensuring that the necessary technology exists to meet or exceed Federal EPA and state regulations.

ICAC supports the EPA's final MACT standards for existing facilities and our member companies stand ready to assist electric generating units ("EGUs") in meeting these standards. After close review of the final MACT standards for new sources, however, ICAC believes that the basis for one of the new source Hg standards[1] is flawed since it fails to address the inability of emission monitoring equipment to continuously monitor extremely low concentrations of Hg in flue gas under a wide range of operating conditions. This makes the equipment unable to provide critical feedback data for operation of the Hg control system.

ICAC member companies have extensively tested all types of commercial and experimental Hg control technologies. This effort has led to the installation of air pollution controls on approximately 65 gigawatts ("GW") of installed coal-fired boiler capacity. Despite this extensive experience, however, ICAC member companies are unaware of data supporting the final Hg limit established for new sources not using low rank virgin coal. Utilizing the appropriate, commercial Hg continuous emissions monitoring systems ("CEMs") and sorbent trap systems with required quality control/quality assurance protocols in place, our member companies cannot ensure that the final new source Hg standard can be achieved in practice. Thus, ICAC member companies are not in a position to offer commercial guarantees to their customers to meet this particular standard. We therefore request that EPA promptly reconsider this new source standard and revise it to a level of 3.0E-3lb/GWh. Such a level can be supported by the available data and can be confidently measured by the systems that are available under EPA's Rule to demonstrate continuous compliance,[2] allowing achievement of these levels using state-of-the-art emission control systems.

I. The New Source Mercury Standard Cannot Be Reliably Measured

The MATS Rule established a Hg standard for new units (utilizing virgin coal that is not low rank coal) of 2.0E-4 lb/GWh. This is an extremely stringent standard, requiring approximately a 99.7% Hg removal efficiency based on the average Hg content of coal. This standard will make it nearly impossible to construct a new coal-fired EGU because financing of such units requires guarantees from equipment suppliers that all emission limits can be met. It also creates two fundamental problems for implementing the standard. First, Hg CEMs (continuous emissions monitors) and sorbent traps are unable to consistently measure emissions at a level that would

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[1] Hg standard for "New-Unit not low rank virgin coal." 77 Fed. Reg. at 9,367.

[2] 40 C.F.R. § 63.10021, 77 Fed. Reg. at 9,479-9,481.

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allow an EGU to be confident of continuous compliance with the limit. There is simply insufficient experience with measuring Hg in flue gas at concentrations that are at or below the final standard. The 2.0E-4 lb/GWh standard translates into a flue gas concentration of approximately 0.023 micrograms per square meter ("*ug*/m^3"). This extremely low level is far below the National Institute of Standards and Technology ("NIST") standard of 0.5 *ug*/m^3 which serves as the lowest available NIST calibration point. It is also a level that cannot be maintained in practice, in the real world operating conditions that monitors will experience.

Second, the level of the standard creates problems for day-to-day EGU operations. For example, since sorbent traps require substantial time to take and analyze samples, it would be difficult for an EGU to "make up" any periods where analysis showed levels above the rolling 30-day emission limit. This could realistically result in the need for the facility to limit operations to maintain compliance. Based on past history, it is also clear that facility operators will seek to operate substantially below any limit that applies continuously. Facility operators normally target a level that is approximately 25 to 50% of an emission limit for their control set points in order to create a "margin for error" and to allow for normal fluctuations in emissions. Current monitoring methods cannot continuously and accurately measure such minute concentrations (approximately 0.010 *ug*/m^3) under all operating conditions. Not only are such levels unachievable in practice, they represent levels that are lower than the *uncertainty levels* of both CEMs and sorbent traps.

EPA therefore should revise the new source Hg standard to address the real world constraints of available monitoring equipment. One possible alternative would be to base a revised standard on NIST protocols. As noted above, there is no NIST protocol for traceability of Hg generators below 0.5 *ug*/m^3. If this limitation is translated into an output-based standard, the resulting standard would be at least 4.35E-3 lb/GWh.[3] The experience of ICAC member companies, however, indicates that a more stringent level of 3.0E-3 lb/GWh is supportable. Through extensive testing and field experience with the available monitoring equipment, ICAC believes that a level of 3.0E lb/GWh would yield the necessary level of assurance that plant operators require and that our industry can support through vendor guarantees. This level would also reflect the fact that we would expect facility operators to substantially under run any limitation

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[3] A 2.0 E-4lb/GWh standard equates to a flue gas concentration of 0.023 *ug*/m^3. This results in a multiplier of 21.74 when converting the output-based limit to a comparable concentration of Hg in flue gas. Applying the same multiplier with reference to the NIST protocol level of 0.5 *ug*/m^3 yields a level of 4.35-3.lb/GWh standard (0.0002 x 21.74 = 0.00435).

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that applies continuously.[4] It additionally represents, to our knowledge, the lowest level in any EGU permit for a new source based upon a case-by-case MACT analysis.[5]

A. CEMS Cannot Ensure Compliance

It is anticipated that many facilities are likely to use commercially-available CEMs to comply with the MATs Rule. CEMs, however, have not been fully certified at low levels of Hg concentration in flue gas, defined as levels <1.0 *ug*/m^3. And, as noted above, there are substantial questions as to whether CEMs can confidently measure emissions anywhere near the level of the final Hg standard for new sources. Empirical measurements back up our assessment. A 2011 study (attached)[6] tested two CEMs for their ability to replicate sorbent trap measurement of Hg in emissions. The CEMs were tested with respect to combusted natural gas (and natural gas that was "spiked" with Hg to precise concentration levels) and with respect to high sulfur coal (after such coal had been processed through various pollution control devices to contain a mercury concentration of between 0.25 to 1.0 *ug*/m^3). While the study demonstrated that CEMs could operate for 3 months with very little difficulty, several aspects of the study should compel EPA to reconsider the level of its final Hg standard for new sources.

First, the study indicates that the lowest level of Hg flue gas measurement that was achievable with necessary accuracy was far above the level of EPA's final standard. The study used the data collected from various test runs to calculate detection limits for the CEMs. Specifically, the study used the natural gas testing data -- where the amount of introduced Hg was precisely known -- to calculate a method detection limit of 0.01 *ug*/m^3 for one CEM and 0.04 *ug*/m^3 for another CEM. From these measurements, lower limits of quantification ("LLQ") were established for the monitors at 0.1 *ug*/m^3 and 0.4 *ug*/m^3, respectively. Thus, both CEMs had LLQs at least *4 times* the level of final new source Hg standard when utilizing the methodology for LLQs in the study.

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[4].We presume that a regulatory limit of 3.0E-3 lb/GWh would mean that a substantial amount of EGU operators would set controls to a level of approximately 1.5E-3 lb/GWh.

[5] The permitted plant is highly controlled and utilizes activated carbon injection, dry sorbent injection, an electrostatic precipitator, selective catalytic reduction, a wet flue desulfurization unit and a wet electrostatic precipitator.

[6] *Determining The Variability Of Continuous Mercury Monitors (CMMS) At Low Mercury Concentrations*, Final Technical Report, Illinois Clean Coal Institute Project Number 10/6A-1, January 1, 2010, through March 31, 2011. (Attachment A).

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Second, differences in the measurement of Hg occurred between the monitors used in the study when measurements occurred during the test firing of coal. One of the CEMs in the study experienced a deviation of 67% (biased high) from the level of Hg in the flue gas when compared with emissions as measured with a sorbent trap. As noted in the study, "[t]he difference is not a random error but appears to be more systematic in nature, as the CEM results were consistently higher than those measured using the sorbent traps."[7] These results indicate that there is simply not enough data to support EPA's conclusion that "measurement methodologies are sufficient to demonstrate compliance with the standards in the final rule."[8]

Finally, although the study concluded that CEMs are a valid measurement method for Hg, it specifically noted that "this only holds true when the concentration is above the calculated LLQ."[9] In other words, CEMs work well, but at flue gas concentrations from 4 to 16 times the level of the final Hg new source standard. It should also be noted that the sophisticated testing done in the study was accomplished through highly controlled mercury concentrations that ranged between 0.25 to 1.0 *ug*/m^3. These levels are 10 to 40 times the flue gas concentration allowed by the final Hg standard. Again, this demonstrates that EPA's assessment in the final rule regarding the sufficiency of current measurement capabilities was misplaced and that the Agency should take corrective action. Based on the most recent monitoring study of its kind -- a study that was undertaken in cooperation with the U.S. Department of Energy -- EPA should conclude that the final new source Hg standard cannot be reasonably implemented and needs to be revised upward to 3.0E-3 lb/GWh.

B. Sorbent Trap Systems Cannot Ensure Compliance

EPA's final Hg standard for new sources does not dictate the use of any one monitoring system, but rather for coal-fired, Integrated Gasification Combined Cycle and solid oil-derived fuel-fired units, CEMs or sorbent trap monitoring can be used.[10] Despite this flexibility, however, neither CEMs nor sorbent trap systems are able to provide assurance of compliance

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[7] *Id.* at 30.

[8] *EPA's Responses to Public Comments on EPA's National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units,* Volume 1, December 2011 at 621.

[9] *Ibid., Illinois* at 27. As noted previously, the LLQ for the CEMs used were calculated at 0.1 to 0.4 *ug*/m^3 compared with the final Hg standard of 0.023 *ug*/m^3.

[10] 77 Fed. Reg. at 9,370.

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with the extremely low level of the final Hg standard. The reasons are different; but the net result is the same.

With regard to sorbent traps, the mercury loading on a sorbent is proportional to the concentration of absorbent at the inlet of the sorbent bed. But the relative capacity of absorbent can be affected during prolonged operation of the unit in conditions that would be expected for coal-fired EGUs. As noted by the attached draft study,[11] the reduced capacity of traps at low mercury concentrations "may be compounded by prolonged exposure to flue gas . . .The sulfur that forms on the surface of carbon exposed to SO_2 is often in the form of SO_3 and hydrated forms such as sulfuric acid. . . Thus, the acid gases will poison the Hg-bonding sites after prolonged exposure, leading to desorption of oxidized mercury species."[12]

In addition to this operational concern, it is also clear that current methods to assess the relative accuracy and reliability of sorbent traps are not aligned with EPA's final Hg new source standard. Existing quality assurance criteria established for EPA Method 30B and sorbent trap monitoring systems are *above the level* of the final standard (0.03 *ug*/m^3 as compared with the required level of Hg in flue gas of 0.023 *ug*/m^3). Further, relative accuracy test audits (RATA) for sorbent traps provide that results are acceptable if measurements taken by two different traps simultaneously align by no more than $\leq$ 0.2 *ug*/m^3. But this level is close to 10 times the level of the final standard.

When compared to EPA's Method 30B measurements used for RATA, the comparison only worsens. When comparing a Method 30B measurement against a sorbent trap monitoring system, results from the two different measurements are considered to be acceptable if the absolute difference between the two methods is $\leq$1.0 *ug*/m^3. But this is a level that is over 50 times the level of the final standard.[13] Again, given the need of facility operators for assurance of compliance, such levels of relative precision cannot be sustained under the 2.0E-4 lb/GWh standard.

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[11] *Mercury Measurement Method Limitations at Low Levels*, ADA Environmental Solutions, Highlands Ranch, Colorado. (Attachment B).

[12] *Id.* at 2.

[13] *Id.* at 5.

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II. Conclusion

EPA has authority under Clean Air Act ("CAA") to reconsider the final Hg standards. Here, there is substantial evidence that one of the Hg limits for new sources is not practicably measurable and thus compliance cannot be reasonably assured. Compliance of new sources with the Hg emission limits in the MATS Rule is obviously of central relevance to the operation of the rule and intrinsic to both the rational implementation of the CAA and compliance with Executive Orders for significant rulemakings.[14] EPA should therefore promptly grant partial reconsideration of the MATS Rule and undertake expedited procedures to finalize a substantially higher level for Hg for new sources of 3.0E-3lb/GWh when utilizing non-low rank virgin coal.

ICAC would welcome any opportunity to discuss this petition and your response.

Sincerely,

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[14] For example, Executive Order 13563 provides that our regulatory system "must promote predictability and reduce uncertainty." It also states that the regulatory system should identify and use the "least burdensome tools for achieving regulatory ends" that are consistent with applicable law.

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cc: Mr. Bill Maxwell, Office of Air Quality Standards and Planning
Mr. Kevin McLean, Office of General Counsel

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT B

Declaration of Kenneth J. Anderson on behalf of Tri-State Generation & Transmission Association, Inc.

Declaration of Kenneth J. Anderson
Executive Vice President and General Manager
Tri-State Generation & Transmission Association, Inc.

In Support of Joint Motion by Developers of New Coal-Fueled Electric Generating Units to Sever and Expedite Consideration of Issues Germane to Hazardous Air Pollutant Standards Applicable to New Units

1. I am the Executive Vice President and General Manager of Tri-State Generation & Transmission Association, Inc. ("Tri-State") and serve in the role of Chief Executive Officer. I joined Tri-State in February 2005 and have been Tri-State's Chief Executive Officer since July 1, 2008. From 1996 to 2004, I worked for Western Farmers Electric Cooperative, including three years as Chief Operating Officer.

2. I make this declaration in support of the Joint Motion referenced above. I have personal knowledge of the issues and activities referred to herein, except where stated on information and belief. If called upon to testify, I could and would testify truthfully thereto.

3. Tri-State is a wholesale electric power supply cooperative providing electric power on a not-for-profit basis to 44 member distribution systems that serve customers in a 250,000 square-mile territory including New Mexico, Colorado, Nebraska, and Wyoming. Tri-State provides electricity to members based on a diverse mix of generation sources including coal, natural gas, hydroelectric, wind, and solar power. Tri-State owns and/or operates coal-fired electric generating units in four states.

4. Tri-State has also entered into an agreement with Sunflower Electric Power Corporation ("Sunflower") to develop a new coal-fired electric generating unit at a facility located in Holcomb, Kansas. This unit is generally referred to as Holcomb 2 because it will be co-located with an existing coal unit (Holcomb 1), which commenced commercial operation in 1983.

5. Tri-State anticipates receiving the majority of the energy generated from Holcomb 2 because it needs additional generating capacity to meet the existing and projected future needs of its members.

6. In February 2006, Sunflower submitted an application for a Prevention of Significant Deterioration ("PSD") preconstruction air quality permit to build the Holcomb expansion. On January 16, 2010, Sunflower submitted a revised PSD permit application for Holcomb 2. After undertaking public notice and comment, the Kansas Department of Health and Environment ("KDHE") issued a PSD permit for Holcomb 2. This permit requires a number of different pollution control devices to be installed to minimize the pollutants that will be emitted from the plant. KDHE has determined that these devices are the "best available control technology" for all relevant pollutants.

7. In January 2011, several environmental advocacy groups filed a petition in the Kansas Court of Appeals challenging KDHE's decision to issue the permit. The case was immediately transferred to the Kansas Supreme Court. We believe that the issues raised in this challenge are without merit and anticipate a favorable decision from the Court by early 2013.

8. Normally, a PSD permit expires 18 months after it was issued. However, because of the ongoing litigation, KDHE issued a stay tolling the expiration date of the Holcomb 2 PSD permit. The stay will be lifted once the Kansas Supreme Court issues a decision on the permit appeal. Under the terms of the stay, construction of the Holcomb 2 unit must commerce within 12 months after the stay is lifted.

9. In February 2012, the United States Environmental Protection Agency ("EPA") issued a final rule, entitled "National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-

Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units." 77 Fed. Reg. 9,304 (Feb. 16, 2012) (the Mercury and Air Toxics Standards or "MATS Rule").

10. Tri-State believes that the standards provided in the final MATS Rule for new units are unlawful under the Clean Air Act because they cannot be achieved in practice by the "best controlled similar source" on which the standards are based. I and many others believe that these standards were intended to stop the construction of any new coal-fired power plants in the United States – a goal that has been publicly announced by a number of environmental advocacy groups.

11. Because of EPA's unlawful new source standards, equipment vendors have stated that they will not offer performance guarantees for the MATS Rule. If so, Tri-State will not be able to obtain financing for Holcomb, even though all the necessary environmental permits will have been obtained. In order to finance any such project, a developer must submit guarantees from its equipment suppliers stating that their equipment will be able to meet all required emissions limitations. Because EPA has imposed a new unit mercury standard in the MATS Rule that is at a level that cannot be detected by currently available pollution control measurement systems, manufacturers have asserted that they are unable to make such guarantees to their customers. Without satisfactory performance guarantees, Tri-State will be unable to obtain the financing necessary to move forward with the Holcomb 2 project.

12. Tri-State's quandary regarding the Holcomb 2 project is further complicated by EPA's recent notice proposing to adopt New Source Performance Standards ("NSPS") for Greenhouse Gas ("GHG") emissions for new coal-fired electric generation sources. 77 Fed. Reg. 22,392 (Apr. 13, 2012). The proposed rule would require that any new coal-fired unit install a system known as carbon capture and storage ("CCS"), a system that EPA acknowledges is not yet

commercially available. Even if it were available, EPA projects that it would increase the cost of building a plant like Holcomb 2 by approximately 80 percent. If EPA were to apply this new requirement to Holcomb 2, a project that has been under development for more than 7 years, it would kill the project.

13. EPA's GHG NSPS does include an exception for "transitional units," which are defined as units that (1) have already obtained the necessary PSD permits and (2) actually commence construction by April 12, 2013. Holcomb 2 has already obtained its PSD permit and thus meets the first condition. However, under EPA's new NSPS, construction of Holcomb 2 must commence in less than a year. Otherwise, it would face a new requirement that would kill the project.

14. As noted above, however, if equipment vendors will not provide performance guarantees, it will not be possible to finance Holcomb 2. Without financing, Tri-State is unable to commence construction on Holcomb 2.

15. Thus, if resolution of the unique concerns new sources have in this case is not expedited, the delay associated with litigating the MATS Rule is likely to kill an important project unless other relief is granted. Tri-State is thus seeking expedited review of these issues in the hope that this Court will strike down EPA's unlawful new source standards. Otherwise, it is highly likely that an important project that has been under development for many years and for which Tri-State has already invested approximately $70 million will have to be abandoned.

16. Tri-State and Sunflower have been working together for nearly five years to develop the Holcomb 2 project. On July 26, 2007, Tri-State and Sunflower executed a Purchase Option and Development Agreement ("PODA") that required Tri-State to make option payments totaling $55 million to Sunflower in exchange for the rights to develop Holcomb 2. Upon execution of the PODA,

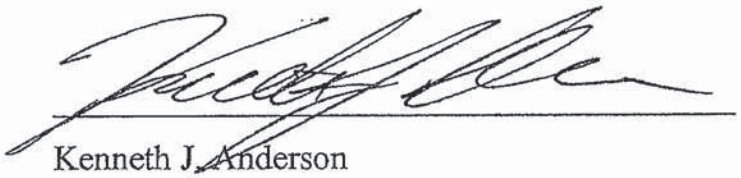
Tri-State paid Sunflower $25 million. In 2008, Tri-State paid Sunflower another $5 million. The remaining $25 million installment is due on the purchase date.

17. In addition to the $30 million in option payments that Tri-State has already made to Sunflower, Tri-State has also acquired certain water rights and options for water rights for the development of the unit and has incurred very substantial engineering and legal costs related to the development of the unit. To date, Tri-State has expended approximately $70 million on the development of the Holcomb 2 project. If the project is not completed, Tri-State estimates that it will not be able to recover approximately $60 million of its expenditures and that the only costs that might be recoverable are those associated with selling the acquired water rights (approximately $10 million).

18. In conclusion, if the unique concerns raised by new sources in challenging the MATS Rule are not placed on an expedited schedule, there is a serious risk that Tri-State and Sunflower will not be able to construct this important project. As a result, Tri-State will have wasted approximately five years of effort and at least $60 million trying to develop this project.

I, Kenneth J. Anderson, declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Dated: April 27, 2011



Kenneth J. Anderson
Executive Vice President and General Manager
Tri-State Generation & Transmission Assoc., Inc.
1100 West 116th Avenue
Westminster, CO 80234

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT C

Declaration of C. Dean Alford on behalf of Power4Georgians, LLC

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

POWER4GEORGIANS, LLC, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	No. 12-1184 (consolidated with No. 12-1100)

DECLARATION OF C. DEAN ALFORD
PROJECT MANAGER FOR PLANT WASHINGTON AND
POWER4GEORGIANS, LLC

I, C. Dean Alford, do hereby declare, under penalty of perjury pursuant to 28 U.S.C. § 1746, as follows:

1. My name is Dean Alford. I am over 21 years of age, under no legal disability, and competent and authorized to make this Declaration. The facts stated in this Declaration are true and correct based on my personal knowledge. I give this Declaration voluntarily in support of the Joint Motion by Developers of New Solid-Fueled Electric Generating Units to Sever and Expedite Consideration of Issues Germane to Hazardous Air Pollutant Standards Applicable to New Units in the above-styled case and for any other lawful purpose.

2. I am the President and Chief Executive Officer of Allied Energy Services, LLC. Allied Energy Services has been retained by Power4Georgians, LLC (P4G) to manage and oversee its development of Plant Washington, which is discussed below. In addition to my management and oversight of the Plant Washington project, I have developed energy generation projects in the U.S. and in Central and South America.

3. P4G is a limited liability company organized under the laws of the State of Georgia and consisting of four member-owned non-profit electric cooperatives. As is discussed in greater detail below, P4G is presently in the process of developing and constructing a nominal 850 megawatt (MW) coal-fired power plant located in Washington County, Georgia, known as "Plant Washington." When constructed, Plant Washington will provide base-load electricity to member-owned electric cooperatives in the State of Georgia, which collectively serve almost 2 million residential and commercial customers in Georgia. Plant Washington may also supply electricity to other electric utilities, and will provide badly needed diversification in the sources of electricity supply for residents and businesses in the State of Georgia.

4. P4G has expended more than $30 million over five years on the development of Plant Washington. The process of developing and constructing a new coal-fired power plant (electrical generating unit or EGU) at a cost of more

than $2 billion is an extraordinarily complex undertaking. For example, P4G has been working since 2008 to obtain the permits required under the Clean Air Act to commence construction on Plant Washington, and then litigating multiple challenges to the validity of those permits with groups opposed to the construction of all new coal-fired power plants. These required permits include a final Prevention of Significant Deterioration (PSD) permit required under Section 165(a) of the Clean Air Act, and a case-by-case Maximum Achievable Control Technology (MACT) determination required under Section 112(g) of the Clean Air Act. In addition, P4G has been required to obtain many other rights and approvals necessary to commence construction of Plant Washington, including:

- Authorization for a "Development of Regional Significance" from the Central Savannah River Area Regional Development Center;
- Surface Water Withdrawal Permit No. 150-0391-04 from the Georgia Environmental Protection Division (EPD), Watershed Protection Branch;
- Ground Water Use Permit No. 150-0026 from the Georgia EPD, Watershed Protection Branch;
- Wastewater Discharge Permit No. GA0039055 under the Clean Water Act's National Pollutant Discharge Elimination System from the Georgia EPD, Watershed Protection Branch;
- Solid Waste Management Determination of Site Suitability No. APL 1501 from the Georgia EPD, Land Protection Branch;
- Stream Buffer Variance allowing the construction of water intake structures from Georgia EPD, Watershed Protection Branch;

- Authorization Number SAS-2008-00134 under Clean Water Act Section 404, Nationwide Permits 7 & 12 from the U.S. Army Corps of Engineers; and

- Property, or options to purchase the necessary property, from landowners in the area.

5. As of April 9, 2012, P4G has a final PSD permit and all other required permits and approvals necessary to commence construction of Plant Washington. P4G is now in the critical stage of securing financing and entering into contracts to move forward to construct the facility. However, P4G's $30 million expenditure and years of work are directly jeopardized by two rules issued by the United States Environmental Protection Agency (EPA). As is explained below, the juxtaposition of these two parallel EPA rulemakings jeopardizes P4G's Plant Washington project by requiring P4G to commence construction of Plant Washington in less than 12 months to be exempt from one proposed rule, while at the same time requiring P4G to design and construct Plant Washington to meet MACT emission limits for hazardous air pollutants (HAPs) that I believe are inconsistent with the Clean Air Act.

6. P4G and other new sources have filed Petitions for Review asking this Court to review and vacate the new emission limits for HAPs. Unless the Court rules expeditiously, however, P4G must attempt to design, contract and finance the project in order to commence construction by April 13, 2013, without knowing whether this Court will provide relief from the overly stringent and incorrectly

established emission limits for HAPs. This is creating great uncertainty in the financial markets and is directly and negatively affecting P4G's ability to secure the financing and to perform the detailed engineering work necessary to commence construction of Plant Washington within the time required. Thus, unless this Court grants expedited review of the challenges to EPA's rule establishing MACT emission limits for HAPs, P4G may well be unable to construct Plant Washington, and its prior significant investments and on-going expenditures may be lost.

EPA's Proposed GHG NSPS and Its Requirement that P4G Commence Construction of Plant Washington Within One Year

7. On April 13, 2012, EPA published a proposed rule entitled "Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units," 77 Fed. Reg. 22,392 (Apr. 13, 2012). This rule is referred to as the "Proposed GHG NSPS."

8. The Proposed GHG NSPS establishes "New Source Performance Standards" under Section 111 of the Clean Air Act that limit the amount of carbon dioxide (CO_2) that can be emitted from new coal-fired power plants. EPA's Proposed GHG NSPS would constrain emissions from new coal-fired power plants greater than 25 megawatts to 1,000 pounds of CO_2 per megawatt-hour (MWh), which is the amount of CO_2 emitted from highly efficient natural gas-fired, combined cycle combustion turbines. To meet this limit, the Proposed GHG NSPS would require new coal-fired power plants to use the technology of "carbon

capture and storage" (CCS), a process by which CO_2 is separated from the flue gas stream, compressed, and transported to a suitable location for long term storage and monitoring. EPA correctly and candidly acknowledges in the Proposed GHG NSPS that CCS is cost-prohibitive and that it can be deployed at this time only with the help of significant subsidies from the federal government. I believe that the Proposed GHG NSPS, if finalized, will effectively prohibit the construction of any new coal-fired EGUs in the United States.

9. By its terms, the Proposed GHG NSPS will apply to new coal-fired power plants that commence construction on or after April 13, 2012, the date the Proposed GHG NSPS was published in the Federal Register. However, the Proposed GHG NSPS expressly exempts certain "transitional sources" if they meet two specific requirements. First, the source must have "received approval for its complete PSD preconstruction permit" prior to publication of the Proposed GHG NSPS in the Federal Register. Second, the source must commence construction of the facility within 12 months of the proposed rule's publication. The Proposed GHG NSPS states that the 12-month period for commencement of construction "would not be extended for any reason."

10. The Proposed GHG NSPS identifies Plant Washington as one of 15 "potential transitional sources" that would be exempt from the Proposed GHG NSPS emission limits and its requirement to install CCS technology. Plant

Washington satisfies the first prong of the definition of a "transitional source," as it has a PSD preconstruction permit that was affirmed by a Final Decision of the Office of State Administrative Hearings on April 9, 2012, prior to publication of the Proposed GHG NSPS. To maintain this exemption, however, the Proposed GHG NSPS expressly requires Plant Washington to commence construction by April 13, 2013, which is 12 months after publication of the Proposed GHG NSPS in the Federal Register.

EPA's Deadline to Commence Construction Within 18 Months of the Issuance of the PSD Permit

11. Additional urgency is imposed upon Plant Washington by another deadline imposed by EPA. Under the regulations implementing the PSD program, Plant Washington must "commence construction" of the facility within 18 months of issuance of the PSD permit. 40 C.F.R. § 52.21(b)(9). This deadline will come due no later than October 2013.

EPA's MATS Rule: The Subject of This Litigation

12. On February 16, 2012, EPA promulgated a final rule entitled "National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units," 77 Fed. Reg. 9,304

(Feb. 16, 2012).[1] EPA refers to this rule as the "Mercury and Air Toxics Rule," or "MATS Rule."

13. Because P4G had not commenced construction of Plant Washington prior to EPA's publication on May 3, 2012 of the proposed MATS Rule, Plant Washington is deemed a "new source" for purposes of that Rule. New sources are treated differently from "existing sources" under the MATS Rule. First, new sources like Plant Washington are generally required to comply with the MATS Rule immediately upon start-up of the plant. Existing sources, in contrast, are provided three years (and possibly longer) to come into compliance with the MATS Rule. Second, the emission limits for new sources are determined on a different and more stringent basis than those applied to existing sources. This is because the Clean Air Act requires EPA to set MACT emission limits for existing sources based on the average emissions achieved in practice by the best performing 12 percent of existing sources in the category, while the emission limits for new sources can be no higher than "the emission control that is achieved in practice by the best controlled similar source."

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[1] This rule was initially proposed by EPA on May 3, 2011. P4G, both individually and as part of a coalition of independent power producers, filed extensive comments with EPA explaining that the proposed rule was seriously flawed and that the emission limits EPA proposed were not achievable in practice under the entire range of foreseeable operating conditions as the Clean Air Act requires. Although EPA's MATS Rule revised the emission limits in the proposed rule somewhat, EPA maintained the basic structure of the rule and the methodology it used to calculate the various emission limits. Thus, EPA's revisions failed to remedy the many flaws present in its initial proposal.

14. I believe that the emission limits in the MATS Rule applicable to new units like Plant Washington are fundamentally flawed and unreasonably stringent. The extraordinary nature of the emission limits in EPA's MATS Rule can be seen by comparing the emission limits in the MATS Rule with those in P4G's Permit issued less than two years previously and based on a careful analysis of the data then available:

a. Mercury. P4G's Permit imposes a case-by-case MACT limit for mercury of 7.64×10^{-6} pounds per megawatt hour on a 12-month rolling average basis when firing sub-bituminous coal, which is equivalent to a mercury emission limit of 7.64×10^{-3} pounds per gigawatt-hour (GWh). At the time P4G's Permit was issued, this was far and away the lowest mercury emission limit in any permit issued to any EGU in the United States. Yet EPA's MATS Rule would require Plant Washington to emit no more than 2.0×10^{-4} pounds per GWh. This is more than thirty-eight times lower than P4G's Permit limit based on its case-by-case MACT determination. Moreover, experts question whether the test data upon which the standard is based was even accurately measured.

b. Hydrochloric Acid (HCl). P4G's Permit imposes a case-by-case MACT limit for HCl of 3.22×10^{-4} pounds per million British thermal units (lb/MMBtu). Again, I understand that at the time P4G's Permit was issued this was the lowest HCl emission limit in any permit issued to any EGU in the United

States. This limit even caused some experts to question whether that limit could be achieved in practice. In contrast, EPA's MATS Rule imposes an emission limit of 4.2×10^{-5} pounds per MMBtu. This is more than seven times lower than the HCl emission limit in P4G's Permit and is not based upon test data but on extrapolations from data reported as "non-detect."

15. Leading technical experts have explained to EPA, both prior to and after its promulgation of the MATS Rule, that these and other emission limits are so stringent that the makers of the necessary pollution control technologies cannot guarantee the MACT limits will be achieved in practice. *See, e.g.*, Testimony of Ralph E. Roberson, Subcommittee on Energy and Power, Committee on Energy and Commerce, U.S. House of Representatives (Feb. 8, 2012).

16. The new source emission limits in EPA's MATS Rule, which I believe are improperly derived and established, cause great uncertainty in the financial markets and thereby materially and adversely affect P4G's ability to secure financing for the project in order to commence construction of Plant Washington within the one-year window provided by the Proposed GHG NSPS:

a. First, it costs billions of dollars to design and construct an EGU like Plant Washington, and pollution control guarantees from equipment suppliers are required by lenders as an express condition of financing. Thus, P4G may be unable to secure the financing necessary to commence construction of Plant

Washington if it cannot obtain guarantees from vendors of pollution control technologies that their equipment will actually achieve the emission limits EPA has established.

b. Second, even if the emission limits in the MATS Rule were achievable in practice and could be guaranteed and even if financing can be secured, the process of designing, installing and operating the pollution control equipment required to meet these flawed and extraordinarily stringent limits would require P4G to incur enormous additional costs. I am unable to provide a more precise estimate of the possible increased costs because no vendor has ever designed or built pollution control equipment to meet the limits in the MATS Rule and no operator has ever been asked to meet such standards on a continuous basis and under the entire range of operating conditions. As a result, to my knowledge no vendor has ever provided a quotation of the additional costs that would be required to meet such standards, if indeed compliance is possible. Because P4G is required to commence construction within 12 months under EPA's Proposed GHG NSPS, however, it would be forced to undertake these expenditures before this litigation can be resolved under a normal schedule.

17. In sum, based on my experience, both with the Plant Washington project and in the energy development sector generally, EPA's decision to issue the Proposed GHG NSPS and the MATS Rule concurrently has placed P4G in an

untenable regulatory position, which jeopardizes P4G's more than $30 million investment in and the very viability of the Plant Washington project. Accordingly, to avoid the risks to P4G that EPA has alone created, P4G asks this Court to expedite the briefing and consideration of its Petition for Review.

C. Dean Alford

Dated: April 26th, 2012

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT D

Declaration of Frank Rotondi on behalf of White Stallion Energy Center, LLC

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

WHITE STALLION ENERGY CENTER, LLC Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	No. 12-1100 (and consolidated cases)

DECLARATION OF FRANK ROTONDI,
PRESIDENT OF WHITE STALLION ENERGY CENTER, LLC

I, Frank Rotondi, swear or affirm under penalty of perjury the following:

1. I am President of White Stallion Energy Center, LLC ("WSEC"), Petitioner in the above-captioned case, and I have firsthand knowledge of the facts set forth herein. I am over the age of twenty-one (21) and I am competent to make this declaration.

2. I have served as President of WSEC since its founding in 2007. Prior to my involvement with WSEC, I served in senior management roles in other energy development companies, and have had personal experience with numerous projects to construct and operate electrical generating units.

3. WSEC is a limited liability company organized under the laws of the State of Texas engaged in the business of electrical energy development and production.

4. Since 2007, WSEC has been developing an approximately 1,320 megawatt, base-load, solid-fueled electric power generating station ("Energy Center") located south of the Port of Bay City in Matagorda County, Texas.

5. If completed, the Energy Center would provide a new clean energy source for South Texas residents and businesses, generating enough low-cost, reliable energy to supply roughly 650,000 homes at competitive prices. The facility would be fueled by a blend of coal and locally available petroleum coke, and would provide needed diversification for the Texas electricity market, which relies heavily on natural gas as a fuel source.

6. In the past several years, WSEC has made substantial progress toward beginning construction of the Energy Center. Among other major development milestones, WSEC has secured an option to purchase land for the project site; secured water and fuel supplies; undertaken substantial engineering; and obtained multiple regulatory approvals from relevant U.S. and State authorities.

7. In particular, on December 16, 2010, the Texas Commission on Environmental Quality ("TCEQ" or "Commission") issued an Air Quality Permit to WSEC authorizing the construction and operation of the Energy Center. Air Permit Nos. 86088/HAP28/PAL26/PSDTX1160 incorporate State, Hazardous Air

Pollutant, Plant-Wide Applicability, and Prevention of Significant Deterioration programs. Before issuing this Air Permit, TCEQ, through its State Office of Administrative Hearings, conducted an extended adjudicatory hearing, culminating in comprehensive findings of fact and conclusions of law that supported the Commission's order granting the permit.

8. Because EPA had not yet adopted maximum achievable control technology ("MACT") limits for hazardous air pollutant ("HAP") emissions from electric generating units ("EGUs") under Section 112(d) of the Clean Air Act, WSEC sought and TCEQ issued a "case-by-case" MACT determination in accordance with Section 112(g) in order to set HAP limits in the Air Permit. The Commission found that "WSEC performed the case-by-case MACT analysis in two primary steps. In the first step, WSEC established the 'MACT floor' or the most stringent limitation achieved in practice by the best controlled similar source. In the second step, WSEC performed a 'beyond-the-floor' analysis of the other methods for potentially reducing emissions to a greater degree, considering such factors as the cost of achieving such emissions reductions and any non-air quality health and environmental impacts and energy requirements to establish whether further reductions are achievable."

9. The Commission also found that "The [TCEQ Executive Director] performed a review of WSEC's case-by-case MACT analysis, and determined that WSEC will apply MACT to control HAP emissions. The results of that determination are incorporated into the terms of the Draft Permit."

10. The MACT determination considered the findings of all of the other case-by-case determinations recently made for other, similar facilities around the U.S.

11. Based on these and other findings, the Commission concluded that "WSEC has made all demonstrations required under applicable federal and state laws and regulations ... regarding hazardous air pollutant major source permit applications, to be issued a hazardous air pollutant major source air quality permit with case-by-case MACT review."

12. In addition to this demonstration that the Energy Center would meet limits representing use of maximum achievable control technology, WSEC also was required to and did show to TCEQ's satisfaction that the permit limits representing MACT would yield conservatively projected atmospheric concentrations of all air pollutants, including HAPs, below levels that are protective of public health and welfare. The Commission specifically concluded, based on the approved modeling of emissions, "that emissions from WSEC ... will be protective of the public's health and physical property, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance."

13. Although the U.S. Environmental Protection Agency ("EPA") filed comments on WSEC's Air Permit during and after the permit process, none of its comments challenged or even questioned TCEQ's case-by-case MACT determination or its determination that the HAP limits in WSEC's Air Permit represented use of MACT and would lead to protection of public health and welfare.

14. Because of the importance of the air permit to any major new power project development, the issuance of the Air Permit in December 2010 allowed WSEC to proceed to the marketplace to secure final development and construction financing for its roughly $2.5 billion project. The Project Owner's Engineer, Stanley Consultants, had determined that the limits in the Permit are achievable, and that vendor guarantees could be obtained to achieve the permitted levels.

15. On May 3, 2011, EPA proposed MACT standards for EGUs. Because WSEC had not commenced physical construction as of that date, its Energy Center is to be treated as a "new source" for purposes of the final rules. The final rule, published on February 16, 2012, imposes limits substantially lower than TCEQ determined barely a year earlier to represent MACT for the Energy Center, via its case-by-case analysis that identified new source MACT limits in accordance with the Clean Air Act. In fact, the limits in the February rule are orders of magnitude lower than in WSEC's Air Permit:

	White Stallion Air Permit (lb/MMBtu)	February 16, 2012 Rule (lb/MMBtu)
Filterable Particulate Matter	0.010	0.0007
Hydrochloric Acid	0.005	0.000042
Mercury	0.86	0.02

(a) Filterable Particulate Matter (PM) - The White Stallion Air Permit has an emission limit for PM Filterable of 0.010 lb/MMBtu. The MACT

rule imposes an emission limit of 0.0007 lb/MMBtu. I have been informed by both Alstom and Foster Wheeler, each a leading equipment supplier, that this is more than an order of magnitude lower than anything Alstom or Foster Wheeler has ever guaranteed and is roughly four times lower than anything they have ever measured.

(b) Hydrochloric acid (HCl) - The White Stallion air permit has an emission requirement for HCl of 0.005 lb/MMBtu. The MACT rule imposes an emission limit of 0.000042 lb/MMBtu. This is nearly two orders of magnitude lower than anything Alstom or Foster Wheeler has ever guaranteed and lower than anything they have ever measured.

(c) Mercury (Hg) - The White Stallion air permit has an emission requirement for Hg of 0.86 lb/TBtu. The MACT rule sets an emission requirement of 0.02 lb/TBtu. This is more than an order of magnitude lower than anything Alstom or Foster Wheeler has ever guaranteed and lower than anything they have ever measured.

16. Numerous technical experts explained during and following the rulemaking that EPA's standards are so stringent that the makers of the MACT technologies cannot guarantee the MACT limits will be attained in practice. *See, e.g.*, Testimony of Ralph E. Roberson, Subcommittee on Energy and Power, Committee on Energy and Commerce, U.S. House of Representatives (Feb. 8, 2012).

17. Since EPA published its proposed rule in May 2011, this inability to obtain guarantees has negatively affected WSEC's ability to finance its construction. During the past year, WSEC has been, and currently remains, unable to finalize financing to begin construction on the Matagorda Energy Center.

18. As a result of these ongoing, regulation-created financial constraints, WSEC is approaching a financial turning-point. WSEC will be forced to delay commercial completion of the project, will bear many millions in additional holding costs, and suffer the consequences of associated negative public perception. This will lead to significant challenges to complete commercial arrangements for power sale, fuel purchases, EPC contracting, and construction financing. Such holding costs threaten the existence of the project, on which WSEC has expended $15,000,708.00 to date.

19. Based on WSEC's experience over the past several years, and my own prior experience in the industry, I believe WSEC will not be able to secure necessary construction financing while EPA's MACT rules remain in effect. Conversely, and again based on my current and prior experience, if those standards are vacated or revised to a level demonstrated to be achievable by currently-existing technology, I believe WSEC would be able to secure the needed financing. In fact, WSEC currently has commitments for financing from AAA-rated funds that are contingent on equipment performance being guaranteed under the emission levels established in the Air Permit as case-by-case MACT.

20. Absent either judicial relief or unforeseen technological invention that allows our vendors to guarantee the newly required emissions levels, the damages to White Stallion would be irreversible for at least the following reasons:

(a) The disruption inherent in winding down and terminating this development project would render it extremely unlikely to be capable of resuscitation;

(b) WSEC's Air Permit would likely expire and become void;

(c) WSEC would lose its option to purchase the facility site on which existing approvals are predicated; and

(d) on March 27, 2012, EPA issued proposed rules to effectively prohibit coal-fired power plants, which will apply to any plant on which construction is not commenced within one year of the proposal date (i.e., by approximately the end of March 2013).

I declare under penalty of perjury that the above is true and correct.

Executed on April 26, 2012.

Frank Rotondi

ADDENDUM OF DECLARATIONS SUPPORTING STANDING PURSUANT TO CIRCUIT RULE 28(a)(7)

EXHIBIT E

Declaration of Gregory P. Kunkel, Ph.D. on behalf of Tenaska Trailblazer Partners, LLC

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

ORAL ARGUMENT NOT YET SCHEDULED

TENASKA TRAILBLAZER PARTNERS, LLC, Petitioner, v. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, Respondent.	Case No. 12-1180 (consolidated with other cases into Case No. 12-1100)

DECLARATION OF GREGORY P. KUNKEL, Ph.D.

I, Gregory P. Kunkel, declare as follows:

1. I have been employed by Tenaska, Inc. ("Tenaska") since 1995. I am currently Vice President, Environmental Affairs for Tenaska, and I have held this position since 2004. Previously, I served Tenaska as Manager and Director in similar capacities.

2. Tenaska is an energy company, headquartered in Omaha, Nebraska, that develops, constructs, owns and operates non-utility generation and cogeneration plants. The company also markets natural gas, biofuels and electric power, and provides risk management services. Tenaska is involved in asset acquisition, fuel supply, natural gas exploration, production and transportation systems, and electric transmission development. Tenaska has developed approximately 9,000 megawatts ("MW") of electric generating capacity across the United States. Tenaska's affiliates own interests in, operate, and manage eight power plants in six states totaling more than 6,700 MW of generating capacity owned in partnership with other companies.

3. As developers, rather than researchers or inventors, Tenaska is focused on environmentally responsible power projects that use available, reliable, cost-competitive technologies that are commercially financeable and that attract conservative investors requiring a reasonable assurance of success.

4. Tenaska began investigating development of a coal-fueled electric generating station in West Texas in 2007. Late that year, it was decided that the new station would include a carbon capture and sequestration ("CCS") component, provided that significant government funding support could be obtained for that purpose. Otherwise, the cost of CCS would prevent the electricity produced at the station from being competitive in the marketplace.

5. On February 19, 2008, Tenaska publicly announced its intention to develop and build the Tenaska Trailblazer Energy Center ("Trailblazer" or the "Center"), a 765 MW gross-output and 600 MW net-output supercritical pulverized coal electric generation facility with the capability to capture and deliver to the enhanced oil recovery ("EOR") markets 85 to 90% of the carbon dioxide (CO_2) produced from the plant's boiler. The project site selected by Tenaska was a location about nine miles east of Sweetwater, TX, in Nolan County.

6. The project was proposed to be sited in West Texas because the captured CO_2 could be delivered to oil operations in the Permian Basin, where it could be used for EOR. In EOR operations, CO_2 is injected into oil-bearing geological formations to facilitate recovery of oil that cannot be accomplished through conventional drilling and pumping, during primary and secondary recovery phases. Unlike other carbon storage systems that are being investigated nationwide, the use and storage of CO_2 as a part of EOR has a long and demonstrated history in the Permian Basin.

7. Tenaska Trailblazer Partners, LLC, the petitioner in this proceeding, is a corporate affiliate of Tenaska through which the company owns a majority stake in the Center. As of March 2010, Arch Coal, Inc. ("Arch") acquired a 35% equity stake in the Center. For purposes of this Declaration, I will refer to Tenaska and Tenaska Trailblazer Partners, LLC collectively as "Tenaska."

8. On the same day as Tenaska's public announcement, Tenaska finalized the purchase of land for the Center, filed an air permit application with the Texas Commission on Environmental Quality ("TCEQ"), and submitted a transmission interconnect request with the Electric Reliability Council of Texas ("ERCOT").

9. On December 14, 2010, the Commissioners of TCEQ voted unanimously to grant the air quality permits necessary for the Center to begin construction. In 2011, with funding from the Global Carbon Capture and Storage Institute, Tenaska completed a Front End Engineering Design (FEED) study with Fluor Corporation ("Fluor'), as the lead engineering, procurement, and construction ("EPC") contractor. Fluor will also supply its proprietary carbon capture technology for use at the Center. Fluor's amine-based technology for large-scale, post-combustion CO_2 capture is one of the first and among the most widely applied commercial solutions proven in operating environments to remove CO_2 from high-oxygen content flue gases.

10. For Trailblazer to become a commercial success, however, certain challenges must be overcome. The capital investment in post-combustion CO_2 capture could add as much as a billion dollars to a two billion dollar power plant, when financing and other "soft" or indirect costs are included.

11. The project's goal of capturing 85 to 90% of the CO_2 that would otherwise be emitted maximizes EOR-related revenues, as well as eligibility for federal technology incentives.

These include the sequestration tax credit and U.S. Department of Energy funding and loan guarantee programs. This government support is critical to the financial feasibility of the project.

12. Another key factor in Tenaska's decision to locate the Center in Texas near a large CO_2 market was the passage of favorable legislation in Texas designed to encourage the development of clean energy facilities. In 2007, the Texas Legislature passed House Bill ("HB") 3732, which set standards for Advanced Clean Energy Projects ("ACEP") and provided tax, financial and regulatory incentives to projects that could meet those standards. To qualify as an ACEP, a project must: (i) reduce SO_2 emissions by 99 percent; (ii) reduce mercury emissions by 95 percent; (iii) meet a NO_x emission rate of no more than 0.05 pounds/million British Thermal Units; (iv) render CO_2 capable of capture, sequestration or abatement; and (v) use coal, biomass, petroleum coke, solid waste, or fuel cells using hydrogen derived from these fuels.

13. In 2009, the Texas Legislature passed additional legislation to provide incentives to projects that capture CO_2. That legislation included: (i) HB 469, which provides sales tax exemptions for equipment that captures (at least a 50% rate), transports and stores CO_2; provides that the first three projects achieving a 70% carbon capture rate will quality for a $100 million franchise tax credit; provides a 30-year, 75% severance tax exemption for oil recovered using CO_2 captured from man-made emission sources; and (ii) Senate Bill 1387, which provides a framework for regulation of CO_2 sequestration and storage between the Texas Railroad Commission and the TCEQ. As such, the Center has considerable support at the State level.

14. Tenaska's plans to move forward, however, are now substantially impeded by EPA's adoption of hazardous air pollutant standards. See *National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-*

Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304 (Feb. 16, 2012). This is because the new-unit emission standards set forth in the rule are so strict that pollution equipment vendors will not offer guarantees that their equipment will meet the standards. Without those guarantees, financing will not be available.

15. Tenaska's ability to develop its project is also affected by EPA's proposed new source performance standards for coal-fueled electric generating units. See *Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units*, 77 Fed. Reg. 22,392 (Apr. 13, 2012) ("GHG NSPS"). Under these proposed standards, coal-fueled units are effectively required to utilize CCS unless they begin construction within one year. Although Tenaska intends to use CCS, EPA has still not fully developed its CCS regulatory requirements. Thus, even a CCS project like Tenaska cannot know that it can meet *all* of EPA's eventual CCS requirements, even if it can meet the specific CCS requirements in the proposed GHG NSPS rule. Moreover, the GHG NSPS rule is still proposed, and Tenaska cannot know what the requirements of the final rule will be. Trailblazer is also a first of a kind CCS project in terms of its scale and performance goals. The addition of federal compliance requirements can only increase the cost associated with the already notable risk premium of building such a first of a kind facility. Thus, Tenaska will be severely disadvantaged by the GHG NSPS Rule unless it is grandfathered rather than being subject to as-yet undetermined requirements of the rule.

16. Because EPA's hazardous air pollutant rule now prevents Tenaska from moving forward, Tenaska strongly desires that this Court expedite its consideration of the challenges lodged against the Final Rule. In short, Tenaska cannot effectively move forward with the project under a cloud of uncertainty as to the outcome of this lawsuit. Moreover, the same cloud

drives away potential funding agencies, investors, and project partners. The longer that this action remains pending before this Court, the greater the likelihood that the Center will fail.

17. Tenaska has more than five years of work invested in this project and has spent more than $28 million dollars. This investment is now at risk given EPA's new hazardous air pollutant standards.

18. I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge.

DATED this 24th day of April, 2012

By: _____

Gregory P. Kunkel, Ph.D.
Vice President, Environmental Affairs
Tenaska, Inc.