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#### BY FEDERAL EXPRESS AND BY EMAIL

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#### Re: Petition for Partial Reconsideration of Denial of Petition for Reconsideration and Petition for Reconsideration of the Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas

On June 29, 2020, by letters to National Parks Conservation Association, Sierra Club, and Earthjustice ("Petitioners"), the Environmental Protection Agency ("EPA") denied a petition for reconsideration ("2017 Petition") regarding Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas; Final Rule; 82 Fed. Reg. 45,481 (Sept. 29, 2017) ("New BART Exemption Rule"). On July 6, 2020, EPA published the denial of the 2017 Petition in the Federal Register, 85 Fed. Reg. 40,286, and posted a previously undisclosed "Corrected Sensitivity Analysis" that purports to demonstrate that, despite significant increases in total allowable emissions from Texas and Georgia, visibility improvement under the Cross State Air Pollution Rule ("CSAPR") is still equal to or greater than the improvements expected under source-specific "best available retrofit technology," and therefore CSAPR remains a valid BART alternative under 40 C.F.R. § 51.308(e)(3). June 29, 2020 Letter Denying Reconsideration at 13-15; *see also* EPA-HQ-OAR-2016-0598-0034 (spreadsheet calculation tab "2020 Petition TX+GA Adjust" posted July 6, 2020). Because EPA presented that "corrected" analysis is of central relevance to the 2017 BART Exemption Rule,

Petitioners now seek partial reconsideration of EPA's actions of June 29 and July 6, 2020 (collectively, "2020 Denial"), and reconsideration of the New BART Exemption Rule itself.<sup>1</sup>

As discussed below, EPA's "corrected" analysis, which was presented for the first time in the agency's denial of the 2017 Petition, makes clear that CSAPR does not satisfy the twopronged test under 40 C.F.R. § 51.308(e)(3) to qualify as a BART alternative. In fact, the spreadsheet underlying the agency's corrected analysis demonstrates that visibility improvement under CSAPR is not equal to or greater than visibility improvement under source-specific BART averaged over all 140 Class I areas or the 60 eastern Class I areas covered by CSAPR (see 8-11 below). That corrected analysis is "of central relevance to the outcome of the rule," 42 U.S.C. § 7607(d)(7)(B), because it demonstrates that the 2017 New BART Exemption Rule is arbitrary, capricious, and contrary to the Clean Air Act and Regional Haze Rule. Id. § 7607(d)(9)(A). Because the agency's updated analysis appeared in EPA's rulemaking for the first time on July 6, 2020, the grounds for the objections raised in this petition "arose after the period for public comment," which ended on January 9, 2017. Id. § 7607(d)(7)(B). Because the grounds for the objections raised in this petition arose after the period for public comment and are of central relevance to EPA's finding in the New BART Exemption Rule that the Transport Rule remains better than BART despite the withdrawal of Texas from the trading program, the Administrator must "convene a proceeding for reconsideration" of portions of the rule, and "provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed." *Id.* § 7607(d)(7)(B).<sup>2</sup>

#### II. BACKGROUND<sup>3</sup>

In 2011, EPA promulgated the Transport Rule, which required 28 states in the eastern U.S., including Texas, to curb power plant emissions of sulfur dioxide ("SO<sub>2</sub>") and nitrogen oxides ("NO<sub>x</sub>") that cross state lines and significantly contribute to violations of ozone and fine-particle standards in other states. 76 Fed. Reg. 48,208 (Aug. 8, 2011). Promulgated under the Clean Air Act's "good neighbor" provision, 42 U.S.C. § 7410(a)(2)(D)(I), the Transport Rule allowed sources to trade emission allowances with other sources in the same or different states, although it constrained emission shifting somewhat by setting emission ceilings or budgets for each state. *Id.* at 48,348. For each state regulated by the Transport Rule, EPA contemporaneously promulgated a federal implementation plan ("FIP") allocating that State's emission budget among its in-state electricity generating units ("EGUs"). *Id.* at 48,271, 48,284-87.

<sup>&</sup>lt;sup>1</sup> This Petition is filed pursuant to section 307(d)(7)(B) of the Clean Air Act, 42 U.S.C. § 7607(d)(7)(B), and, to the extent it may be applicable, section 4(d) of the Administrative Procedure Act ("APA"), 5 U.S.C. § 553(e).

<sup>&</sup>lt;sup>2</sup> Because judicial review of the rule is available by the filing of a petition for review within sixty days of the publication date—that is, by September 4, 2020—the grounds for the objections arose "within the time specified for judicial review." Id.

<sup>&</sup>lt;sup>3</sup> We attach and incorporate by reference the factual background and objections set forth in our November 28, 2017 Petition for Reconsideration.

To implement the Clean Air Act's separate visibility protection mandate and its implementing regulation, the Regional Haze Rule, the states (or EPA where a state fails to act) must submit implementation plans that ensure "reasonable progress" toward eliminating human-caused visibility impairment at national parks and wilderness area by 2064. 40 C.F.R. § 51.308(d)(1), (d)(3). A key element of both the Clean Air Act and the Regional Haze Rule is the requirement to install "best available retrofit technology" ("BART") at many of the nation's oldest sources. 42 U.S.C. § 7491(b)(2)(A); 40 C.F.R. § 51.308(e). Under the Regional Haze Rule, states were required to submit implementation plans addressing BART and ensuring reasonable progress toward the national visibility goal by December 2007. 40 C.F.R. § 51.308(b).

In 2012, EPA published a BART Exemption Rule (or "Better-than-BART" Rule), 77 Fed. Reg. 33,643 (June 7, 2012), which exempted EGUs covered by EPA's Transport Rule trading program from meeting source-specific BART requirements under the Regional Haze Rule. EPA justified that 2012 BART Exemption Rule with computer modeling purporting to show that the Transport Rule satisfied both criteria of the agency's test for a valid BART alternative—namely, that when compared to EPA's "presumptive" BART emission limits, implementation of the Transport Rule (1) does not cause visibility to decline in any Class I area, and (2) there is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas. *See also* 40 C.F.R. § 51.308(e)(3).<sup>4</sup> As part of that modeling analysis, EPA also conducted a qualitative "Sensitivity Analysis," which purported to demonstrate that the Transport Rule remained a valid "better-than-BART" alternative despite increases in the emission budgets for Texas and Georgia.<sup>5</sup>

In 2015, however, the D.C. Circuit held that EPA's sulfur dioxide and annual nitrogen oxide Transport Rule budgets for several states, including Texas, were invalid. *EME Homer City Generation v. EPA*, 795 F.3d 118, 138 (D.C. Cir. 2015) (*"Homer City II"*). As a result, EPA determined it would have to re-evaluate whether those states' power plants would still be subject

<sup>&</sup>lt;sup>4</sup> The Regional Haze Rule includes a specific so-called "better-than-BART" test that may be satisfied in one of two ways: (1) If the distribution of emissions under the alternative measure is not substantially different than under BART *and* the alternative measure results in greater emission reductions; or (2) if the distribution of emissions is significantly different and an air quality modeling study for the best and worst 20 percent of days shows an improvement in visibility from the alternative measure relative to BART. 40 CFR 51.308(e)(3).

Because CSAPR results in a substantially different distribution of emissions, EPA's 2012 CSAPR better than BART rule relied on the second test. 77 Fed. Reg. 33,642. To demonstrate that an alternative is "better-than-BART" based on such an air quality modeling, EPA must demonstrate that two criteria (referred to below as "prongs") are met: first, visibility does not decline in any Class I area, and second, there is an overall improvement in visibility, determined by comparing the average differences in visibility conditions under BART and the alternative measure across all affected Class I areas. 40 C.F.R. § 51.308(e)(3)(i)-(ii); *see also* 81 Fed. Reg. at 78,954, 78,958 (Nov. 10, 2016).

<sup>&</sup>lt;sup>5</sup> U.S. EPA, Memorandum, Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Emissions Budgets (May 29, 2012), EPA-HQ-OAR-2011-0729-0323.

to the Transport Rule, and accordingly, whether EGUs in those states could continue to rely on the BART Exemption Rule as an alternative to source-specific BART for EGUs.

On June 10, 2016, EPA published a proposed rule captioned "Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas," which included two primary components. First, in response to the D.C. Circuit's decision in *Homer City II*, EPA proposed to withdraw the FIP provisions that required Texas and three other states' EGUs to participate in the Transport Rule trading programs for annual emissions of sulfur dioxide. 81 Fed. Reg. at 78,960.<sup>6</sup>

Second, despite the withdrawal of Texas from the annual sulfur dioxide and nitrogen oxide emission trading program and other changes in the Transport Rule, EPA proposed to find, based on its 2012 qualitative analysis that the Transport Rule would continue to result in greater reasonable progress toward natural visibility under the Regional Haze program. 81 Fed. Reg. at 78,962. EPA's rationale for finding that Transport Rule remained "better than BART" for the remaining Transport Rule states despite the withdrawal of Texas's sulfur dioxide and nitrogen oxide emission budgets depended on the assumption that eligible Texas EGUs would have to be treated as subject to source-specific BART for sulfur dioxide emissions instead of being treated as subject to Transport Rule sulfur dioxide trading requirements. According to EPA, treating Texas EGUs as subject to BART for sulfur dioxide instead of Transport Rule sulfur dioxide requirements would have "reduced projected SO<sub>2</sub> emissions by between 127,300 tons— approximately 177,800 tons per year more than CSAPR—thereby improving projected air quality in [the CSAPR + BART everywhere else] scenario relative to projected air quality in both the Nationwide BART scenario and the base case scenario." *Id.* at 78,963. EPA further explained that, as a result of those source-specific BART reductions:

it is a logical conclusion that the modeled visibility improvement in the CSAPR + BART elsewhere scenario would have been even larger relative to the other scenarios than what was modeled in the 2012 analytic demonstration as reflected in the CSAPR-Better-than-BART rule. There is therefore no need to do any new modeling or more complicated sensitivity analysis. The lower SO2 emissions in Texas would clearly have led to more visibility improvement on the best and worst visibility days in the nearby Class I areas. Since the "original" CSAPR + BART-elsewhere scenario passed both prongs of the better-than-BART test (compared to the Nationwide BART scenario and the base case scenario), a modified CSAPR + BART-elsewhere scenario without Texas in the CSAPR region would without question also have passed both prongs of the better-than-BART test. In fact, if the modeling analysis had reflected the withdrawal of FIP provisions for Texas EGUs proposed in this action, the EPA expects that CSAPR implementation would have passed the better-than-BART test even more easily,

<sup>&</sup>lt;sup>6</sup> Because 2014 air quality modeling showed that Texas no longer contributed significantly to downwind nonattainment for the 1997 annual PM<sub>2.5</sub> NAAQS in any state, EPA proposed to find that it lacked authority under the "good neighbor" provision of the Clean Air Act, 42 U.S.C. 7410(a)(2)(D)(i)(I), to require emission reductions from Texas and other states' EGUs to protect downwind air quality.

## *again supporting the use of CSAPR implementation as a BART alternative* for all states whose EGUs participate in the CSAPR trading programs.<sup>7</sup>

Petitioners did not oppose EPA's proposed removal of Texas from annual sulfur dioxide and nitrogen oxide emission limits under the Transport Rule, but opposed EPA's continued reliance on an outdated 2012 analysis to justify continued exemption of EGUs from sourcespecific BART in Transport Rule states.<sup>8</sup>

On January 4, 2017, after the publication of the proposed rule in this case, EPA published a separate notice of proposed rulemaking to satisfy Texas's long-overdue BART obligations under the Clean Air Act. 82 Fed. Reg. 912 (Jan. 4, 2017). That proposal found, among other things, that in light of the D.C. Circuit's decision invalidating Texas's Transport Rule emission budgets in *Homer City II*, the state's EGUs could not continue to rely on the Transport Rule to satisfy the BART requirements.<sup>9</sup> Instead, after conducting detailed, source-specific five-factor BART analyses, EPA proposed sulfur dioxide emission limits for eighteen coal-fired and seven gas-fired EGUs in Texas. 82 Fed. Reg. at 946-47 (Tables 33 and 34).

EPA concluded that based on the installation of new scrubbers, coal-fired EGUs in Texas could cost-effectively meet sulfur dioxide emission limits between 0.04 and 0.06 lb/mmBTU, *see id.* at 939-46—significantly lower than the 0.15 lb/mmBTU "presumptive" sulfur dioxide limit that EPA had relied on in concluding that the New BART Exemption Rule was "Better than BART."<sup>10</sup> Similarly, for units with existing scrubbers, EPA projected that it would be cost effective for the units to update their scrubbers to meet sulfur dioxide emission limits between 0.11-0.12 lb/mmBTU. *See id.* EPA supported the proposed rule with technical and legal documentation of its analysis of each of the five factors used to determine "best available retrofit technology," as required in the statute, 42 U.S.C. § 7491(g)(2), and applicable regulations, 40 C.F.R. § 51.308(e)(1)(ii)(A). EPA projected that its Texas BART proposal would reduce harmful sulfur dioxide emissions by 194,000 tons per year, a "larger reduction than projected"

<sup>&</sup>lt;sup>7</sup> 81 Fed. Reg. at 78,963-64 (citations omitted; emphasis added).

<sup>&</sup>lt;sup>8</sup> See Comments by Earthjustice et al. (submitted Jan. 9, 2017) [EPA Docket No. EPA-HQ-OAR-2016-0598].

<sup>&</sup>lt;sup>9</sup> According to EPA, the Transport Rule remains a valid substitute for nitrogen oxide BART because Texas EGUs are subject to ozone-season nitrogen oxide emission limits under the Transport Rule Update. 81 Fed. Reg. at 78,957-58.

<sup>&</sup>lt;sup>10</sup> Petitioners continue to object to EPA's reliance on flawed and outdated "presumed" BART emission limits. As EPA's source-specific Texas BART proposal and its final reasonable progress FIP make clear, it is common for coal-fired EGUs to cost-effectively meet sulfur dioxide emission limits between 0.04 and 0.06 lb/mmBTU—significantly lower than the "presumptive" 0.15 lb/mmBTU limit that EPA had relied on in concluding that the New BART Exemption Rule was "better than BART." 82 Fed. Reg. 912 (Jan. 4, 2017) (source specific BART proposal); 81 Fed. Reg. 296 (Jan. 5, 2016) (final reasonable progress FIP. EPA's Texas trading rule does not conclude otherwise. Given that EPA's own analyses, *id.*, show that significantly lower emission rates are technically and economically feasible, there is nothing in the record to support EPA's conclusion that CSAPR should be compared against outdated, presumptive BART limitations.

under the Transport Rule.<sup>11</sup> EPA has not refuted the technical documentation supporting its conclusions that these units could achieve those emission limits and that such limits constitute BART for each subject unit.

On September 29, 2017, EPA issued the final New BART Exemption Rule. 82 Fed. Reg. 45,481. As proposed, EPA finalized the withdrawal of the FIP provisions requiring affected Texas EGUs to participate in Transport Rule trading programs for annual emissions of sulfur dioxide and nitrogen oxides. Also as proposed, EPA finalized its finding that the original 2012 Transport Rule "better-than-BART" analysis remained valid, and thus, there was no need to revise or revisit the Transport Rule better than BART rule. 82 Fed. Reg. at 45,491. EPA reiterated that the removal of Texas from the Transport Rule for sulfur dioxide would have resulted in an even larger reduction in Texas sulfur dioxide emissions than modeled in the original Transport Rule scenario because Texas EGUs would be subject to source-specific sulfur dioxide BART instead of being subject to the Transport Rule. EPA projected that Texas EGUs' sulfur dioxide emissions would be at least 127,300 tons lower under BART than under the Transport Rule. As a result, EPA concluded that the removal of Texas from the Transport Rule would have "strengthened" the 2012 analytic demonstration because the only material change from the sensitivity analysis would be even greater emission reductions and accompanying visibility benefits resulting from source-specific sulfur dioxide BART for Texas sources.

In the final rule, EPA also admitted for the first time that Texas's removal from the Transport Rule could result in a potential shift of 22,300 to 53,000 tons per year of sulfur dioxide allowances to other states.<sup>12</sup> EPA explained that the reason for this shift in emissions was that in the original Transport Rule scenario, Texas EGUs were projected to emit at least 22,300 tons of sulfur dioxide in excess of the state budget. This would have been possible through the use of allowances purchased from EGUs in other sulfur dioxide Group 2 states: Alabama, Georgia, Kansas, Minnesota, Nebraska, and South Carolina. But because Texas is no longer part of the Transport Rule trading program, Texas EGUs would no longer purchase those allowances from the other states, and the EGUs in those other states could potentially use those allowances to increase their own sulfur dioxide emissions. Accounting for that shift in emissions, EPA estimated the overall net projected reduction in sulfur dioxide emissions by removing Texas from the Transport Rule and requiring source-specific BART would be approximately 105,000 tons per year, instead of the 127,300 tons described in the original proposal. Despite the potential increase in emissions from other Transport Rule states, however, EPA concluded that any associated reduction in visibility "would be more than offset by greater visibility improvement in Class I areas near Texas" as a result of source-specific sulfur dioxide BART.<sup>13</sup>

<sup>&</sup>lt;sup>11</sup> EPA, Technical Support Document for the Texas Regional Haze BART Federal Implementation Plan at 2 (Dec. 2016)[EPA Docket No. EPA-R06-OAR-2016-0611-0004] ("BART FIP TSD").

<sup>&</sup>lt;sup>12</sup> 82 Fed. Reg. at 45,493/3.

<sup>&</sup>lt;sup>13</sup> *Id.* at 45,494/1.

Less than one month later, however, on October 17, 2017, EPA published a Texas BART Rule,<sup>14</sup> in which the agency reversed course and declined to adopt source-specific emission limitations for BART-eligible Texas EGUs under the Regional Haze Rule. Although the final New BART Exemption Update rule was explicitly predicated on the assumption that Texas EGUs would be subject to individual BART emission limits instead of the Transport Rule budgets, EPA's alternative plan discarded source-specific BART limits for Texas EGUs in favor of an entirely new intrastate emissions trading scheme. Contrary to its proposed and final New BART Exemption Rule, EPA's published BART trading scheme for Texas does not include source-specific emission limits. Rather than reducing Texas EGUs' sulfur dioxide emissions to levels at least 105,000 tons lower than they would have been under CSAPR, the new intrastate trading program allows Texas EGUs to emit more sulfur dioxide than would have been allowed under the Transport Rule budgets for Texas. Coupled with the approximately 22,300 to 53,000 tons per year of sulfur dioxide increase that results from the removal of Texas from the interstate trading program,<sup>15</sup> the Texas BART trading scheme plus the removal of Texas from CSAPR now results in at least 149,600 tons more per year of sulfur dioxide than EPA estimated in the proposed New BART Exemption Rules-thereby raising the likelihood of decreased visibility in affected Class I areas, and a worse visibility performance overall of the Transport Rule relative to BART.<sup>16</sup>

In response to the New BART Exemption Rule and the Texas BART Rule, Petitioners filed their 2017 Petition (Exhibit A), which demonstrated that EPA must convene a reconsideration regarding (1) EPA's conclusion that CSAPR continues to be a valid alternative to the installation of source-specific BART under the Regional Haze Rule despite the withdrawal of Texas from the trading program; (2) EPA's entirely new emissions shifting analysis, which the agency relies on to demonstrate that the Transport Rule remains better than BART; and (3)

<sup>&</sup>lt;sup>14</sup> Promulgation of Air Quality Implementation Plans; State of Texas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan, 82 Fed. Reg. 48,324 (Oct. 17, 2017). Sierra Club and NPCA contend that the October 17, 2017 action does not constitute a valid final action sufficient to comply with the Consent Decree in *NPCA v. EPA*, No. 11-1548 (D.D.C.), and have asked the Court in that case to order EPA to promulgate a final action as required by that decree. *See* Mot. to Enforce Decree, *NPCA v. EPA*, No. 11-1548 (D.D.C. filed Oct. 13, 2017) (ECF Doc. 103). The parties to that proceeding have recently filed supplemental pleadings regarding motions to enforce and to terminate the Consent Decree. *Id.*, ECF Docs. 144 (EPA), 145 (Plaintiffs). In citing the October 17, 2017 action here, NPCA and Sierra Club do not in any way concede its legality or sufficiency, and that it constitutes final action. <sup>15</sup> 82 Fed. Reg. at 45,493/3.

<sup>&</sup>lt;sup>16</sup> In the proposed New BART Exemption Rule, EPA anticipated (based on outdated, presumptive BART emission limits) that source-specific BART for Texas EGUs would result in a reduction of at least 127,300 tons per year. 81 Fed Reg. at 78,963. As a result of the Texas BART trading scheme, however, that reduction has vanished. Meanwhile, the exclusion of Texas from the Transport Rule trading scheme will result in at least 22,300 excess tons of pollution from states like Alabama and Georgia. Relative to the proposed New BART Exemption Rule, the total additional and unaccounted for emission increase is at least 149,600 tons per year.

the agency's continued reliance on its 2012 modeling despite substantive flaws in EPA's emissions shifting analysis and failing to demonstrate that the Transport Rule continues meet the regulatory criteria for a valid BART alternative.

Petitioners demonstrated that it was impracticable to raise the issues detailed in the 2017 Petition during the public comment period because EPA did not make information or its rationale available until after the issuance of the rule. As shown in the 2017 Petition, EPA's New BART Exemption Rule is predicated on the assumption that Texas EGUs would be subject to sourcespecific BART. EPA's separate BART Rule for Texas—issued three weeks *after* the final New BART Exemption Rule in this case—rendered that assumption invalid. As further discussed in the 2017 Petition, these objections were of central relevance to the outcome of the rule and EPA's conclusion that the Transport Rule remains better than BART despite the removal of Texas from the trading program.

On June 29, 2020, EPA denied the 2017 Petition by letters enclosing "The EPA's Basis for Denying the Sierra Club and the National Parks Conservation Association's Petition for Reconsideration." In this 2020 Basis for Denial (at 7), EPA concedes that it was not practicable for Petitioners to raise objections regarding the Texas intrastate trading program during the public comment period. Nonetheless, EPA concludes that Petitioners' objections are not of "central relevance" to the final rule because even when CSAPR is analyzed in combination with the Texas trading program rather than source-specific BART in Texas, EPA's conclusion that CSAPR continues to meet the two-pronged test of 40 C.F.R. § 51.308(e)(3) remains valid. *Id.* at 7-8. EPA also found that Petitioners' remaining objections regarding emission shifting, use of modeling performed for the 2012 analysis, and use of presumptive BART limits failed to meet either or both parts of the two-part test for mandatory reconsideration. *Id.* at 16-20.

On July 6, 2020, EPA published a notice of its action denying the 2017 Petition. 85 Fed. Reg. 40,286. Also on July 6, 2020, EPA added a new document to the docket at EPA-HQ-OAR-2016-0598-0034 entitled "Cross-State Air Pollution Rule Better than BART (BART) Sensitivity Calculations," related to Section IV.B.4. of the 2020 Basis for Denial. That "Corrected Sensitivity Analysis," published for the first time in response to the 2017 Petition for Reconsideration, purports to demonstrate that, despite significant increases in total allowable emissions from Texas and Georgia, visibility improvement under the Cross State Air Pollution Rule ("CSAPR") is still equal to or greater than the improvements expected under sourcespecific "best available retrofit technology," and therefore CSAPR remains a valid BART alternative under 40 C.F.R. § 51.308(e)(3).

### II. EPA MUST RECONSIDER THE NEW BART EXEMPTION RULE AND THE 2020 DENIAL.

Because EPA presented its "corrected" and "updated" sensitivity calculations for the first time in its July 6, 2020 denial of the 2017 Petition, and because that new analysis is of central relevance to the outcome of the 2017 BART Exemption Rule, Petitioners hereby petition for reconsideration of both the New BART Exemption Rule and EPA's 2020 Denial under the Clean Air Act, 42 U.S.C. § 7607(d)(7)(B). For both actions, Petitioners object to EPA's disclosure of

information regarding visibility impacts under alternative regulatory scenarios for the first time after the 2020 Denial.<sup>17</sup>

First, Petitioners' objection is of "central relevance" to the validity of EPA's 2017 New Exemption Rule. Indeed, based on EPA's own revised calculations, presented for the first time on July 6, 2020, the agency no longer has a valid basis for concluding that the Transport Rule remains better than BART. A BART alternative is permissible only if both of the following two criteria are met: (i) visibility does not decline in any Class I area, and (ii) there is an *overall improvement* in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas. 40 C.F.R. § 51.308(e)(3) (emphasis added).

Here, EPA's own "corrected" analysis makes clear that CSAPR does *not* satisfy the twopronged test under 40 C.F.R. § 51.308(e)(3) to qualify as a BART alternative. In fact, the spreadsheet underlying the agency's corrected analysis demonstrates that visibility improvement under CSAPR is *not* equal to or greater than visibility improvement under source-specific BART averaged over all 140 Class I areas, or the sixty eastern Class I areas covered by CSAPR.<sup>18</sup>

In Section IV.B.4 of the 2020 Basis for Denial, captioned "Corrected Sensitivity Analysis Showing CSAPR Better Than BART," EPA sets out an "updated" sensitivity analysis in response to the 2017 Petition for Reconsideration. Specifically, EPA re-evaluates the two-pronged test under 40 C.F.R. § 51.308(e)(3) to determine whether CSAPR still qualifies as a BART alternative with the incorporation of the revised, increased Texas and Georgia SO<sub>2</sub> emission budgets. EPA summarizes the results of its revised sensitivity analysis in Table 3 of its Denial Letter, which is presented below:

Average Visibility Change	CSAPR+BART - 2014 base 20% best days	Nationwide BART - 2014 base 20% best days	CSAPR+BART – 2014 base 20% worst days	Nationwide BART – 2014 base 20% worst days
140 class I areas	-0.1	-0.1	-0.5	-0.5
60 eastern class I areas	-0.2	-0.2	-1.2	-1.0

Figure 1: Reproduced from Table 3 of EPA's Denial of Petitioner's Request for Reconsideration

<sup>&</sup>lt;sup>17</sup> To the extent it may be applicable, Petitioners also seek reconsideration under section 4(d) of the Administrative Procedure Act ("APA"), 5 U.S.C. § 553(e).

<sup>&</sup>lt;sup>18</sup> As explained in the 2017 Petition (at 11-12), the New BART Exemption Rule also fails to meet the Regional Haze Rule's BART exemption requirements for the nine Class I areas EPA previously "identified as the affected areas." *See* CSAPR-BART Sensitivity Memo, EPA-HQ-OAR-2016-0598-0004 at 3; *see also* 2017 Petition, EPA-HQ-OAR-2016-0598-0035 at 12-13.

EPA concludes:

using the petitioners' own assumption for emissions in Texas under the Texas intrastate trading program, the average visibility improvement in the CSAPR scenario is still equal to or greater than the visibility improvement in the BART scenario on both the 20 percent best days and the 20 percent worst days (averaged over the 60 eastern class I areas and the 140 nationwide class I areas). Thus, the sensitivity analysis supports EPA's conclusion that CSAPR participation remains a valid BART alternative.

2020 Basis for Denial at 16.

As support for its denial of the 2017 Petition, on July 6, 2020, EPA also published an "updated" and previously undisclosed spreadsheet that contains EPA's visibility calculations, which contains the following summary:<sup>19</sup>

			CSAPR+BA	CSAPR+BA		
		CSAPR	RT - 2014	RT - 2014		
		+BAR	base 20%	base 20%		
		T -	best with	worst with	Nationwi	Nationwi
	CSAPR+BA	2014	adjustments	adjustments	de BART	de BART
	RT - 2014	base	to GA and	to GA and	- 2014	- 2014
	base 20%	20%	TX; 2020	TX; 2020	base 20%	base 20%
	best	worst	PfR	PfR	best	worst
Avg visibility change for 140 Class I areas	-0.1	-0.7	-0.1	-0.5	-0.1	-0.5
Avg visibility change for 60 Class I areas	-0.3	-1.6	-0.2	-1.2	-0.2	-1.0

#### Figure 2: Summary Results from EPA's Spreadsheet Sensitivity Analysis

Petitioners did not alter EPA's calculations or methodology, but simply copied EPA's summary results and pasted it below EPA's figures, while reformatting the numbers to display two decimal places. These expanded results are below:<sup>20</sup>

 $<sup>^{19}</sup>$  EPA-HQ-OAR-2016-0598-0034\_content. See the tab entitled, "2020 Petition TX + GA Adjust," cells N142 – S143.

			CSAPR+BA	CSAPR+BA		
		CSAPR	RT - 2014	RT - 2014		
		+BAR	base 20%	base 20%		
		Τ-	best with	worst with	Nationwi	Nationwi
	CSAPR+BA	2014	adjustments	adjustments	de BART	de BART
	RT - 2014	base	to GA and	to GA and	- 2014	- 2014
	base 20%	20%	TX; 2020	TX; 2020	base 20%	base 20%
	best	worst	PfR	PfR	best	worst
Avg visibility change for 140 Class I areas	-0.13	-0.68	-0.10	-0.52	-0.11	-0.47
Avg visibility change for 60 Class I areas	-0.29	-1.55	-0.21	-1.16	-0.24	-1.02

Figure 3. Expanded Summary Results from EPA's Spreadsheet Sensitivity Analysis

As can be seen from the expanded results, for the 140 Class I Areas, the 0.10 deciview visibility benefit from "CSAPR+BART - 2014 base 20% best with adjustments to GA and TX" is actually *less than* the 0.11 deciview improvement from "Nationwide BART - 2014 base 20% best." Similarly, for the 60 Class I Areas, the 0.21 deciview visibility benefit from "CSAPR+BART - 2014 base 20% best with adjustments to GA and TX" is actually *less than* the 0.24 deciview improvement from "Nationwide BART - 2014 base 20% best." Thus, EPA's sensitivity analysis actually serves to disprove its point: the average visibility improvement in the BART scenario on the 20 percent best days (averaged over the 60 eastern class I areas and the 140 nationwide class I areas).

Retaining two decimal places in assessing EPA's visibility results is consistent with EPA's own approach in its December 2011 BART Alternative TSD.<sup>21</sup> For instance, on page 40 of the TSD, EPA presents its summary of the average visibility results using a similar format as above:

<sup>&</sup>lt;sup>20</sup> See the file, "EPA-HQ-OAR-2016-0598-0034\_content\_1." See the tab entitled, "2020 Petition TX + GA Adjust," cells N147 – S149 (Exhibit B).

<sup>&</sup>lt;sup>21</sup> Technical Support Document for Demonstration of the Transport Rule as a BART Alternative, U.S. Environmental Protection Agency Office of Air Quality Planning and Standards Research Triangle Park, NC 27711 December 2011, Docket Number EPA-HQ-OAR-2011-0729.

	Transport Rule – 2014 Base Case 20% Best Days	Transport Rule – 2014 Base Case 20% Worst Days	Nationwide BART – 2014 Base Case 20% Best Days	Nationwide BART – 2014 Base Case 20% Worst Days
Eastern Class I Areas Average (60 Areas)	-0.3	-1.6	-0.2	-1.0
All Class I Areas Average (140 Areas)	-0.1	-0.7	-0.1	-0.5

Figure 4. EPA's Table 3-6 from its December 2011 BART Alternative TSD.

In referencing the above table, EPA notes in Footnote 30, "Before rounding to the tenths digit, 'Transport Rule +BART-elsewhere' has a visibility improvement of 0.13 deciview compared to 0.11 deciview for 'nationwide BART."<sup>22</sup> Thus, in its own TSD, EPA in fact used visibility results rounded to two decimal places for the same purpose and in the same way as we do above.

In addition, we note that EPA has commonly presented visibility data to at least two decimals. For instance, in its 2017 Texas FIP proposal, EPA presents its visibility modeling using two and often three decimals places.<sup>23</sup>

Second, it was impracticable for Petitioners to raise the issues in this Reconsideration Petition during the comment period for the 2017 BART Exemption Rule or the subsequent 2017 Petition because EPA presented its "corrected" sensitivity calculations for the first time on July 6, 2020, when it posted the revised spreadsheet to the docket in this matter. EPA must provide a reasonable opportunity for public examination, evaluation and comment on its actions and any underlying, supporting information, assumptions or conclusions. More specifically, the Clean Air Act requires a "detailed explanation" of "(A) the factual data on which the proposed rule is based; (B) the methodology used in obtaining the data and in analyzing the data; and (C) major legal interpretations and policy considerations underlying the proposed rule," 42 U.S.C. § 7607(d)(3), and, after issuance of the proposed rule, that EPA affirmatively update the rulemaking docket as new information becomes available. 42 U.S.C. § 7607(d)(4)(B)(i); *see also Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 518-19 (D.C. Cir. 1983)

<sup>&</sup>lt;sup>22</sup> *Id*. at n.30.

<sup>&</sup>lt;sup>23</sup> See, e.g., 82 Fed. Reg. 912, 921, 931-34, 940 (Jan. 4, 2017).

(Clean Air Act requires a "detailed explanation of its reasoning at the 'proposed rule' stage as well [as in the final rule].").

These notice requirements are designed "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review." *Int'l Union,* 407 F.3d at 1259-60. "It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, [to a] critical degree, is known only to the agency." *Am. Radio Relay League, Inc. v. FCC,* 524 F.3d 227, 237 (D.C. Cir. 2008) (quoting *Portland Cement Ass'n v. Ruckelshaus,* 486 F.2d 375, 393 (D.C. Cir. 1973) (alteration in original)).

EPA has taken many actions—including the New BART Exemption Rule, the 2020 Denial, and others described above—that have at their heart a comparison of visibility improvement under a Nationwide BART scenario and CSAPR plus BART elsewhere scenario. Here, EPA disclosed new visibility calculations regarding such comparisons *after* issuing the 2020 Denial and almost three years after the New BART Exemption Rule. This data addresses an issue of central relevance in both actions—namely whether CSAPR plus BART results in an "overall improvement in visibility" compared to source-specific BART "over all affected Class I areas. 40 C.F.R. § 51.308(e)(3).<sup>24</sup> EPA's own updated calculations demonstrate that it does not. In fact, the "corrected" calculations, made available to the public for the first time on July 6, 2020, show the opposite—i.e., that source specific BART would result in greater visibility improvements over all 140 Class I areas, the 60 eastern Class I areas covered by CSAPR, and the nine Class I areas EPA identified in 2012 as the areas affected by Texas emissions. As a consequence, EPA's BART Exemption Rule fails to meet the unambiguous requirements of the Regional Haze Rule. EPA's continued reliance on CSAPR as an alternative to source specific BART is therefore arbitrary, capricious, and contrary to law.

EPA afforded neither Petitioners nor the public an opportunity to review this new data or EPA's methodology, or to present evidence for the record. Thus, EPA must grant this petition

<sup>&</sup>lt;sup>24</sup> To support its conclusion that the Transport Rule resulted in greater reasonable progress than source specific BART, EPA relied on air quality modeling for the best and worst 20 percent of days to show that CSAPR resulted in an improvement in visibility from the alternative measure relative to BART. 40 CFR 51.308(e)(3); 77 Fed. Reg. at 33,648. To demonstrate that an alternative is "better-than-BART" based on air quality modeling, EPA must demonstrate that both (1) visibility does not decline in any Class I area and (2) there is an overall improvement in visibility, determined by comparing the average differences in visibility conditions under BART and the alternative measure across all affected Class I areas. 40 C.F.R. § 51.308(e)(3)(i)-(ii). EPA relied on that same modeling, together with subsequent sensitivity analyses, to support its conclusion that CSAPR remains a valid BART alternative despite the withdrawal of Texas from trading program. 81 Fed. Reg. 78,954; *see also* EPA Docket No. EPA-HQ-OAR-2011-0729-0323 (sensitivity analysis). Thus, EPA's calculations comparing the average differences between visibility improvement under BART and CSAPR go to the heart of the agency's finding that CSAPR remains a valid BART alternative.

for reconsideration of the New BART Exemption Rule and the 2020 Denial, and must afford an opportunity for the public to comment on its newly presented data.

Sincerely,

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# Exhibit A





November 28, 2017

#### BY FEDERAL EXPRESS AND EMAIL

Administrator Scott Pruitt Office of the Administrator U.S. Environmental Protection Agency William Jefferson Clinton Building – Mail Code 1101A 1200 Pennsylvania Ave., NW Washington, DC 20460 Pruitt.Scott@epa.gov

#### Re: Petition for Partial Reconsideration of Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas; Final Rule; 82 Fed. Reg. 45,481 (Sept. 29, 2017); EPA-HQ-OAR-2016-0598; FRL-9968-46-OAR

Under Section 307(d)(7)(B) of the Clean Air Act ("CAA" or "the Act"), 42 U.S.C. § 7607(d)(7)(B), National Parks Conservation Association ("NPCA"), and Sierra Club (collectively, "Petitioners") respectfully petition the Administrator of the Environmental Protection Agency ("the Administrator" or "EPA") to reconsider certain aspects of EPA's final rule captioned Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas, 82 Fed. Reg. 45,481 (Sept. 29, 2017) [hereinafter, the "New BART Exemption Rule"]. Specifically, Petitioners object to: (1) EPA's conclusion that the Cross State Air Pollution Rule ("CSAPR" or the "Transport Rule") continues to be a valid alternative to the installation of source-specific "best available retrofit technology" ("BART") under the Regional Haze Rule despite the withdrawal of Texas from the trading program; (2) EPA's entirely new emissions shifting analysis, which the agency relies on to demonstrate that the Transport Rule remains better than BART; and (3) the agency's continued reliance on its 2012 modeling despite substantive flaws in EPA's emissions shifting analysis and failing to demonstrate that the Transport Rule continues meet the regulatory criteria for a valid BART alternative.

As discussed below, each objection is "of central relevance to the outcome of the rule," 42 U.S.C. § 7607(d)(7)(B), in that they demonstrate that the final rule is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." *Id.* § 7607(d)(9)(A). Moreover, the EPA interpretations, assumptions and plans that render the New BART Exemption Rule

arbitrary and capricious appeared for the first time in either the final rule published on September 29, 2017, or in EPA's subsequent October 17, 2017 Regional Haze rule for BART-eligible sources in Texas. Thus, the grounds for the objections raised in this petition "arose after the period for public comment," which ended on January 9, 2017. *Id.* § 7607(d)(7)(B). Because the grounds for the objections raised in this petition arose after the period for public comment and are of central relevance to EPA's finding in the New BART Exemption Rule that the Transport Rule remains better than BART despite the withdrawal of the Texas from the trading program, the Administrator must "convene a proceeding for reconsideration" of portions of the rule, and "provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed." *Id.* § 7607(d)(7)(B).<sup>1</sup>

#### BACKGROUND

In 2011, EPA promulgated the Transport Rule, which required 28 states in the eastern U.S., including Texas, to curb power plant emissions of sulfur dioxide ("SO<sub>2</sub>") and nitrogen oxides ("NO<sub>x</sub>") that cross state lines and significantly contribute to violations of ozone and fine-particle standards in other states. 76 Fed. Reg. 48,208 (Aug. 8, 2011). Promulgated under the Clean Air Act's "good neighbor" provision, 42 U.S.C. § 7410(a)(2)(D)(I), the Transport Rule allowed sources to trade emission allowances with other sources in the same or different states, although it constrained emission shifting somewhat by setting emission ceilings or budgets for each state. *Id.* at 48,348. For each state regulated by the Transport Rule, EPA contemporaneously promulgated a federal implementation plan ("FIP") allocating that State's emission budget among its in-state electricity generating units ("EGUs"). *Id.* at 48,271, 48,284-87.

To implement the Clean Air Act's separate visibility protection mandate and its implementing regulation, the Regional Haze Rule, the states (or EPA where a state fails to act) must submit implementation plans that ensure "reasonable progress" toward eliminating human-caused visibility impairment at national parks and wilderness area by 2064. 40 C.F.R. § 51.308(d)(1), (d)(3). A key element of both the Clean Air Act and the Regional Haze Rule is the requirement to install "best available retrofit technology" ("BART") at many of the nation's oldest sources. 42 U.S.C. § 7491(b)(2)(A); 40 C.F.R. § 51.308(e). Under the Regional Haze Rule, states were required to submit implementation plans addressing BART and ensuring reasonable progress toward the national visibility goal by December 2007. 40 C.F.R. § 51.308(b).

In 2012, EPA published a BART Exemption Rule (or "Better-than-BART" Rule), 77 Fed. Reg. 33,643 (June 7, 2012), which exempted EGUs covered by EPA's Transport Rule trading program from meeting source-specific BART requirements under the Regional Haze Rule. EPA justified that 2012 BART Exemption Rule with computer modeling purporting to show that the Transport Rule satisfied both criteria of the agency's test for a valid BART alternative—namely, that when compared to EPA's "presumptive" BART emission limits, implementation of the Transport Rule (1) does not cause visibility to decline in any Class I area, and (2) there is an overall improvement in visibility, determined by comparing the average differences between

<sup>&</sup>lt;sup>1</sup> Because judicial review of the rule is available by the filing of a petition for review within sixty days of the publication date—that is, by November 28, 2017—the grounds for the objections arose "within the time specified for judicial review." *Id.* 

BART and the alternative over all affected Class I areas. As part of that modeling analysis, EPA also conducted a qualitative "Sensitivity Analysis," which purported to demonstrate that the Transport Rule remained a valid "better-than-BART" alternative despite increases in the emission budgets for Texas and Georgia.<sup>2</sup>

In 2015, however, the D.C. Circuit held that EPA's sulfur dioxide and annual nitrogen oxide Transport Rule budgets for several states, including Texas, were invalid. *EME Homer City Generation v. EPA*, 795 F.3d 118, 138 (D.C. Cir. 2015) (*"Homer City II"*). As a result, EPA determined it would have to re-evaluate whether those states' power plants would still be subject to the Transport Rule, and accordingly, whether EGUs in those states could continue to rely on the BART Exemption Rule as an alternative to source-specific BART for EGUs. In response to that remand, in September 2016, EPA issued a final rule updating the Transport Rule to address states' good neighbor obligations with regard to the 2008 ozone NAAQS, and establishing new ozone-season nitrogen oxide budgets for several states, including Texas, to address those states' good neighbor obligations with regard to the 2008 8-hour ozone NAAQS. 81 Fed. Reg. 74,504, 74,576 (Oct. 26, 2016).<sup>3</sup>

On June 27, 2016, EPA issued a memorandum providing Texas with the option of voluntarily adopting the Transport Rule pollution budgets as a way of avoiding the source-specific emission limits associated with Best Available Retrofit Technology.<sup>4</sup> Unlike the other three states to which EPA had extended the offer, Texas declined to adopt the Transport Rule's requirements into state law.<sup>5</sup>

<sup>&</sup>lt;sup>2</sup> U.S. EPA, Memorandum, Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Emissions Budgets (May 29, 2012), EPA-HQ-OAR-2011-0729-0323.

<sup>&</sup>lt;sup>3</sup> EPA did not establish new ozone-season nitrogen oxide budgets for Florida, North Carolina, and South Carolina because the agency determined that those state EGUs no longer have downwind ozone impacts that require participate in the Transport Rule ozone-season nitrogen oxide trading program. In addition, EPA did not adopt revised sulfur dioxide budgets for Alabama, Georgia or South Carolina. However, each of those states, except Florida, have committed to requiring in-state EGUs to participate in the Transport Rule trading program for either annual nitrogen oxide or sulfur dioxide emissions to address particulate matter transport obligations. 81 Fed. Reg. 78,954, 78,956-57 (Nov. 10, 2016). Petitioners continue to object to EPA's reliance on those states' voluntary commitment to comply with the Transport Rule as a way of prolonging the ability of any states to rely on the better-than-BART rule to avoid source-specific BART for EGUs. Florida is the only state originally covered by the Transport Rule for nitrogen oxide emissions for which all such coverage is ending as a result of the EPA's set of actions to address the *Homer City II* remand. *Id*.

<sup>&</sup>lt;sup>4</sup> Mem. from J. McCabe, Acting Assistant Administrator, EPA to Regional Air Division Directors, Re: The USEPA's Plan for Responding to the Remand of the Cross-State Air Pollution Rule Phase 2 SO<sub>2</sub> Budgets for Alabama, Georgia, South Carolina, and Texas (June 27, 2016) [EPA Docket No. EPA-HQ-OAR-2016-0598-0003]; *see also* 81 Fed. Reg. at 78,959 n.35.
<sup>5</sup> The D.C. Circuit also remanded the Transport Rule sulfur dioxide emission budgets for Alabama, Georgia, and South Carolina, each of which have now proposed or adopted SIP revisions that would require in-state EGUs to continue to comply with comparably stringent

On November 10, 2016, EPA published a proposed rule captioned "Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas," which included two primary components. First, in response to the D.C. Circuit's decision in *Homer City II*, EPA proposed to withdraw the FIP provisions that require affected Texas and three other states' EGUs to participate in the Transport Rule trading programs for annual emissions of sulfur dioxide. 81 Fed. Reg. at 78,960. Because 2014 air quality modeling showed that Texas no longer contributed significantly to downwind nonattainment for the 1997 annual  $PM_{2.5}$  NAAQS in any state, EPA proposed to find that it lacked authority under the "good neighbor" provision of the Clean Air Act, 42 U.S.C. § 7410(a)(2)(D)(i)(I), to require emission reductions from Texas and other states' EGUs to protect downwind air quality.

Second, despite the withdrawal of Texas from the annual sulfur dioxide and nitrogen oxide emission trading program and other changes in the Transport Rule, EPA proposed to find, based on a qualitative analysis conducted in 2012, that the Transport Rule would continue to result in greater reasonable progress toward natural visibility under the Regional Haze program. 81 Fed. Reg. at 78,962. EPA's rationale for finding that Transport Rule remained "better than BART" for the remaining Transport Rule states despite the withdrawal of Texas's sulfur dioxide and nitrogen oxide emission budgets depended on the assumption that eligible Texas EGUs would have to be treated as subject to source-specific BART for sulfur dioxide emissions instead of being treated as subject to Transport Rule sulfur dioxide instead of Transport Rule sulfur dioxide requirements would have "reduced projected SO<sub>2</sub> emissions by between 127,300 tons and approximately 177,800 tons per year more than CSAPR, thereby improving projected air quality in [the CSAPR + BART everywhere else] scenario relative to projected air quality in both the Nationwide BART scenario and the base case scenario." *Id.* at 78,963. EPA further explained that, as a result of those source-specific BART reductions:

*it is a logical conclusion that the modeled visibility improvement in the CSAPR* + *BART elsewhere scenario would have been even larger relative to the other scenarios than what was modeled in the 2012 analytic demonstration as reflected in the CSAPR-Better-than-BART rule*. There is therefore no need to do any new modeling or more complicated sensitivity analysis. *The lower SO2 emissions in Texas would clearly have led to more visibility improvement on the best and worst visibility days in the nearby Class I areas*. Since the "original" CSAPR + BART-elsewhere scenario passed both prongs of the better-than-BART test (compared to the Nationwide BART scenario and the base case scenario), a modified CSAPR + BART-elsewhere scenario without Texas in the CSAPR region would without question also have passed both prongs of the better-than-BART test. In fact, if the modeling analysis had reflected the withdrawal of FIP provisions for Texas EGUs proposed in this action, the *EPA expects that CSAPR implementation would have passed the better-than-BART test even more easily,* 

Transport Rule sulfur dioxide and and annual nitrogen oxide requirements. 81 Fed. Reg. at 78,962.

## *again supporting the use of CSAPR implementation as a BART alternative* for all states whose EGUs participate in the CSAPR trading programs.<sup>6</sup>

Petitioners did not (and do not) oppose EPA's proposed removal of Texas from annual sulfur dioxide and nitrogen oxide emission limits under the Transport Rule, but filed detailed comments opposing EPA's continued reliance on an outdated 2012 analysis to justify continued exemption of EGUs from source-specific BART in Transport Rule states for several reasons.<sup>7</sup>

On January 4, 2017, after the publication of the proposed rule in this case, EPA published a separate notice of proposed rulemaking to satisfy Texas's long-overdue BART obligations under the Clean Air Act. 82 Fed. Reg. 912 (Jan. 4, 2017). That proposal found, among other things, that in light of the D.C. Circuit's decision invalidating Texas's Transport Rule emission budgets in *Homer City II*, and because Texas declined to voluntarily participate in the Transport Rule, , the state's EGUs could not continue to rely on the Transport Rule to satisfy the BART requirements.<sup>8</sup> Instead, after conducting detailed, source-specific five-factor BART analyses, EPA proposed sulfur dioxide emission limits for eighteen coal-fired and seven gas-fired EGUs in Texas. 82 Fed. Reg. at 946-47 (Tables 33 and 34).

EPA concluded that based on the installation of new scrubbers, coal-fired EGUs in Texas could cost-effectively meet sulfur dioxide emission limits between 0.04 and 0.06 lb/mmBTU, *see id.* at 939-46—significantly lower than the 0.15 lb/mmBTU "presumptive" sulfur dioxide limit that EPA had relied on in concluding that the New BART Exemption Rule was "Better than BART." Similarly, for units with existing scrubbers, EPA projected that it would be cost effective for the units to update their scrubbers to meet sulfur dioxide emission limits between 0.11-0.12 lb/mmBTU. *See id.* EPA supported the proposed rule with technical and legal documentation of its analysis of each of the five factors used to determine "best available retrofit technology," as required in the statute, 42 U.S.C. § 7491(g)(2), and applicable regulations, 40 C.F.R. § 51.308(e)(1)(ii)(A). EPA projected that its Texas BART proposal would reduce harmful sulfur dioxide emissions by 194,000 tons per year, a "larger reduction than projected" under the Transport Rule.<sup>9</sup> EPA has not refuted the technical documentation supporting its conclusions that these units could achieve those emission limits.

On September 29, 2017, EPA issued the final New BART Exemption Rule at issue here. 82 Fed. Reg. 45,481. As proposed, EPA finalized the withdrawal of the FIP provisions requiring affected Texas EGUs to participate in Transport Rule trading programs for annual emissions of sulfur dioxide and nitrogen oxides. Also as proposed, EPA finalized its finding that the original

<sup>&</sup>lt;sup>6</sup> 81 Fed. Reg. at 78,963-64 (citations omitted; emphasis added).

<sup>&</sup>lt;sup>7</sup> See Comments by Earthjustice et al. (submitted Jan. 9, 2017) [EPA Docket No. EPA-HQ-OAR-2016-0598].

<sup>&</sup>lt;sup>8</sup> According to EPA, the Transport Rule remains a valid substitute for nitrogen oxide BART because Texas EGUs are subject to ozone-season nitrogen oxide emission limits under the Transport Rule Update. 81 Fed. Reg. at 78,957-58.

<sup>&</sup>lt;sup>9</sup> EPA, Technical Support Document for the Texas Regional Haze BART Federal Implementation Plan at 2 (Dec. 2016)[EPA Docket No. EPA-R06-OAR-2016-0611-0004] ("BART FIP TSD").

2012 Transport Rule "better-than-BART" analysis remained valid, and thus, there was no need to revise or revisit the Transport Rule better than BART rule. 82 Fed. Reg. at 45,491. EPA reiterated that the removal of Texas from Transport Rule for sulfur dioxide would have resulted in an even larger reduction in Texas sulfur dioxide emissions than modeled in the original Transport Rule scenario because Texas EGUs would be subject to source-specific sulfur dioxide BART instead of being subject to the Transport Rule. Indeed, EPA projected that Texas EGUs' sulfur dioxide emissions would be at least 127,300 tons lower under BART than under the Transport Rule. As a result, EPA concluded that the removal of Texas from the Transport Rule would have "strengthened" the 2012 analytic demonstration because the only material change from the sensitivity analysis would be even greater emission reductions and accompanying visibility benefits resulting from source-specific sulfur dioxide BART for Texas sources.

However, in the final rule, EPA also admitted for the first time that Texas's removal from the Transport Rule could result in a potential shift of 22,300 to 53,000 tons per year of sulfur dioxide allowances to other states.<sup>10</sup> EPA explained that the reason for this shift in emissions was that in the original Transport Rule scenario, Texas EGUs were projected to emit at least 22,300 tons of sulfur dioxide in excess of the state budget. This would have been possible through the use of allowances purchased from EGUs in other sulfur dioxide Group 2 states: Alabama, Georgia, Kansas, Minnesota, Nebraska, and South Carolina. But because Texas is no longer part of the Transport Rule trading program, Texas EGUs would no longer purchase those allowances from the other states, and the EGUs in those other states could potentially use those allowances to increase their own sulfur dioxide emissions. Accounting for that shift in emissions, EPA estimated the overall net projected reduction in sulfur dioxide emissions by removing Texas from the Transport Rule and requiring source-specific BART would be approximately 105,000 tons per year, instead of the 127,300 tons described in the original proposal. Despite the potential increase in emissions from other Transport Rule states, however, EPA concluded that any associated reduction in visibility "would be more than offset by greater visibility improvement in Class I areas near Texas" as a result of source-specific sulfur dioxide BART.<sup>11</sup>

Less than one month later, however, on October 17, 2017, EPA published a Texas BART Rule,<sup>12</sup> in which the agency reversed course and declined to adopt source-specific emission limitations for BART-eligible Texas EGUs under the Regional Haze Rule. Although the final New BART Exemption Update rule was explicitly predicated on the assumption that Texas EGUs *would be subject to* individual BART emission limits instead of the Transport Rule

<sup>&</sup>lt;sup>10</sup> 82 Fed. Reg. at 45,493/3.

<sup>&</sup>lt;sup>11</sup> *Id.* at 45,494/1.

<sup>&</sup>lt;sup>12</sup> Promulgation of Air Quality Implementation Plans; State of Texas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan, 82 Fed. Reg. 48,324 (Oct. 17, 2017). Sierra Club and NPCA contend that the October 17 action does not constitute a valid final action sufficient to comply with the Consent Decree in *NPCA v. EPA*, No. 11-1548 (D.D.C.), and have asked the Court in that case to order EPA to promulgate a final action as required by that decree. *See* Mot. to Enforce Decree, *NPCA v. EPA*, No. 11-1548 (D.D.C. filed Oct. 13, 2017) (ECF Doc. 103). In citing the October 17 action here, NPCA and Sierra Club do not in any way concede its legality or sufficiency, and that it constitutes final action.

budgets, EPA issued an alternative plan that discarded source-specific BART limits for Texas EGUs in favor of an entirely *new intrastate* emissions trading scheme. Contrary to its proposed and final New BART Exemption Rule, EPA's published BART trading scheme for Texas does *not* include source-specific emission limits. Rather than reducing Texas EGUs' sulfur dioxide emissions to levels at least 105,000 tons lower than they would have been under CSAPR, the new intrastate trading program allows Texas EGUs to emit *more* sulfur dioxide than would have been allowed under the Transport Rule budgets for Texas. Coupled with the approximately 22,300 to 53,000 tons per year of sulfur dioxide increase in emissions that EPA now admits is a result from removing Texas from the interstate trading program,<sup>13</sup> the Texas BART trading scheme plus the removal of Texas from CSAPR now results in at least 149,600 tons more per year of sulfur dioxide than EPA estimated in the *proposed* New BART Exemption Rules—thereby raising the likelihood of decreased visibility in affected Class I areas, and a worse visibility performance overall of the Transport Rule relative to BART.<sup>14</sup>

#### EPA MUST CONVENE A RECONSIDERATION PROCEEDING AS TO THE NEW BART EXEMPTION RULE

Under the Clean Air Act, the Administrator "shall convene a proceeding for reconsideration of the rule" if the petitioner demonstrates: (1) that it was impracticable to raise the objection during the comment period or the grounds for the objection arose after the close of the public comment period; and (2) that the objections are of central relevance to the outcome of the rule. 42 U.S.C. § 7607(d)(7)(B). As discussed in Section I, *infra*, it was impracticable to raise the issues in this reconsideration request during the public comment period because EPA did not make the information or its rationale available until after the issuance of the rule. Moreover, EPA's New BART Exemption Rule is predicated on the assumption that Texas EGUs would be subject to source-specific BART. EPA's separate BART Rule for Texas-issued three weeks after the final New BART Exemption Rule in this case-renders that assumption invalid. Because it was impossible for Petitioners in January 2016 to "divine the agency's unspoken thoughts" regarding its 2017 plan for addressing BART for Texas EGUs, it was impracticable for Petitioners to raise the objections within the comment period. See CSX Transp., Inc. v. Surface Transp. Bd., 584 F.3d 1076, 1080 (D.C. Cir. 2009) (a rule violates the notice requirement where "interested parties would have had to 'divine [the agency's] unspoken thoughts,' because the final rule was surprisingly distant from the proposed rule.") (quoting Int'l Union, United Mine Workers of Am. v. Mine Safety & Health Admin., 407 F.3d 1250, 1259-60 (D.C.

<sup>&</sup>lt;sup>13</sup> 82 Fed. Reg. at 45,493/3.

<sup>&</sup>lt;sup>14</sup> In the proposed New BART Exemption Rule, EPA anticipated (based on outdated, presumptive BART emission limits) that source-specific BART for Texas EGUs would result in a reduction of at least 127,300 tons per year. 81 Fed Reg. at 78,963. As a result of the Texas BART trading scheme, however, that reduction has vanished. Meanwhile, the exclusion of Texas from the Transport Rule trading scheme will result in at least 22,300 excess tons of pollution from states like Alabama and Georgia. Relative to the proposed New BART Exemption Rule, the total additional and unaccounted for emission increase is at least 149,600 tons per year.

Cir.2005) (alteration in original)).

Moreover, as discussed in Section II, *infra*, the objections below are of central relevance to the outcome of the rule and EPA's conclusion that the Transport Rule remains better than BART despite the removal of Texas from the trading program. Specifically, petitioners object to: (1) EPA's conclusion that the Transport Rule remains better than BART despite the withdrawal of Texas from the trading program because that conclusion is predicated on the installation of source-specific BART at Texas EGUs—an assumption that is now unsupportable due to EPA's subsequent BART FIP for Texas; (2) EPA's entirely new emissions shifting analysis, which the agency relies on to demonstrate that the Transport Rule remains better than BART, but which EPA unlawfully failed to present to the public for comment; and (3) the agency's continued reliance on its 2012 modeling despite substantive flaws in EPA's emissions shifting analysis and failing to demonstrate that the Transport Rule continues to meet the regulatory criteria for a valid BART alternative.

Because both the Clean Air Act's prerequisites for reconsideration are met, 42 U.S.C. § 7607(d)(7)(B), EPA "lack[s] discretion not to address the claimed errors." *North Carolina v. EPA*, 531 F.3d 896, 927 (D.C. Cir. 2008).

#### I. It Was Impracticable for Petitioners to Raise the Issues in this Reconsideration Petition Because the Proposed Rule Failed to Disclose or Address Key Changes in Factual and Legal Circumstances.

EPA must provide a reasonable opportunity for public examination, evaluation and comment on any proposed rule and any underlying, supporting information, assumptions or conclusions. More specifically, the Clean Air Act requires a "detailed explanation" of "(A) the factual data on which the proposed rule is based; (B) the methodology used in obtaining the data and in analyzing the data; and (C) major legal interpretations and policy considerations underlying the proposed rule," 42 U.S.C. § 7607(d)(3), and, after issuance of the proposed rule, that EPA affirmatively update the rulemaking docket as new information becomes available. 42 U.S.C. § 7607(d)(4)(B)(i); *see also Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 518-19 (D.C. Cir. 1983) (Clean Air Act requires a "detailed explanation of its reasoning at the 'proposed rule' stage as well [as in the final rule].").

These notice requirements are designed "(1) to ensure that agency regulations are tested via exposure to diverse public comment, (2) to ensure fairness to affected parties, and (3) to give affected parties an opportunity to develop evidence in the record to support their objections to the rule and thereby enhance the quality of judicial review." *Int'l Union*, , 407 F.3d at 1259-60. "It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, [to a] critical degree, is known only to the agency." *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 237 (D.C. Cir. 2008) (quoting *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 393 (D.C. Cir. 1973) (alteration in original)).

As discussed in further detail below, EPA violated these principles in two key respects, and, as a result, precluded meaningful public comment on the assumptions and rationales that go to the heart of the agency's final rule. 42 U.S.C. § 7607(d)(7)(B). First, EPA's conclusion that

the Transport Rule remains better than BART despite the withdrawal of Texas from the trading program and other changes is predicated on the assumption that Texas EGUs would be subject to source-specific BART. Although EPA has admitted that the removal of Texas from the Transport Rule trading system would increase emissions from other states that "might lead to violations of the analytic criteria that the EPA relied on to find that [the Transport Rule] qualifies as a BART alternative,"<sup>15</sup> EPA concluded that any such emission increase would be "more than offset" by treating Texas EGUs as subject to sulfur dioxide BART.<sup>16</sup> But EPA can no longer credibly rely on those assumed emission reductions because the agency's subsequent October 17, 2017 Texas BART FIP does not include any source-specific emission limits, and instead relies upon an entirely new intrastate trading program that allows Texas EGUs to increase their emissions over the Transport Rule budgets. Thus, the New BART Exemption Rule relies on a key factual assumption that is no longer valid, and of which commenters could not have been aware as of the deadline for public comments. Moreover, EPA did not publish this new alternative intrastate emission trading scheme for BART-eligible sources in Texas until after the agency published the New BART Exemption Rule at issue. Because EPA did not notify the public of its intent to abandon source-specific BART limits for Texas sources until long after the close of comment on the New BART Exemption Rule, it was impracticable-indeed, impossible-to raise objections to that assumption during the public comment period on the proposed rule.

Second, EPA's "geographic emissions shifting" analysis, 82 Fed. Reg. at 45,491-94, which the agency relies on to demonstrate that the Transport Rule remains better than BART, was not included in the proposed rule at all. EPA's core emissions shifting analysis appeared for the first time in the final rule; not an iota of rationale or even reference to this analysis appeared in the proposed rule. Because EPA did not include its emissions shifting analysis in the proposed rule, and did not disclose it to the public until the final rule, it was impracticable to raise objections to the emissions shifting analysis during the public comment period on the proposed rule. Had EPA proposed the emission shifting rationales, or notified the public of the agency's intent with respect to Texas's BART obligations, petitioners and others would have had the opportunity to raise these and other concerns with the New BART Exemption Rule. They would also have had the opportunity to argue (as petitioners do below), that the final rule is unlawful and arbitrary.

EPA pointed commenters down one path, and then abruptly took a different path. EPA must remedy these deficiencies by convening a reconsideration proceeding and providing for notice and comment on these issues, which are central to the validity of the final rule's determination that the Transport Rule is better than BART after *Homer City II*.

<sup>&</sup>lt;sup>15</sup> 82 Fed. Reg. at 45,492.

<sup>&</sup>lt;sup>16</sup> *Id*. at 45,494.

#### II. EPA's Failure to Disclose or Evaluate Changed Factual and Legal Circumstances, and the Agency's Failure to Seek Public Comment on Key Aspects of the Sensitivity Analysis Constitute Errors Central to the Outcome of the New BART Exemption Rule.

EPA's failure to disclose or evaluate key factual and legal information that was of "central relevance to the rule constituted error that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made." 42 U.S.C. § 7607(d)(8). As an initial matter, EPA's conclusions are based on assumptions that are contrary to the evidence. Moreover, had EPA obeyed the law by soliciting public comment on all of the key information underlying the final rule, it would have learned of the serious substantive objections detailed below.

#### A. EPA's New BART Exemption Update Rule is Unlawfully and Arbitrarily Based on the Invalid Assumption that Texas Sources Would be Subject to Source-Specific BART Limits for Sulfur Dioxide.

A rule is arbitrary and capricious "if the agency has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (citing SEC v. Chenery Corp., 332 U.S. 194, 196 (1947)). Moreover, after issuance of a proposed rule, the Clean Air Act requires EPA to affirmatively update the rulemaking docket as new information becomes available. 42 U.S.C. § 7607(d)(4)(B)(i). 42 U.S.C. § 7607(d)(4)(B)(i) (requiring new data "be placed in the docket as soon as possible after their availability"); see also Catawba County, North Carolina v. EPA, 571 F.3d 20, 45 (D.C. Cir. 2009) (an agency has "an obligation to deal with newly acquired evidence in some reasonable fashion"); WWHT, Inc. v. FCC, 656 F.2d 807, 819 (D.C. Cir. 1981); cf. Geller v. FCC, 610 F.2d 973 (D.C. Cir. 1979) (where an agency action depends on a factual or legal assumption it is required to institute additional rulemaking proceedings "if subsequently that predicate disappears"). EPA's New BART Exemption Update Rule violates these fundamental principles in three key respects.

First, the New BART Exemption Rule is impermissibly based upon a factual predicate that no longer exists—namely, that sulfur dioxide emission reductions associated with the installation of presumptive source-specific BART would be install at Texas EGUs. But EPA's subsequently-issued BART trading scheme for Texas does not require source-specific limits for sulfur dioxide emissions for *any* EGU. And in fact, the new intrastate trading program allows Texas EGUs to *increase* their emissions over the final Transport Rule budget. *Compare* 82 Fed. Reg. at 48,353 (noting total allocations under final Transport Rule) *with* 82 Fed. Reg. at 48,358 (allowing up to 320,550 tons per year under Texas intrastate trading scheme). This is not simply a situation in which the agency passively acquired new information. Instead, EPA has used "the rulemaking process to pull a surprise switcheroo" on the public and regulated community. *Envt'l Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005) (vacating EPA rule for failure to comply with notice requirements). EPA's proposed rule suggested that Texas sources would be subject to source-specific BART, but then reversed course and will now allow Texas to emit

more sulfur dioxide than under the Transport Rule itself. As a result, the New BART Exemption Update Rule is left without a factual basis and the agency must convene a reconsideration proceeding to evaluate whether the Transport Rule remains better than BART given the removal of the factual predicate underlying the final rule.

Second, EPA no longer has a valid basis for concluding that the Transport Rule remains better than BART. A BART alternative is permissible only if both of the following two criteria are met: (i) visibility does not decline in any Class I area, and (ii) there is an overall improvement in visibility, determined by comparing the average differences between BART and the alternative over all affected Class I areas. 40 C.F.R. § 51.308(e)(3). EPA's own 2012 Sensitivity Analysis, upon which the agency relies to demonstrate that the Transport Rule remains better than BART, was predicated on the assumption that Texas emissions under the Transport Rule would remain below 317,100 tons of sulfur dioxide annually. 81 Fed. Reg. at 78,963 n.58. Under EPA's newly-developed trading scheme for Texas, participating Texas EGUs will be allocated 238,393 tons of sulfur dioxide emissions annually. 82 Fed. Reg. at 48,358. A supplemental allowance pool allows those sources to increase emissions as much as 54,711 tons per year, making the total allowable allocations under the program 293,104 tons per year. Id. at 48,358-59. However, there are numerous sources that are not required to participate in the Texas trading scheme, but which would have been subject to the Transport Rule. . Those sources are not subject to any limitation under the Texas trading rule, and emit approximately 27,446 tons per year. 82 Fed. Reg. at 48,358. Moreover, as EPA indicates, additional allowances from retirements and corrections can be added to the Supplemental Allowance Pool up to some unspecified maximum. 82 Fed. Reg. at 48,356. This means that under the intrastate trading scheme for Texas that EPA adopted in lieu of BART, Texas EGUs are authorized to emit sulfur dioxide in excess of the 317,000 ton limit EPA's own analysis established as an upper bound to remain better than BART. Thus, with the withdrawal of Texas BART from the equation the Transport Rule and the adoption of an alternate trading program for Texas, EPA no longer has a factual or legal basis for asserting that the Transport Rule remains better than BART.

Finally, in light of EPA's qualitative analysis that the Transport Rule plus source-specific BART for Texas EGUs "would clearly have led to more visibility improvement" than the Transport Rule trading program for those same sources,<sup>17</sup> the agency cannot logically or factually maintain that the *opposite* is now true. In fact, a simple calculation demonstrates this fact. Applying the very same methodology that EPA used in 2012 to demonstrate that the Transport Rule remained better than BART despite the addition of 50,157 sulfur dioxide allowances, it is clear that the Transport Rule is not better than source-specific BART for Texas sources. In that 2012 analysis, the agency assumed that those additional SO2 allowances for Texas would "cause a 27% reduction in the number of sulfur dioxide tons reduced compared to the proposal modeling" because 50,157 was a 27% increase over the previous budget.<sup>18</sup>

<sup>&</sup>lt;sup>17</sup> 81 Fed. Reg. at 78,963-64.

<sup>&</sup>lt;sup>18</sup> See 'Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Emissions Budgets' at 4-5 (May 29, 2012) [EPA Docket No. EPA–HQ–OAR–2011–0729–0323].

a factor of 0.73." The agency also "assume[d] that the . . . 27% reduction in SO<sub>2</sub> emissions reductions [i.e., emissions increase] . . . will linearly reduce the visibility benefits in nearby Class I areas by . . . 27%."<sup>19</sup> With that 27% increase in emissions, EPA calculated the visibility decline that would result in the nine Class I areas most affected by Texas emissions.

That same analysis can be used to calculate the relative visibility impacts between the current Transport Rule budget for Texas and the emissions that could be achieved with the reduction of 127,300 tons per year associated with source-specific BART.<sup>20</sup> In the table below, the visibility improvements that would be achieved with source-specific BART over the Transport Rule budgets are shown as positive numbers. *See* Exhibit A. As demonstrated, in every affected Class I area, source specific BART results in greater visibility improvement than the application of the Transport Rule budgets. By reversing course and refusing to apply source-specific BART to Texas EGUs, EPA has removed a "significant factual predicate" for EPA's finding that CSAPR continues to be better than BART. *WWHT*, 656 F.2d at 819. The agency must therefore convene a reconsideration proceeding to address the fundamental change in circumstances underlying the New BART Exemption Rule.

		20 % Best	Davs Visibility	Improvement	20 % W	orst Davs V	isibility
			(dv)	1	Im	provement (	dv)
							Improvem
				<b>.</b>		CSAPR +	ent in
			CSAPR +	Improvement		BART-	Visibility
			BART-	in Visibility		elsewhere	Due to the
			elsewhere	Due to the		Proportio	Removal
		CSAPR +	Proportionally	Removal of	CSAPR +	nally	of TX
Class I Area		BART-	Increased by	TX from SO <sub>2</sub>	BART-	Increased	from SO <sub>2</sub>
Name	State	elsewhere	1.68	CSAPR	elsewhere	by 1.68	CSAPR
Big Bend NP	TX	0.2	0.34	0.14	1.1	1.85	0.75
Caney Creek Wilderness	AR	0.4	0.67	0.27	3.2	5.38	2.18
Carlsbad Caverns NP	ΤХ	0.1	0.17	0.07	0.9	1.51	0.61
Guadalupe Mountains NP	ΤХ	0.1	0.17	0.07	0.9	1.51	0.61
Hercules- Glades	МО	0.6	1.01	0.41	25	4 20	1 70
Wilderness		0.0	1.01	0.41	2.5	4.20	1.70
Salt Creek	NM	0.1	0.17	0.07	0.7	1.18	0.48

<sup>19</sup> Id.

<sup>&</sup>lt;sup>20</sup> The table below applies the methodology used in Table 2 from the May 29, 2012 Transport Rule sensitivity memo from Brian Timin. *See id.* However, instead of an increase of 50,157 tons to the Texas budget, this table calculates the budget assuming the low end decrease of 127,300 tons, as discussed in the proposed rule that among other things, removed Texas from participating in the SO2 portion of CSAPR. 81 Fed. Reg. 78,963. An emission factor of 1.68 is calculated, using the same methodology discussed on the top of page 5 of the May 29, 2012 memo. Instead of replicating the change in visibility due to an increase in the Texas SO<sub>2</sub> budget, the Table applies that same methodology to calculating the change in visibility due to withdrawing Texas from the SO2 portion of CSAPR. *See* Exhibit A.

Upper Buffalo Wilderness	AR	0.5	0.84	0.34	2.5	4.20	1.70
White Mountain Wilderness	NM	0.1	0.17	0.07	0.6	1.01	0.41
Wichita Mountains	OK	0.2	0.34	0.14	1.6	2.69	1.09

## B. EPA Unlawfully and Arbitrarily Failed to Seek Public Comment on the Final Rule's Geographic Emissions Shifting Analysis.

As noted above, Section I.A, the Clean Air Act requires, among other things, that EPA's proposed rule include "(A) the factual data on which the proposed rule is based; (B) the methodology used in obtaining the data and in analyzing the data; and (C) any major legal interpretations and policy considerations underlying the proposed rule," 42 U.S.C. § 7607(d)(3), and, after issuance of the proposed rule, that EPA affirmatively update the rulemaking docket as new information becomes available. *Id.* § 7607(d)(4)(B)(i).

EPA's New BART Exemption Update Rule violates this fundamental principle in two ways. First, EPA unlawfully failed to present its back-of-the envelope emissions shifting calculations—or even acknowledge the potential for emissions shifting—in the rulemaking proposal for public comment. Had EPA done so, petitioners and others would have had the opportunity to offer additional technical analysis regarding the adequacy of that emissions shifting rationale, of which petitioners had no adequate notice.<sup>21</sup> They would also have had the opportunity to argue (as petitioners do below), that the emissions shifting analysis is arbitrary. As things stand now, however, the specific emissions shifting rationale that EPA ultimately adopted has never been subjected to public notice and comment as required by the Act.

Second, even if EPA's entirely new emissions shifting calculations were to be accepted, there is no longer any factual basis for EPA's conclusory assertion that any visibility impact associated with emissions shifting will "be more than offset by greater visibility improvement in Class I areas near Texas" as a result of source-specific sulfur dioxide BART.<sup>22</sup> EPA acknowledged for the first time in the final rule that the removal of Texas from the Transport Rule trading program could result in a potential shift of 22,300 to 53,000 tons per year of sulfur dioxide allowances to other states, potentially "caus[ing] adverse visibility impacts in some individual Class I areas" thereby violating the first prong of the two-pronged better than BART test. 82 Fed. Reg. at 45,493. Despite that potential increase in emissions from other Transport Rule states due to the withdrawal of Texas from the program, EPA waves aside any resulting

<sup>&</sup>lt;sup>21</sup> In their comments, Petitioners raised concerns that the removal of Texas from the Transport Rule could change the geographic distribution of emissions, thereby resulting in visibility declines in affected Class I areas. *Comments by Earthjustice* at 5-6, EPA Docket No. EPA-HQ-OAR-2016-0598. But Petitioners had no opportunity to address EPA's entirely new emissions shifting calculation or its conclusory assertion that any such changes in geographic distribution or concentration of emissions would be more than offset by source-specific BART in Texas—an assertion that is now demonstrably erroneous.

<sup>&</sup>lt;sup>22</sup> 82 Fed. Reg. at 45, 494/1.

visibility impairment because presumptive source-specific BART for Texas will result in a reduction of at least 127,300 tons per year, more than offsetting any increase in other states.<sup>23</sup> Less than three weeks later, however, EPA abandoned its proposed source-specific BART limits for Texas EGUs, and instead adopted a new trading system that allows those EGUs to emit more pollution than had been allowed under the Transport Rule itself. As a result, the BART-related emission reductions EPA projected would "more than offset" any increases in other states have now vanished. In fact, the total increase in Texas EGU emissions could be even greater as a result of EPA's new trading scheme. Yet, EPA never provided the public with an opportunity to comment on that fundamental change in circumstances.

As a result of EPA's reversal and its decision to allow Texas to emit more sulfur dioxide than under the Transport Rule itself, the agency's emissions shifting analysis is left without a factual basis. Consequently, EPA must convene a reconsideration proceeding to evaluate whether the Transport Rule remains better than BART given the removal of the factual predicate underlying the final rule. *See WWHT*, 656 F.2d at 819 (an agency is required to institute additional rulemaking proceedings "if a significant factual predicate of a prior decision on the subject (either to promulgate or not to promulgate specific rules) has been removed.").

Moreover, EPA committed a procedural violation (*see* 42 U.S.C. § 7607(d)(9)(D)) by failing to solicit public comment on its emissions shifting analysis. That procedural violation is arbitrary and capricious. *See id.* § 7607(d)(9)(D)(i). Given EPA's failure to update the record or provide a supplemental notice, there was no way that commenters could have provided meaningful comment on EPA's final methodology and conclusions for the New BART Exemption Update Rule.

## C. EPA's Continued Reliance on the 2012 Analysis is Arbitrary and Capricious in Light of the Agency's Emissions Shifting Analysis.

A rule is arbitrary and capricious where, as here, the agency has entirely failed to consider an important aspect of the problem or offered an explanation for its decision that runs counter to the evidence before the agency. *State Farm*, 463 U.S. at 43. Here, EPA's back-of-the envelope emissions shifting analysis is not only completely new, but it is also arbitrary and capricious because the agency failed to consider several fundamental problems with removing Texas from the Transport Rule trading program and implementing an entirely new intrastate trading program.

As an initial matter, even assuming EPA's entirely new back-of-the envelope emission shifting *calculation* was correct, the agency has failed to make the required technical demonstration that the Transport Rule trading program will continue to "achieve greater reasonable progress than would have resulted from the installation and operation of BART at all sources subject to BART." 40 C.F.R § 51.308(e)(2)(i). In particular, given the agency's admission that removing Texas from the Transport Rule trading program could result in a shift—*i.e.*, a change in distribution—of up to 53,000 tons per year of sulfur dioxide allowances

to other states,<sup>24</sup> EPA's own regulations require the agency to conduct updated air dispersion modeling. 40 C.F.R. § 51.308(e)(3) (if the distribution of emissions is different under an alternative program, a state "must conduct dispersion modeling"). In light of EPA's admission that the distribution of emissions is, in fact, different, the agency's failure to conduct additional modeling is unlawful.

Second, EPA's conclusion that there will be no decline in visibility is arbitrarily based on the assumption that any increase in emissions would be caused by only two factors: change in demand relative to other states or relative fuel prices in other states in a revised Transport Rule scenario.<sup>25</sup> As discussed more fully below, these are hardly the only two factors that can shift emissions in a post-Transport Rule update rule. For example, some sources might choose to shut down rather than reduce emissions or buying allowances, thereby shifting generation elsewhere. Some sources might choose to buy more allowances, as there will be more on the market. Some utility providers might simply choose to re-dispatch to more efficient or more economic generation. Moreover, EPA's emission shifting analysis also fails to consider significant changes in market conditions and outlooks for the coal generation sector.<sup>26</sup>

Despite changes in the power sector and other factors that influence the distribution and quantity of Transport Rule emissions, EPA arbitrarily relies on outdated modeling instead of updating the technical support for its action, as the agency has done in other contexts. In its recent update to the Transport Rule, for example, EPA itself relied on more updated Integrated Planning Model data to analyze the impact of the updated Transport Rule on the U.S. electric power sector.<sup>27</sup> Given the withdrawal of Texas from the Transport Rule's trading program and changes to other Transport Rule state emission budgets combined with recent changes in the power sector, EPA can and must do the same kind of updated analysis here. Without updating its power sector or air quality modeling to account for changes in the distribution and quantity of Transport Rule emissions as well as other changes in the power sector, EPA has no data to demonstrate that its own "better than BART" test will continue to be met, given the removal of Texas from the trading program and other post-*Homer City II* changes.

Third, even accepting EPA's emissions shifting calculations and its dubious premise that any increase in emissions would be caused by only two factors, there is no longer any factual basis for EPA's conclusory assertion that any visibility impact associated with emissions shifting will "be more than offset by greater visibility improvement in Class I areas near Texas" as a result of source-specific sulfur dioxide BART.<sup>28</sup> As noted above, EPA's entire emissions shifting analysis assumed the implementation of source-specific BART for Texas EGUs—an

<sup>&</sup>lt;sup>24</sup> 82 Fed. Reg. at 45,493/3.

<sup>&</sup>lt;sup>25</sup> *Id.* at 45,493 n.88.

<sup>&</sup>lt;sup>26</sup> See, e.g., Comments by Earthjustice at 4, EPA Docket No. EPA-HQ-OAR-2016-0598 (citing, *inter alia*, http://www.eia.gov/electricity/annual/html/epa\_03\_02\_a.html (Net Generation by Energy Source: Electric Utilities, 2005-2015) (last visited Jan. 9, 2017)).

<sup>&</sup>lt;sup>27</sup> See https://www.epa.gov/airmarkets/analysis-cross-state-air-pollution-rule-update (last visited Jan. 9, 2017).

<sup>&</sup>lt;sup>28</sup> 82 Fed. Reg. at 45,494/1.

assumption that is no longer valid. Nor is there any factual basis for EPA's conclusory assertion that the removal of Texas from the Transport Rule trading program is:

unlikely to cause localized visibility degradation in any Class I area near a CSAPR state affected by the removal of Texas from CSAPR for SO<sub>2</sub>. In consequence, the Agency finds it reasonable to conclude that in such a revised CSAPR scenario, no such Class I areas would experience declines in visibility conditions relative to the base case scenario.

Indeed, EPA's assumption that source-specific BART for Texas will result in a reduction of at least 127,300 tons per year has vanished. And its new Texas trading system allows EGUs to emit more pollution than had been allowed under the Transport Rule itself. EPA had an obligation to deal with that "newly acquired evidence in some reasonable fashion." *See also Catawba County, North Carolina v. EPA*, 571 F.3d 20, 45 (D.C. Cir. 2009). At a minimum, and as discussed above, EPA could have applied the same 2012 Sensitivity Analysis methodology to a variety of nearby Class I areas to determine a worst-case impact.

Finally, EPA's emissions shifting analysis is fundamentally flawed because it fails to address at least two additional factors that are critical to the continuing regulatory viability of the Transport Rule sulfur dioxide trading program in light of the withdrawal of Texas from the program: (1) the impact on sulfur dioxide market prices and (2) significant changes in the cost-effectiveness and efficacy of source-specific BART. In the final rule, EPA acknowledges the importance of both of these interrelated factors:

Under the base case scenario, EGUs incur no cost at all under CSAPR for emitting a ton of SO<sub>2</sub>. In contrast, under either the original CSAPR scenario or a revised CSAPR scenario, EGUs would incur some cost per ton of SO<sub>2</sub> emissions under CSAPR, and where that new cost is the principal change from the base case scenario, EGUs that emit SO<sub>2</sub> would generally be projected to either decrease or maintain their emissions relative to the base case scenario where that cost was not present. *If in a revised CSAPR scenario, allowances are more plentiful and the cost incurred per ton of SO<sub>2</sub> emissions therefore is less than the cost per ton under the original CSAPR scenario, some EGUs that emit SO<sub>2</sub> would be projected to reduce their SO<sub>2</sub> emissions by a smaller amount than in the original CSAPR scenario*, but they generally would not be projected to significantly increase their emissions relative to the base case scenario.<sup>29</sup>

Despite the obvious effect of these factors on the continuing viability of the Transport Rule, EPA performs no real analysis of the impact of the removal of Texas from the Transport Rule for sulfur dioxide on the pricing of the CSAPR allowance market in its rule. Although EPA attempts to cast aside Petitioners' previous comments regarding the validity of the original 2012 analytic demonstration<sup>30</sup> EPA's admits that the cost incurred per ton of sulfur dioxide removed is

<sup>&</sup>lt;sup>29</sup> 82 Fed. Reg. at 45,493 (emphasis added).

<sup>&</sup>lt;sup>30</sup> *Id.* at 45,494.

relevant to the cost-effectiveness of BART control technology. <sup>31</sup> It is reasonable to expect that with the exit of Texas, which was predicted to purchase 22,300 tons of sulfur dioxide from other Group 2 member states, that the price of allowances would be affected. EPA addresses a number of potentially applicable factors: fuel type, fuel pricing, and electricity demand, but declines to address how the pricing and availability of SO<sub>2</sub> allowances could affect the integrity of the Transport Rule trading program. In a reconsideration proceeding, Petitioners would offer additional technical analysis regarding the adequacy of the EPA's emissions shifting analysis, including an analysis on the expected price of SO<sub>2</sub> allowance pricing with Texas no longer participating in the program.

EPA's emissions shifting analysis is similarly flawed in its approach to outdated "presumed" BART emission limits. As Petitioners have repeatedly argued, it is feasible and common for coal-fired EGUs to cost-effectively meet sulfur dioxide emission limits between 0.04 and 0.06 lb./mmBTU—significantly lower than the "presumptive" 0.15 lb/mmBTU limit that EPA had relied on in concluding that the New BART Exemption Rule was "better than BART." EPA has come to the same conclusion in its proposed rule to satisfy Texas's long-overdue BART obligations under the Clean Air Act. 82 Fed. Reg. 912 (Jan. 4, 2017). Notably, EPA has not refuted the technical documentation supporting its conclusions that Texas EGUs could achieve those much lower emission limits. Thus, there is nothing in the record to support EPA's conclusion that BART should be based on a comparison to presumptive limits for these units. As a consequence, EPA's conclusion that sulfur dioxide BART for Texas should be based on presumptive limits is flawed.

Further, it is more than reasonable to conclude that similar units could achieve similar emission limits. In fact, EPA used that approach in its BART analysis.<sup>32</sup> This calls into question EPA's basic approach to using presumptive BART as a threshold of comparison to CSAPR. EPA's reliance on presumptive BART in its New BART Exemption Rule, while essentially simultaneously developing a very large record demonstrating that the same or similar units could achieve much lower sulfur dioxide emission limits is arbitrary. Indeed, in its proposed 2016 BART Rule for Texas, EPA projected that source-specific BART would have reduced harmful sulfur dioxide emissions by 194,000 tons per year versus the estimated 127,000 tons per year associated with "presumptive" BART limits. EPA's subsequent source-specific BART proposal for Texas not only calls into question the agency's projected Transport Rule -related reductions for Texas, but it calls into serious question EPA's continued reliance on presumptive BART for

<sup>&</sup>lt;sup>31</sup> Id. at 45,493.

<sup>&</sup>lt;sup>32</sup> Technical Support Document for the Texas Regional Haze BART Federal Implementation Plan at p. 45 (Nov. 2016) (Revised December 2016, see Errata- BART Modeling TSD for details) [EPA Docket No. EPA–R06–OAR–2016–0611]("It should be noted that the lowest available SO<sub>2</sub> emission guarantees, from the original equipment manufacturers of wet FGD systems, are 0.04 lb/MMBtu. As we established in our Oklahoma FIP, 68 this level of control is achievable with wet FGD. This level of control was also employed in our recent Texas-Oklahoma FIP. 69 We received a comment challenging this level of control and we reproduce our response to that comment in Appendix A. We continue to conclude that our proposed level of control for wet FGD is reasonable.").

all of the other Transport Rule states.

#### CONCLUSION

For all the foregoing reasons, EPA must reconsider the portion its New BART Exemption Rule that finds that the Transport Rule remains better than BART despite the withdrawal of Texas from the trading program.

Sincerely,

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# Exhibit A

In the first tab, this spreadsheet reproduces the Texas portion of the calculations from the CSPAR BART sensitivity memo from Brian Timin to Docket ID No. EPA-HQ-OAR-2011-0729: Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans, dated 5/29/12. It applies the corrections from the above referenced memo to the projected visibility improvement results for the 2nd prong test summarized in Table 3-5 of the Document, "Technical Support Document for Demonstration of the Transport Rule as a BART Alternative," December 2011. It demonstrates that for Texas Class I areas and some of the Class I Areas in adjacent states, implementation of BART wold have resulted in more visibility improvement than CSAPR.

In the second tab, that same technique is used to estimate estmate the amount of visibility improvement that would result from the removal of Texas from SO2 CSAPR, assuming presumptive BART. In this case, a low end decrease of 127,300 tons is assumed, as discussed in the proposed rule that among other things, removed Texas from participating in the SO2 portion of CSAPR (81 FR 78963). Unlike the use of this estimation technique in the first tab, its use in the second tab is acknowledged to not carry the same degree of conservatisim.

The table below replicates Table 2 from the 5/29/12 CSPAR BART sensitivity memo from Brian Timin, with the addition of the calculation of the adjustment factors for Texas and Georgia discussed on the top of page 5 of that document. Note that EPA calculates a factor of 0.48 for Gerogia, which is a conservative rounding up of the factor calculated here.

	2014 Base	2014 TR + BART elsewhere SO2 Emissions (estimate from IPM used in air	SO2 Emissions Decrease from		SO2 Emissions Decrease from	EPA's
	Case SO2	quality	TR (as	2014 Budget	TR with	Resulting
	Emissions	modeling)	modeled)	Increase	Increased	Emission
State	[tons]	[tons]	[tons]	[tons]	Budget [tons]	Factor
Texas	453,332	266,627	-186,705	50,157	-136,548	0.731
Georgia	170,300	93,600	-76,700	40,334	-36,366	0.474
Total	623,632	360,227	-263,405	90,491	-172,914	

The table below is reproduced from Table 3 of the 5/29/12 CSPAR BART sensitivity memo from Brian Timin. It includes the Class I areas most affected by Texas emissions and the modeled visibility improvement from the Transport Rule + BART-elsewhere case (in deciviews). The 0.73 proportionality factor was calculated in the Brian Timin memo to correct for the increase of 50,157 tpy SO2 that was

					TR + BART-
			TR + BART-		elsewhere
			elsewhere	TR + BART-	20% Worst
			20% Best Days	elsewhere	Days
		TR + BART-	Proportionally	20% Worst	Proportionally
		elsewhere 20%	Reduced by	Days	Reduced by
		Best Days	0.73 (change	(change in	0.73 (change
Class I Area Name	State	(change in dv)	in dv)	dv)	in dv)
Big Bend NP	ТХ	-0.2	-0.15	-1.1	-0.80
Caney Creek Wilderness	AR	-0.4	-0.29	-3.2	-2.34
Carlsbad Caverns NP	ТХ	-0.1	-0.07	-0.9	-0.66
Guadalupe Mountains NP	ТХ	-0.1	-0.07	-0.9	-0.66
Hercules-Glades Wilderness	MO	-0.6	-0.44	-2.5	-1.83
Salt Creek	NM	-0.1	-0.07	-0.7	-0.51

Upper Buffalo Wilderness	AR	-0.5	-0.37	-2.5	-1.83
White Mountain Wilderness	NM	-0.1	-0.07	-0.6	-0.44
Wichita Mountains	ОК	-0.2	-0.15	-1.6	-1.17

In the above and below, improvements in visibility are represented by negative numbers, as this was used in the original analysis. Note that the reduction in TX emissions of 27% due to the increase in TX's SO2 budget of 50,157 tpy does not affect the "no degredation" test because all the modified visibility changes are still negative (some improvement).

					TR + BART-		TR + BART-		
				TR + BART-	elsewhere		elsewhere 20%		
				elsewhere	20% Best days	TR + BART-	Worst days	BART - 2014	BART - 2014
			2014 Base	20% Best	Proportionally	elsewhere	Proportionally	Base Case	Base Case
		2014 Base Case	Case Visibility	Days	Reduced by	20% Worst	Reduced by	20% Best	20% Worst
		Visibility 20%	20% Worst	(change in	0.73 (change	Days (change	0.73 (change in	Days (change	Days (change
Class I Areas (IMPROVE Site)	State	Best Days (dv)	Days (dv)	dv)	in dv)	in dv)	dv)	in dv)	in dv)
Acadia NP	ME	8.0	20.1	0.0		-1.1		0.0	-0.8
Badlands NP	SD	6.3	16.0	-0.1		-0.6		-0.1	-0.7
Bandelier NM	NM	4.2	11.1	-0.1		-0.3		-0.1	-0.4
Big Bend NP	ТХ	5.4	16.3	-0.2	-0.15	-1.1	-0.80	-0.2	-1.0
Black Canyon of the Gunnison	СО	2.3	9.5	-0.1		-0.1		-0.1	-0.1
Bosque del Apache	NM	5.6	13.0	-0.1		-0.6		-0.1	-0.6
Boundary Waters Canoe Area	MN	5.8	18.8	-0.1		-1.2		-0.1	-1.0
Brigantine	NJ	13.2	25.4	-0.4		-2.5		-0.2	-1.6
Caney Creek Wilderness	AR	11.3	24.4	-0.4	-0.29	-3.2	-2.34	-0.6	-2.2
Carlsbad Caverns NP	тх	5.2	15.5	-0.1	-0.07	-0.9	-0.66	-0.1	-0.8
Cohutta Wilderness	GA	12.9	26.6	-0.8		-3.8		-0.5	-2.3
Dolly Sods Wilderness	WV	10.3	27.1	-1.1		-5.7		-0.8	-3.2
Eagles Nest Wilderness	СО	0.4	8.3	0.0		-0.1		0.0	-0.1
Everglades NP	FL	11.5	20.4	-0.3		-1.0		-0.3	-0.7
Flat Tops Wilderness	со	0.4	8.3	0.0		-0.1		0.0	-0.1
Great Gulf Wilderness	NH	6.7	19.2	-0.1		-1.8		-0.1	-1.3
Great Sand Dunes NM	СО	3.5	11.3	-0.1		-0.2		-0.1	-0.2
Great Smoky Mountains NP	TN	12.2	27.0	-0.8		-3.7		-0.7	-2.0
Guadalupe Mountains NP	тх	5.2	15.5	-0.1	-0.07	-0.9	-0.66	-0.1	-0.8
Hercules-Glades Wilderness	MO	12.2	25.2	-0.6	-0.44	-2.5	-1.83	-0.8	-1.7
Isle Royale NP	MI	6.4	19.9	-0.1		-1.0		-0.2	-0.9
James River Face Wilderness	VA	12.9	25.8	-0.9		-4.2		-0.5	-2.1
Joyce-Kilmer-Slickrock Wildern	TN	12.2	27.0	-0.8		-3.7		-0.7	-2.0

#### TX CSAPR SO2 Budget Increase

La Garita Wilderness	СО	2.3	9.5	-0.1		-0.1		-0.1	-0.1
Linville Gorge Wilderness	NC	10.3	26.0	-0.7		-4.3		-0.5	-2.3
Lostwood	ND	7.9	18.8	-0.1		-0.5		-0.1	-0.5
Lye Brook Wilderness	VT	5.5	20.7	-0.1		-2.6		-0.1	-1.7
Maroon Bells-Snowmass Wilde	СО	0.4	8.3	0.0		-0.1		0.0	-0.1
Mammoth Cave NP	КҮ	15.3	29.5	-1.2		-5.1		-0.9	-2.8
Medicine Lake	MT	6.5	17.7	0.0		-0.3		0.0	-0.3
Mesa Verde NP	CO	3.2	11.4	-0.1		-0.3		-0.1	-0.3
Moosehorn	ME	8.4	19.0	0.0		-1.0		0.0	-0.8
Mount Zirkel Wilderness	СО	1.0	9.2	0.0		-0.1		0.0	-0.1
North Absaroka Wilderness	WY	1.5	11.1	0.0		0.0		0.0	0.0
Okefenokee	GA	13.9	24.1	-0.9		-2.5		-0.7	-1.7
Otter Creek Wilderness	WV	10.3	27.1	-1.1		-5.7		-0.8	-3.2
Pecos Wilderness	NM	1.0	9.0	-0.1		-0.2		-0.1	-0.2
Presidential Range-Dry River W	NH	6.7	19.2	-0.1		-1.8		-0.1	-1.3
Rawah Wilderness	СО	1.0	9.2	0.0		-0.1		0.0	-0.1
Roosevelt Campobello Internat	ME	8.4	19.0	0.0		-1.0		0.0	-0.8
Cape Romain	SC	13.6	24.0	-0.7		-2.9		-0.4	-1.9
Rocky Mountain NP	CO	2.0	12.2	0.0		-0.1		0.0	-0.1
Salt Creek	NM	7.3	17.1	-0.1	-0.07	-0.7	-0.51	-0.2	-0.7
San Pedro Parks Wilderness	NM	1.2	9.9	-0.2		-0.3		-0.2	-0.4
Seney	MI	6.9	23.3	-0.1		-1.6		0.0	-1.5
Shenandoah NP	VA	9.0	26.2	-0.8		-5.0		-0.6	-3.0
Shining Rock Wilderness	NC	6.3	24.8	-0.7		-3.8		-0.5	-2.1
Sipsey Wilderness	AL	14.5	26.5	-0.9		-3.7		-0.9	-2.1
Theodore Roosevelt NP	ND	6.8	17.0	0.0		-0.3		0.0	-0.4
UL Bend	MT	4.2	15.2	0.0		-0.1		0.0	-0.1
Upper Buffalo Wilderness	AR	11.3	24.7	-0.5	-0.37	-2.5	-1.83	-0.6	-1.4
Voyageurs NP	MN	6.6	18.4	-0.1		-1.0		-0.1	-0.8
Washakie Wilderness	WY	1.5	11.1	0.0		0.0		0.0	0.0
West Elk Wilderness	СО	0.4	8.3	0.0		-0.1		0.0	-0.1
Weminuche Wilderness	СО	2.3	9.5	-0.1		-0.1		-0.1	-0.1
White Mountain Wilderness	NM	3.1	12.3	-0.1	-0.07	-0.6	-0.44	-0.2	-0.5
Wheeler Peak Wilderness	NM	1.0	9.0	-0.1		-0.2		-0.1	-0.2
Wind Cave NP	SD	4.6	15.1	0.0		-0.3		-0.1	-0.4
Wichita Mountains	ОК	9.1	21.7	-0.2	-0.15	-1.6	-1.17	-0.2	-1.2
Wolf Island	GA	13.9	24.1	-0.9		-2.5		-0.7	-1.7
Eastern Class I Areas Average	(60 Areas)			-0.3		-1.6		-0.2	-1.0

The above information is taken from Table 3-5 of the Document, "Technical Support Document for Demonstration of the Transport Rule as a BART Alternative," December 2011. As can be seen from a comparison to the first table, it also includes BART base case modeling results. In above, only Class I Areas in TX or those in surrounding states EPA identified in the Brian Timin memo as being impacted by TX's SO2 emissions were examined.

		20 % Be	est Days Visibilit	y Improveme	nt (dv)	20 % W	orst Days Visibil	ity Improveme	nt (dv)
					Better				Better
					Visibility				Visibility
			TR + BART-		under BART		TR + BART-		under BART
			elsewhere		before or after		elsewhere		before or
		TR + BART-	after EPA	BART - 2014	EPA	TR + BART-	after EPA	BART - 2014	after EPA
Class I Area Name	State	elsewhere	Adjustment	Base Case	Adjustment?	elsewhere	Adjustment	Base Case	Adjustment?
Big Bend NP	ТΧ	0.2	0.15	0.2	Y - After	1.1	0.80	1.0	Y - After
Caney Creek Wilderness	AR	0.4	0.29	0.6	Y - Before	3.2	2.34	2.2	N
Carlsbad Caverns NP	ТΧ	0.1	0.07	0.1	Y - After	0.9	0.66	0.8	Y - After
Guadalupe Mountains NP	ТΧ	0.1	0.07	0.1	Y - After	0.9	0.66	0.8	Y - After
Hercules-Glades Wilderness	MO	0.6	0.44	0.8	Y - Before	2.5	1.83	1.7	N
Salt Creek	NM	0.1	0.07	0.2	Y - Before	0.7	0.51	0.7	Y - After
Upper Buffalo Wilderness	AR	0.5	0.37	0.6	Y - Before	2.5	1.83	1.4	Ν
White Mountain Wilderness	NM	0.1	0.07	0.2	Y - Before	0.6	0.44	0.5	Y - After
Wichita Mountains	ОК	0.2	0.15	0.2	Y - After	1.6	1.17	1.2	Y - After
Totals		2.3	1.7	3.0		14.0	10.2	10.3	

The above summary table summarizes the analysis for the Class I Areas most affected by Texas emissions. For the sake of clarity, changes in visibility from baselines which were previously represented as negative numbers, have been changed to positive numbers to more intuitively represent visibility improvement. As can be seen, in every Texas Class I Area and in every adjacent Class I Area EPA identified was impacted by Texas emissions, better visibility improvement resulted in the 20% best days and/or the 20% worst days from source-by-source BART than through CSAPR.

The table below applies the methodology used in Table 2 from the 5/29/12 CSPAR BART sensitivity memo from Brian Timin. However, instead of an increase of 50,157 tons to the Texas budget, this table calculates the budget assuming the low end decrease of 127,300 tons, as discussed in the proposed rule that among other things, removed Texas from participating in the SO2 portion of CSAPR (81 FR 78963). An emission factor of 1.68 is calculated, using the same methodology discussed on the top of page 5 of the 5/29/12 memo. However, instead of replicating the change in visibility due to an increase in the TX SO2 budget as was done in the previous tab, this tab applies that same methodology to calculating the change in visibility due to withdrawing Texas from the SO2 portion of CSAPR.

		2014 TR + BART-				
		elsewhere SO2		Low-end Budget		
	2014 Base	Emissions (estimate	SO2 Emissions	Decrease from	SO2 Emissions	
	Case SO2	from IPM used in air	Decrease from TR	withdrawal of	Decrease from TR	
	Emissions	quality modeling)	(as modeled)	Texas from SO2	with TX	<b>Resulting Emission</b>
State	[tons]	[tons]	[tons]	CSAPR [tons]	withdrawal [tons]	Factor
Texas	453,332	266,627	-186,705	-127,300	-314,005	1.68

		20 % Best Day	s Visibility Improve	ment (dv)	20 % Worst Days Visibility Improvement (dv)					
				Improvement in			Improvement in			
			TR + BART-	Visibility Due to		TR + BART-	Visibility Due to			
			elsewhere	the Removal of		elsewhere	the Removal of			
		TR + BART-	Proportionally	TX from SO2	TR + BART-	Proportionally	TX from SO2			
Class I Area Name	State	elsewhere	Increased by 1.68	CSAPR	elsewhere	Increased by 1.68	CSAPR			
Big Bend NP	ТХ	0.2	0.34	0.14	1.1	1.85	0.75			
Caney Creek Wilderness	AR	0.4	0.67	0.27	3.2	5.38	2.18			
Carlsbad Caverns NP	ТХ	0.1	0.17	0.07	0.9	1.51	0.61			
Guadalupe Mountains NP	ТХ	0.1	0.17	0.07	0.9	1.51	0.61			
Hercules-Glades Wilderness	MO	0.6	1.01	0.41	2.5	4.20	1.70			
Salt Creek	NM	0.1	0.17	0.07	0.7	1.18	0.48			
Upper Buffalo Wilderness	AR	0.5	0.84	0.34	2.5	4.20	1.70			
White Mountain Wilderness	NM	0.1	0.17	0.07	0.6	1.01	0.41			
Wichita Mountains	OK	0.2	0.34	0.14	1.6	2.69	1.09			

The above table summarizes the analysis for the Class I Areas most affected by Texas emissions. The same TR + BART elsewhere values as used in the previous tab are used here. For the sake of clarity, changes in visibility from baselines which were previously represented as negative numbers, have been changed to positive numbers to more intuitively represent visibility improvement. Using the same methodology EPA employed in its 5/29/12 CSPAR BART sensitivity memo from Brian Timin to estimate the change in visibility due to the withdrawal of Texas from SO2 CSAPR here results in a 68% increase in visibility at the Class I Areas most impacted from Texas' emissions. The estimation technique used in the 5/29/12 Brian TImin memo assumed all of the visibility impacts came from the state in question resulting in an overestimation of the decline in visibility. That was a conservative technique because the goal was to demonstrate that CSAPR remained better-than-BART despite the decline in visibility due to increases in state budgets. However, using that same approach to estimating the improvement in visibility due to a reduction in Texas' SO2 budget is not conservative, since it similarly overestimates the visibility impact. In other words, the true visibility improvement due to the removal of Texas from SO2 CSAPR is likely smaller.

#### **CERTIFICATE OF SERVICE**

I hereby certify that on November 28, 2017, I filed National Parks Conservation Association and Sierra Club's Petition for Partial Reconsideration of Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas; Final Rule; 82 Fed. Reg. 45,481 (Sept. 29, 2017); EPA-HQ-OAR-2016-0598; FRL-9968-46-OAR, via email and Federal Express, to:

Administrator Scott Pruitt Office of the Administrator U.S. Environmental Protection Agency William Jefferson Clinton Building – Mail Code 1101A 1200 Pennsylvania Ave., NW Washington, DC 20460 Pruitt.Scott@epa.gov

Further, I certify that on November 28, 2017, I served a courtesy copy of the foregoing, via email, to:

Kevin Minoli Acting General Counsel Office of General Counsel U.S. Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Ave., NW Washington, DC 20460 Minoli.Kevin@epa.gov

Lea Anderson Office of General Counsel U.S. Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Ave., NW Washington, DC 20460 Anderson.Lea@epa.gov

Air & Radiation Docket A-and-R-Docket@epa.gov

November 28, 2017

/s/ Gabrielle Winick

Gabrielle Winick

# **Exhibit B**

Worksheet	Description
2020 Petition TX+GA Adjust	Visibility values calculated as a sensitivity to support the denial of the petition for reconsideration of "Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas". The sensitivity used the default regional haze test and also assumed that there is reduced visibility improvement at 9 Class I areas that are impacted by Texas (yellow highlighted rows; default visibility improvement times 0.71) and 7 Class I areas that are impacted by Georgia (blue highlighted rows; default visibility improvement times 0.18). The results of this analysis are documented in the petition for reconsideration denial letter attachment (all values in deciviews)
2012 Final Rule TX +GA Adjust	Visibility values calculated with the default regional haze test and also assuming that there is reduced visibility improvement at 9 Class I areas that are impacted by Texas (yellow highlighted rows; default visibility improvement times 0.73) and 7 Class I areas that are impacted by Georgia (blue highlighted rows; default visibility visibility improvement times 0.48). The results of this analysis are documented in a memo to the 2012 CSAPR Better than BART final rule docket entitled "Sensitivity Analysis Accounting for Increases in Texas and Georgia Transport Rule State Emissions Budgets" (all values in deciviews)
2011 Proposal CSAPR BtB	Visibility values calculated using the default regional haze test in MATS version 2.3.1. The results are the same as docketed for the 2011 CSAPR Better than BART proposed rule (all values in deciviews).



Class I Area Name	IMPROVE ID	Representative Site	State	12km domain or 36km domain	2003-2007 Ambient Data 20% Best (dv)	2003-2007 Ambient Data 20% Worst (dv)	2014 base case 20% best	2014 base case 20% worst	CSAPR+ BART 20% best	CSAPR+ BART 20% worst	Nationwide BART 20% best	Nationwide BART 20% worst	CSAPR+BAF T - 2014 base 20% best	CSAPR+BAR T - 2014 base 20% worst	CSAPR+BART - 2014 base20% best with adjustments to GA and TX	CSAPR+BART - 2014 base 20% worst with adjustments to GA and TX	Nationwide BART - 2014 base 20% best	Nationwide BART - 2014 base 20% worst	TX Fac
Acadia NP	ACAD	ACAD1	ME	12km	8.3	22.8	8 8.0	20.1	7.9	19.0	7.9	9 19.3	3 0.0	-1.1	0.0	-1.1	0.0	-0.8	C
Bandelier NM	BAND	BADL1 BAND1	NM	12km 12km	6./	16.8	s 6.3 0 4.2	16.0	4.1	15.4	6.1 6 4.1	1 10.7	s -0.1	-0.6	-0.1	-0.6	-0.1	-0.7	
Big Bend NP Black Conversion NM	BIBE	BIBE1	TX	12km	5.7	17.2	2 5.4	16.3	5.2	15.2	5.3	2 15.3	-0.1	-1.10	-0.12	-0.80	-0.19	-1.03	
Bosque del Apache	BOAP	BOAP1	NM	12km	6.1	13.8	5.6	13.0	5.5	12.5	5.4	4 12.4	-0.1	-0.6	-0.1	-0.4	-0.1	-0.1	
Boundary Waters Canoe Area	BOWA	BOWA1 BRIG1	MN	12km	5.9	20.2	2 5.8	18.8	5.7	17.6	5.1	7 17.8	3 -0.1	-1.2	-0.6	-1.2	-0.1	-1.0	
Caney Creek Wilderness	CACR	CACR1	AR	12km	11.8	26.7	7 11.3	24.4	10.9	21.2	10.1	8 22.3	-0.4	-3.2	-0.32	-2.32	-0.56	-2.17	
Carlsbad Caverns NP Cohutta Wilderness	CAVE COHU	GUM01 COHU1	TX GA	12km 12km	5.6	16.5	5 5.2	15.5	5.1	22.8	5.1	1 14.1 4 24.4	-0.1 1 -0.8	-0.9	-0.08	-0.64	-0.13	-0.81	
Dolly Sods Wilderness	DOSO	DOSO1	wv	12km	11.2	29.9	10.3	27.1	9.2	21.4	9.5	5 23.9	-1.1	-5.7	-1.1	-5.7	-0.8	-3.2	
Eagles Nest Wilderness Everglades NP	EVER	EVER1	FL	12km 12km	12.3	22.5	s 0.4	20.4	11.1	8.2	0.4	4 8.4 2 19.7	-0.3	-0.1	-0.3	-0.1	-0.3	-0.1	
Flat Tops Wilderness Great Gulf Wilderness	FLTO	WHRI1 GRGUI1	CO	12km	0.9	8.8	0.4	8.3	0.4	8.2	0.4	4 8.2	2 0.0	-0.1	0.0	-0.1	0.0	-0.1	
Great Sand Dunes NM	GRSA	GRSA1	CO	12km	3.9	11.8	3.5	19.2	3.5	17.5	3.5	5 10.0	-0.1	-1.8	-0.1	-0.2	-0.1	-0.2	
Great Smoky Mountains NP Guadalune Mountains NP	GRSM	GRSM1 GUM01	TN	12km	13.2	30.6	5 12.2	27.0	11.4	23.3	11.0	6 25.0	-0.8	-3.7	-0.4	-1.8	-0.7	-2.0	
Hercules-Glades Wilderness	HEGL	HEGL1	MO	12km	13.0	27.0	12.2	25.2	11.6	22.7	11.4	4 23.5	-0.0	-2.5	-0.5	-1.8	-0.8	-1.7	
Isle Royale NP James River Face Wilderness	ISLE JARI	JARI1	VA	12km 12km	6.6 14.0	21.3	6.4	19.9	6.3	18.9	6.2	2 19.1 4 23.7	-0.1	-1.0	-0.1	-1.0	-0.2	-0.9	
Joyce-Kilmer-Slickrock Wilderness	JOYC	GRSM1	TN	12km	13.2	30.6	12.2	27.0	11.4	23.3	11.0	6 25.0	-0.8	-3.7	-0.4	-1.8	-0.7	-2.0	
Linville Gorge Wilderness	LIGO	LIG01	NC	12km	11.3	29.7	10.3	26.0	9.6	21.8	9.8	B 23.7	-0.1	-4.3	-0.1	-4.3	-0.1	-0.1	
Lostwood	LOST	LOST1	ND	12km	8.0	19.6	5 7.9	18.8	7.8	18.3	7.8	8 18.3	-0.1	-0.5	-0.1	-0.5	-0.1	-0.5	
Maroon Bells-Snowmass Wilderness	MABE	WHRI1	со	12km	0.9	8.8	3 0.4	8.3	0.4	8.2	0.4	4 8.2	0.0	-0.1	0.0	-2.0	0.0	-0.1	
Mammoth Cave NP Medicine Lake	MACA MELA	MACA1 MELA1	KY MT	12km 12km	16.5	32.0	15.3	29.5	14.1	24.4	14.4	4 26. 5 17.3	-1.3	-5.1	-1.2	-5.1	-0.9	-2.8	
Mesa Verde NP	MEVE	MEVE1	co	12km	3.7	12.1	3.2	11.4	3.1	11.1	3.1	1 11.1	-0.1	-0.3	-0.1	-0.3	-0.1	-0.3	
Mount Zirkel Wilderness	MOUS	MOZI1	CO	12km 12km	8.6	21.2	8.4 1.0	9.2	8.4	9.2	8.4	+ 18.3 9.3	0.0 2 0.0	-1.0	0.0	-1.0	0.0	-0.8	
North Absaroka Wilderness	NOAB	NOAB1 OKEE1	WY	12km	1.7	11.3	1.5	11.1	1.5	11.0	1.5	5 11.0	0.0	0.0	0.0	0.0	0.0	0.0	
Otter Creek Wilderness	OTCR	DOSO1	WV	12km	14.9	27.2	13.5	24.1	9.2	21.0	13. 9.5	5 23.9	-0.5	-2.5	-0.4	-1.2	-0.7	-1./	
Pecos Wilderness Presidential Range-Dry River Wildow	PECO	WHPE1 GRGU1	NM	12km	1.4	9.6	1.0	9.0	1.0	8.9	0.9	9 8.9	-0.1	-0.2	-0.1	-0.2	-0.1	-0.2	
Rawah Wilderness	RAWA	MOZI1	со	12km	1.2	9.7	7 1.0	9.2	1.0	9.2	1.0	9.1	2 0.0	-0.1	0.0	-0.1	0.0	-0.1	
Roosevelt Campobello International Cape Romain	ROCA	MOOS1 ROMA1	ME SC	12km 12km	8.6	21.2	2 8.4 1 13.6	19.0	8.4	18.0	8.4	4 18.3 1 22.1	8 0.0	-1.0	-0.7	-1.0	-0.4	-0.8	
Rocky Mountain NP	ROMO	ROM01	co	12km	2.3	12.9	2.0	12.2	1.9	12.1	1.9	9 12.1	0.0	-0.1	0.0	-0.1	0.0	-0.1	
Salt Creek San Pedro Parks Wilderness	SACK	SACR1 SAPE1	NM	12km 12km	7.9	18.	5 7.3 1 1.2	9.9	1.0	9.6	1.0	2 16.	-U.: 5 -0.:	-0.7	-0.1	-0.5	-0.2	-0.7	
Seney	SENE	SENE1	MI	12km	7.1	25.1	6.9	23.3	6.8	21.7	6.8	B 21.9	-0.1	-1.6	-0.1	-1.6	0.0	-1.5	
Shining Rock Wilderness	SHRO	SHEN1 SHRO1	NC	12km	7.3	29.4	5 6.3	20.2	5.7	21.2	5.9	23.2	-0.2	-5.0	-0.8	-5.0	-0.6	-3.0	
Sipsey Wilderness Theodore Roosevelt NP	SIPS	SIPS1 THRO1	AL ND	12km 12km	15.3	29.9	14.5	26.5	13.6	22.8	13.	7 24.5	5 -0.9 5 0.0	-3.7	-0.4	-1.8	-0.9	-2.1	
UL Bend	ULBE	ULBE1	MT	12km	4.4	15.5	5 4.2	15.2	4.2	15.2	4.2	2 15.1	0.0	-0.1	0.0	-0.1	0.0	-0.1	
Upper Buttalo Wilderness Voyageurs NP	UPBU VOYA	UPBU1 VOYA2	AR MN	12km 12km	12.0	27.0	11. 6.6	24.7	10.8	22.2	10. 6.5	7 23.4 5 17.6	-0. i -0.	-2.5	-0.4	-1.8	-0.6 -0.1	-1.4	
Washakie Wilderness	WASH	NOAB1	WY	12km	1.7	11.3	3 1.5	11.1	1.5	11.0	1.5	5 11.0	0.0	0.0	0.0	0.0	0.0	0.0	
Weminuche Wilderness	WEMI	WEMI1	co	12km	2.8	10.0	2.3	9.5	2.3	9.4	2.3	* 8.2 3 9.4	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
White Mountain Wilderness Wheeler Reak Wilderness	WHIT	WHIT1 WHIPE1	NM	12km	3.4	13.0	3.1	12.3	3.0	11.7	2.9	9 11.8	8 -0.1	-0.6	-0.1	-0.5	-0.2	-0.5	
Wind Cave NP	WICA	WICA1	SD	12km	4.9	16.0	4.6	15.1	4.6	14.8	4.6	5 14.8	3 0.0	-0.3	0.0	-0.3	-0.1	-0.4	
Wichita Mountains Wolf Island	WIMO WOLF	WIMO1 OKEF1	OK GA	12km 12km	9.9 14.9	23.6	9.1 2 13.9	21.7	8.9	20.2	8.9	20.5	-0.	-1.6	-0.1	-1.1	-0.2	-1.2	
Agua Tibia Wilderness	AGTI	AGTI1	CA	36km	8.4	22.4	1 7.9	20.2	7.8	20.2	7.8	B 20.2	2 0.0	0.0	0.0	0.0	0.0	0.0	
Anaconda-Pintler Wilderness	ANAC	SULA1	MT	36km	2.4	17.0	4.0	15.8	4.0	15.7	4.0	3 16.8	B 0.1	0.0	0.0	0.0	0.0	0.0	
Ansel Adams Wilderness (Minarets)	ANAD	KAIS1 CANY1	CA	36km	1.9	15.2	2 1.7	14.6	1.7	14.6	1.7	7 14.6	5 0.0	0.0	0.0	0.0	0.0	0.0	
Mount Baldy Wilderness	BALD	BALD1	AZ	36km	2.9	11.3	3 2.5	10.9	2.4	10.9	2.4	4 10.3	7 -0.1	0.0	-0.1	0.0	-0.1	-0.2	
Bob Marshall Wilderness Bryce Canyon NP	BOMA BRCA	MONT1 BRCA1	MT UT	36km 36km	3.3	16.1	1 3.1 5 2.4	15.8	3.1	15.8	3.1	1 15.8 4 10.7	8 0.0 7 0.0	-0.1	0.0	-0.1	0.0	-0.1	
Bridger Wilderness	BRID	BRID1	WY	36km	1.7	10.7	7 1.6	10.4	1.6	10.3	1.6	5 10.3	3 0.0	-0.1	0.0	-0.1	0.0	-0.1	
Cabinet Mountains Wilderness Canyonlands NP	CABI	CABI1 CANY1	UT	36km	3.3	14.:	s 3.0 s 2.6	14.U 9.8	2.6	13.9	i 3.0	J 13.9 5 9.6	i -0.1	-0.1	-0.1	-0.1	-0.1	-0.1	
Capitol Reef NP Caribou Wilderness	CAPI	CAPI1 LAVO1	UT	36km 36km	3.2	10.9	2.9	10.3	2.9	10.2	2.9	9 10.2	2 0.0	-0.2	0.0	-0.2	0.0	-0.2	
Chiricahua NM	CHIR	CHIR1	AZ	36km	4.6	12.9	9 4.4	12.4	4.4	12.4	4.4	4 12.2	2 -0.1	-0.1	-0.1	-0.1	-0.1	-0.2	
Chiricahua Wilderness Crater Lake NP	CHIW	CHIR1 CRLA1	AZ OR	36km 36km	4.6	12.9	4.4	12.4	4.4	12.4	4.4	4 12.3	2 -0.1	-0.1	-0.1	-0.1	-0.1	-0.2	
Craters of the Moon NM	CRMO	CRMO1	ID	36km	3.7	14.1	3.5	13.7	3.5	13.6	3.5	5 13.6	5 O.I	0.0	0.0	0.0	0.0	0.0	
Desolation Wilderness	DESO	BLIS1	CA	36km	4.5	18.4	2.1	10.4	2.1	10.4	2.1	1 12.4	0.0	0.0	0.0	0.0	0.0	0.0	
Diamond Peak Wilderness	DIPE	CRLA1	OR	36km	1.6	13.2	2 1.5	12.7	1.5	12.7	1.5	5 12.3	7 0.0	0.0	0.0	0.0	0.0	0.0	
Emigrant Wilderness	EMIG	YOSE1	CA	36km	3.4	16.9	3.1	16.2	3.4	16.2	3.1	1 16.3	2 0.1	0.0	0.0	0.0	0.0	0.0	
Fitzpatrick Wilderness Galiuro Wilderness	FITZ GALI	BRID1 CHIR1	WY AZ	36km 36km	1.7	10.7	1.6	10.4	1.6	10.3	1.6	5 10.3 4 12.2	8 0.0	-0.1	-0.1	-0.1	-0.1	-0.1	
Gates of the Mountains Wilderness	GAMO	GAM01	MT	36km	1.4	11.9	1.2	11.6	1.2	11.6	1.3	2 11.6	5 O.I	-0.1	0.0	-0.1	0.0	0.0	
Gearnart Mountain Wilderness Gila Wilderness	GEMO	GICL1	NM	36km	1.b 3.1	13.1	2 1.5	12.7	1.5	12.0	1.5	5 12. B 12.8	0.0	-0.2	0.0	0.0	0.0	-0.3	
Glacier NP	GLAC	GLAC1	MT	36km	7.1	19.6	6.8	19.1	6.8	19.0	6.8	B 19.0	0.0	0.0	0.0	0.0	0.0	0.0	
Goat Rocks Wilderness	GORO	WHPA1	WA	36km	3.0	13.:	2.9	12.6	2.9	12.6	2.5	5 12.6	0.0 0.0	-0.1	0.0	-0.1	0.0	-0.1	
Grand Canyon NP Grand Teton NP	GRCA	GRCA2 YELL2	AZ WY	36km 36km	2.2	11.9	1.9	11.0	1.9	10.9	1.9	9 11.0	0.0	-0.1	0.0	-0.1	0.0	-0.1	
Hells Canyon Wilderness	HECA	HECA1	OR	36km	5.0	11.	4.8	18.3	4.7	18.3	4.1	7 18.3	3 0.1	0.0	0.0	0.0	0.0	0.0	
Hoover Wilderness Jarbidge Wilderness	HOOV	HOOV1 JARB1	CA NV	36km 36km	1.5	11.6	1.3	11.2	1.3	11.2	1.3	3 11.3	2 0.0	0.0	0.0	0.0	0.0	0.0	
John Muir Wilderness	JOMU	KAIS1	CA	36km	1.9	15.2	2.3	14.6	1.7	14.6	1.5	7 14.6	5 0.0	0.0	0.0	0.0	0.0	0.0	
Joshua Tree NM Kaiser Wilderness	JOSH KAIS	JUSH1 KAIS1	CA CA	36km 36km	5.7	18.9	5.5	17.3	5.5	17.3	5.5	7 14.6	5 0.0	0.0	0.0	0.0	0.1	0.0	
Kalmiopsis Wilderness	KALM	KALM1	OR	36km	6.4	16.4	6.1	16.1	6.1	16.1	6.1	1 16.0	0.0	0.0	0.0	0.0	0.0	-0.1	
Lava Beds NM	LABE	LABE1	CA	36km	8.2	23.1	2.9	21.5	2.9	13.5	7.6	21.	5 0.0	0.0	0.0	0.0	0.0	0.0	
Lassen Volcanic NP Mazatzal Wilderness	LAVO MAZA	LAVO1 IKBA1	CA AZ	36km 36km	2.5	13.7	2.3	13.2	2.3	13.2	2.5	3 13.1	0.0	0.0	0.0	0.0	0.0	0.0	
Mission Mountains Wilderness	MIMO	MONT1	MT	36km	3.3	14.0	1 3.1	12.5	3.1	15.8	3.1	15.8	3 0.1	-0.1	0.0	-0.1	0.0	-0.1	
Mount Hood Wilderness	MOHO	MOH01	OR	36km	1.8	14.7	1.6	13.9	1.6	13.8	1.6	5 13.8	8 0.0	-0.1	0.0	-0.1	0.0	-0.1	

1									
				2014 TR + BART-elsewhere	SO2 Emissions	2014	SO2 Emissions		Resultin
			2014 Base Case	SO2 Emissions (estimate	Decrease from	Budget	Decrease from TR		g
	GA		SO2 Emissions	from IPM used in air quality	TR (as modeled)	Increase	with Increased		Emission
TX Factor	Factor	State	[tons]	modeling) [tons]	[tons]	[tons]	Budget [tons]	New Total	Factor
0.73	0.48	Texas	453,332	266,627	-186,705	50,157	-136,548	316,784	0.73
		Georgia	170,300	93,600	-76,700	40,334	-36,366	133,934	0.47

Mount Jefferson Wilderness	MOJE	THSI1	OR	36km	2.7	15.8	2.6	15.4	2.6	15.3	2.6	15.3	0.0	0.0	0.0	0.0	0.0	0.0
Mokelumne Wilderness	MOKE	BLIS1	CA	36km	2.3	12.9	2.1	12.4	2.1	12.4	2.1	12.4	0.0	0.0	0.0	0.0	0.0	0.0
Mountain Lakes Wilderness	MOLA	CRLA1	OR	36km	1.6	13.2	1.5	12.7	1.5	12.7	1.5	12.7	0.0	0.0	0.0	0.0	0.0	0.0
Mount Rainier NP	MORA	MORA1	WA	36km	5.1	17.1	4.8	16.0	4.7	15.9	4.7	15.9	0.0	-0.1	0.0	-0.1	0.0	-0.1
Mount Washington Wilderness	MOWA	THSI1	OR	36km	2.7	15.8	2.6	15.4	2.6	15.3	2.6	15.3	0.0	0.0	0.0	0.0	0.0	0.0
North Cascades NP	NOCA	NOCA1	WA	36km	3.0	13.3	2.9	12.6	2.9	12.6	2.9	12.6	0.0	0.0	0.0	0.0	0.0	0.0
Olympic NP	OLYM	OLYM1	WA	36km	5.7	15.8	5.4	15.1	5.4	15.0	5.4	15.0	0.0	0.0	0.0	0.0	0.0	0.0
Pasayten Wilderness	PASA	PASA1	WA	36km	2.6	15.4	2.4	14.8	2.4	14.7	2.4	14.7	0.0	-0.1	0.0	-0.1	0.0	-0.1
Petrified Forest NP	PEFO	PEFO1	AZ	36km	5.0	13.6	4.4	13.4	4.3	13.4	4.3	13.2	0.0	0.0	0.0	0.0	-0.1	-0.2
Pine Mountain Wilderness	PIMO	IKBA1	AZ	36km	5.4	14.0	5.0	12.9	5.0	13.2	5.0	13.2	0.0	0.2	0.0	0.2	0.0	0.2
Pinnacles NM	PINN	PINN1	CA	36km	8.3	17.9	7.8	16.5	7.8	16.5	7.8	16.5	0.0	0.0	0.0	0.0	0.0	0.0
Point Reyes NS	PORE	PORE1	CA	36km	9.7	22.4	9.0	21.2	9.0	21.2	9.0	21.2	0.0	0.0	0.0	0.0	0.0	0.0
San Rafael Wilderness	RAFA	RAFA1	CA	36km	5.9	19.4	5.3	18.2	5.3	18.2	5.3	18.2	0.0	0.0	0.0	0.0	0.0	0.0
Red Rock Lakes	REDR	YELL2	WY	36km	2.2	11.2	2.0	10.9	2.0	10.9	2.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
Redwood NP	REDW	REDW1	CA	36km	5.8	18.6	5.8	18.0	5.8	18.0	5.8	18.0	0.0	0.0	0.0	0.0	0.0	0.0
San Gabriel Wilderness	SAGA	SAGA1	CA	36km	4.5	18.4	3.9	16.4	3.9	16.4	3.9	16.4	0.0	0.0	0.0	0.0	0.0	0.0
San Gorgonio Wilderness	SAGO	SAGO1	CA	36km	5.0	21.4	4.6	19.7	4.6	19.7	4.6	19.7	0.0	0.0	0.0	0.0	0.0	0.0
Saguaro NM	SAGU	SAGU1	AZ	36km	7.0	14.4	6.5	13.4	6.3	13.7	6.4	13.3	-0.2	0.3	-0.2	0.3	-0.2	-0.1
San Jacinto Wilderness	SAJA	SAGO1	CA	36km	5.0	21.4	4.6	19.7	4.6	19.7	4.6	19.7	0.0	0.0	0.0	0.0	0.0	0.0
Sawtooth Wilderness	SAWT	SAWT1	ID	36km	3.7	15.0	3.6	14.8	3.6	14.8	3.6	14.8	0.0	0.0	0.0	0.0	0.0	0.0
Scapegoat Wilderness	SCAP	MONT1	MT	36km	3.3	16.1	3.1	15.8	3.1	15.8	3.1	15.8	0.0	-0.1	0.0	-0.1	0.0	-0.1
Selway-Bitterroot Wilderness	SELW	SULA1	MT	36km	2.4	17.1	2.3	16.8	2.3	16.8	2.3	16.8	0.0	0.0	0.0	0.0	0.0	0.0
Sequoia NP	SEQU	SEQU1	CA	36km	8.2	23.7	7.6	21.5	7.6	21.5	7.6	21.5	0.0	0.0	0.0	0.0	0.0	0.0
Sierra Ancha Wilderness	SIAN	SIAN1	AZ	36km	5.7	14.5	5.1	14.0	5.0	14.0	5.0	14.0	-0.1	0.0	-0.1	0.0	0.0	0.0
South Warner Wilderness	SOWA	LABE1	CA	36km	3.0	14.1	2.9	13.5	2.9	13.5	2.9	13.5	0.0	0.0	0.0	0.0	0.0	0.0
Strawberry Mountain Wilderness	STMO	STAR1	OR	36km	3.6	17.3	3.5	16.9	3.4	16.9	3.4	16.9	0.0	0.0	0.0	0.0	0.0	0.0
Superstition Wilderness	SUPE	TONT1	AZ	36km	6.0	14.2	5.5	13.5	5.5	13.4	5.5	13.4	0.0	-0.1	0.0	-0.1	0.0	-0.1
Sycamore Canyon Wilderness	SYCA	SYCA1	AZ	36km	5.3	15.5	4.8	15.0	4.8	14.9	4.8	14.9	0.0	-0.1	0.0	-0.1	0.0	-0.1
Teton Wilderness	TETO	YELL2	WY	36km	2.2	11.2	2.0	10.9	2.0	10.9	2.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
Three Sisters Wilderness	THIS	THSI1	OR	36km	2.7	15.8	2.6	15.4	2.6	15.3	2.6	15.3	0.0	0.0	0.0	0.0	0.0	0.0
Thousand Lakes Wilderness	THLA	LAVO1	CA	36km	2.5	13.7	2.3	13.2	2.3	13.2	2.3	13.1	0.0	0.0	0.0	0.0	0.0	0.0
Ventana Wilderness	VENT	PINN1	CA	36km	8.3	17.9	7.8	16.5	7.8	16.5	7.8	16.5	0.0	0.0	0.0	0.0	0.0	0.0
Mount Adams Wilderness	WHPA	WHPA1	WA	36km	1.6	12.7	1.5	11.9	1.5	11.9	1.5	11.9	0.0	-0.1	0.0	-0.1	0.0	-0.1
Yellowstone NP	YELL	YELL2	WY	36km	2.2	11.2	2.0	10.9	2.0	10.9	2.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
Yosemite NP	YOSE	YOSE1	CA	36km	3.4	16.9	3.1	16.2	3.1	16.2	3.1	16.2	0.0	0.0	0.0	0.0	0.0	0.0
	Avg visibility change for 140 Class I areas										as	-0.13	-0.68	-0.1	-0.6	-0.1	-0.5	
	Avg visibility change for 60 Class I areas											-0.29	-1.55	-0.2	-1.3	-0.2	-1.0	

	IMPROVE	Represent		12km or	2003-2007 Ambient Data 20%	2003-2007 Ambient Data 20%	2014 base case 20%	2014 base case 20%	CSAPR+ BART 20%	CSAPR+ BART 20%	Nationwide BART 20%	Nationwide BART 20%	CSAPR+BAR T - 2014 base 20%	CSAPR+BAR T - 2014 base 20%	Nationwide BART - 2014 base 20%	Nationwide BART - 2014 base 20%
Class I Area Name Acadia NP Badlands NP	ID ACAD BADL	ACAD1 BADL1	State ME SD	36km 12km 12km	Best (dv) 8.3 6.7	Worst (dv) 22.8 16.8	best 8.0 6.3	worst 20.1 16.0	best 7.9 6.2	worst 19.0 15.4	best 7.9 6.2	worst 19.3 15.3	best 0.0 -0.1	worst -1.1 -0.6	best 0.0 -0.1	worst -0.8 -0.7
Bandelier NM Big Bend NP Black Common of the Gunnison NM	BAND BIBE	BAND1 BIBE1	NM TX	12km 12km	4.6	i 12.0 17.2	4.2	11.1	4.1	10.8	4.1	10.7	-0.1	-0.3	-0.1	-0.4
Bosque del Apache Boundary Waters Canoe Area	BOAP	BOAP1 BOWA1	NM MN	12km 12km	6.1	13.8	5.6	5 13.0 5 18.8	5.5	12.5	5.4	12.4	-0.1	-0.6	-0.1	-0.6
Brigantine Caney Creek Wilderness Carlsbad Caverns NP	CACR CAVE	CACR1 GUMO1	AR TX	12km 12km 12km	14.3 11.8 5.6	28.7 26.7 16.5	13	2 25.4 3 24.4 2 15.5	12.9	22.8	13.0 10.8 5.1	23.7 22.2 14.7	-0.4 -0.4 -0.1	-2.5 -3.2 -0.9	-0.2 -0.6 -0.1	-1.6 -2.2 -0.8
Cohutta Wilderness Dolly Sods Wilderness Faeles Nest Wilderness	COHU DOSO FANF	COHU1 DOSO1 WHRI1	GA WV CO	12km 12km 12km	13.8	30.5 29.9 8.8	12.9	26.6	12.1 9.2	22.8	12.4 9.5	24.4	-0.8	-3.8 -5.7 -0.1	-0.5	-2.3 -3.2 -0.1
Everglades NP Flat Tops Wilderness	EVER FLTO	EVER1 WHRI1	FL CO	12km 12km	12.3	8 22.5	11.9	5 20.4 8.3	11.1	19.3	11.2	19.7	-0.3	-1.0	-0.3	-0.7
Great Gulf Wilderness Great Sand Dunes NM Great Smoky Mountains NP	GRGU GRSA GRSM	GRGU1 GRSA1 GRSM1	NH CO TN	12km 12km 12km	3.9	21.4	3.5 12.5	19.2 11.3 2 27.0	5.5 3.5 11.4	17.4 11.1 23.3	5.5 3.5 11.6	18.0 11.1 25.0	-0.1 -0.1 -0.8	-1.8 -0.2 -3.7	-0.1 -0.7	-1.3 -0.2 -2.0
Guadalupe Mountains NP Hercules-Glades Wilderness Isle Royale NP	GUMO HEGL ISLE	GUMO1 HEGL1 ISLE1	TX MO MI	12km 12km 12km	5.6 13.0 6.6	5 16.5 27.0 5 21.3	5.2 12.2 6.4	2 15.5 2 25.2 1 19.9	5.1 11.6 6.3	14.7 22.7 18.9	5.1 11.4 6.2	14.7 23.5 19.1	-0.1 -0.6 -0.1	-0.9 -2.5 -1.0	-0.1 -0.8 -0.2	-0.8 -1.7 -0.9
James River Face Wilderness Joyce-Kilmer-Slickrock Wilderness	JARI JOYC	JARI1 GRSM1	VA TN	12km 12km	14.0	28.9	12.	25.8	12.1	21.6	12.4	23.7	-0.9	-4.2	-0.5	-2.1
Linville Gorge Wilderness Lostwood	LIGO	LIGO1 LOST1	NC ND	12km 12km	11.3	29.7 19.6	10.	3 26.0 3 18.8	9.6	21.8	9.8	23.7	-0.1	-4.3	-0.1	-2.3
Lye Brook Wilderness Maroon Bells-Snowmass Wilderness Mammoth Cave NP	LYBR MABE MACA	LYBR1 WHRI1 MACA1	VT CO KY	12km 12km 12km	5.8 0.9 16.5	8 24.1 8 8.8 5 32.0	0.4 15.3	20.7 8.3 29.5	5.4 0.4 14.1	18.2 8.2 24.4	5.4 0.4 14.4	19.0 8.2 26.7	-0.1 0.0 -1.2	-2.6 -0.1 -5.1	-0.1 0.0 -0.9	-1.7 -0.1 -2.8
Medicine Lake Mesa Verde NP Moosehorn	MELA MEVE MOOS	MELA1 MEVE1 MOOS1	MT CO ME	12km 12km 12km	6.6 3.7 8.6	i 18.2 12.1 i 21.2	6.5 3.2 8.4	17.7 11.4 19.0	6.5 3.1 8.4	17.4 11.1 18.0	6.5 3.1 8.4	17.3 11.1 18.3	-0.0 -0.1	-0.3 -0.3 -1.0	0.0 -0.1 0.0	-0.3 -0.3 -0.8
Mount Zirkel Wilderness North Absaroka Wilderness	MOZI NOAB	MOZI1 NOAB1	CO WY	12km 12km	1.2	9.7	1.0	9.2 5 11.1	1.0	9.2	1.0	9.2	0.0	-0.1	0.0	-0.1 0.0
Otter Creek Wilderness Pecos Wilderness	OTCR	DOSO1 WHPE1	WV NM	12km 12km	14.3	29.9	10.	24.1 3 27.1 9.0	9.2	21.0	9.5	23.9	-0.5	-2.3 -5.7 -0.2	-0.8	-3.2 -0.2
Presidential Range-Dry River Wilderness Rawah Wilderness Roosevelt Campobello International Park	PRRA RAWA ROCA	GRGU1 MOZI1 MOOS1	NH CO ME	12km 12km 12km	7.0	21.4 9.7 21.2	6.7 1.0 8.4	19.2 9.2 19.0	6.6 1.0 8.4	17.4 9.2 18.0	6.6 1.0 8.4	18.0 9.2 18.3	-0.1 0.0 0.0	-1.8 -0.1 -1.0	-0.1 0.0 0.0	-1.3 -0.1 -0.8
Cape Romain Rocky Mountain NP Salt Creek	ROMA ROMO SACR	ROMA1 ROMO1 SACR1	SC CO NM	12km 12km 12km	15.1 2.3 7 9	27.4 12.9 18 3	13.0	5 24.0 0 12.2 8 17 1	12.9 1.9 7 7	21.2 12.1 16.4	13.1 1.9 7 7	22.1	-0.7 0.0 -0 1	-2.9 -0.1 -0.7	-0.4 0.0	-1.9 -0.1 -0.7
San Pedro Parks Wilderness Seney Shenandoah NR	SAPE SENE	SAPE1 SENE1	NM MI	12km 12km 12km	1.5	10.4	1.2	23.3	1.0	9.6	1.0	9.5	-0.2	-0.3	-0.2	-0.4
Shining Rock Wilderness Sipsey Wilderness	SHRO	SHRO1 SIPS1	NC AL	12km 12km	10.2 7.3 15.3	29.4 28.5 29.9	9.0 6.3 14.	26.2 24.8 26.5	8.2 5.7 13.6	21.2 21.1 22.8	8.4 5.9 13.7	23.2 22.7 24.5	-0.8 -0.7 -0.9	-5.0 -3.8 -3.7	-0.6 -0.5 -0.9	-3.0 -2.1 -2.1
Theodore Roosevelt NP UL Bend Upper Buffalo Wilderness	THRO ULBE UPBU	THRO1 ULBE1 UPBU1	ND MT AR	12km 12km 12km	7.1	17.9 15.5 27.0	6.8 4.2 11.2	8 17.0 2 15.2 3 24.7	6.8 4.2 10.8	16.7 15.2 22.2	6.8 4.2 10.7	16.6 15.1 23.4	0.0	-0.3 -0.1 -2.5	0.0	-0.4 -0.1 -1.4
Voyageurs NP Washakie Wilderness West Fik Wilderness	VOYA WASH	VOYA2 NOAB1	MN WY CO	12km 12km 12km	6.8 1.7	19.6 11.3	6.0	5 18.4 5 11.1	6.5 1.5	17.4	6.5 1.5	17.6	-0.1	-1.0	-0.1	-0.8 0.0
Weite Die Wilderness White Mountain Wilderness	WEMI	WEMI1 WHIT1	CO NM	12km 12km	2.8	10.0 13.0	2.3	9.5	2.3	9.4	2.3	9.4	-0.1	-0.1	-0.1	-0.1
Wheeler Peak Wilderness Wind Cave NP Wichita Mountains	WICA WIMO	WICA1 WIM01	SD OK	12km 12km 12km	1.4 4.9 9.9	9.6	4.6	9.0 5 15.1 21.7	4.6	8.9 14.8 20.2	4.6	8.9 14.8 20.5	-0.1 0.0 -0.2	-0.2 -0.3 -1.6	-0.1 -0.2	-0.2 -0.4 -1.2
Wolf Island Agua Tibia Wilderness Alpine Lake Wilderness	WOLF AGTI ALLA	OKEF1 AGTI1 SNPA1	GA CA WA	12km 36km 36km	14.9 8.4 5.1	27.2	13.9	24.1	13.0 7.8 4.6	21.6 20.2 15.7	13.2 7.8 4.6	22.4 20.2 15.7	-0.9 0.0	-2.5	-0.7	-1.7 0.0 0.0
Anaconda-Pintler Wilderness Ansel Adams Wilderness (Minarets)	ANAC ANAD	SULA1 KAIS1	MT CA	36km 36km	2.4	17.1	2.1	16.8 14.6	2.3	16.8 14.6	2.3	16.8	0.0	0.0	0.0	0.0
Mount Baldy Wilderness Bob Marshall Wilderness	BALD BOMA	BALD1 MONT1	AZ MT	36km 36km	2.9	10.8	2.5	9.8 10.9 15.8	2.0	9.0 10.9 15.8	2.0	9.0 10.7 15.8	-0.1	-0.2 0.0 -0.1	-0.1	-0.2 -0.2
Bryce Canyon NP Bridger Wilderness Cabinet Mountains Wilderness	BRCA BRID CABI	BRCA1 BRID1 CABI1	UT WY MT	36km 36km 36km	2.4 1.7 3.3	11.6 10.7 14.3	2.4	10.8 10.4 14.0	2.4 1.6 3.0	10.7 10.3 13.9	2.4 1.6 3.0	10.7 10.3 13.9	0.0	-0.1 -0.1 -0.1	0.1 0.0 0.0	-0.1 -0.1 -0.1
Canyonlands NP Capitol Reef NP Caribou Wilderness	CANY CAPI CARI	CANY1 CAPI1	UT UT CA	36km 36km 36km	3.0 3.2 2.5	10.8 10.9 13.7	2.0	9.8 10.3 13.2	2.6 2.9 2.3	9.6 10.2	2.6	9.6 10.2 13.1	-0.1	-0.2	-0.1	-0.2 -0.2
Chiricahua NM Chiricahua Wilderness Crater Lake NP	CHIR CHIW CRLA	CHIR1 CHIR1 CRLA1	AZ AZ OR	36km 36km 36km	4.6 4.6 1.6	i 12.9 i 12.9 i 13.2	4.4	12.4 12.4 12.4	4.4 4.4 1.5	12.4 12.4 12.7	4.4	12.2 12.2 12.7	-0.1 -0.1 0.0	-0.1 -0.1 0.0	-0.1 -0.1 0.0	-0.2 -0.2 0.0
Craters of the Moon NM Cucamonga Wilderness Desolation Wilderness	CRMO CUCA DESO	CRMO1 SAGA1 BUS1	ID CA	36km 36km 36km	3.7	14.1	3.5	13.7 16.4	3.5 3.9	13.6	3.5 3.9 2.1	13.6 16.4	0.0	0.0	0.0	0.0
Diamond Peak Wilderness Eagle Cap Wilderness	DIPE	CRLA1 STAR1	OR OR	36km 36km	1.6	i 13.2	1.5	12.7	1.5	12.7	1.5	12.7	0.0	0.0	0.0	0.0
Fitzpatrick Wilderness Galiuro Wilderness	FITZ GALI	BRID1 CHIR1	WY AZ	36km 36km	1.7	10.5	1.6	i 10.2 i 10.4 i 12.4	1.6	10.2	1.6	10.2	0.0	-0.1	0.0	-0.1
Gates of the Mountains Wilderness Gearhart Mountain Wilderness Gila Wilderness	GAMO GEMO GICL	GAMO1 CRLA1 GICL1	MT OR NM	36km 36km 36km	1.4	11.9 13.2 13.1	1.5	2 11.6 5 12.7 9 13.0	1.2 1.5 2.9	11.6 12.7 12.9	1.2 1.5 2.8	11.6 12.7 12.8	0.0	-0.1 0.0 -0.2	0.0	0.0
Glacier NP Glacier Peak Wilderness Goat Rocks Wilderness	GLAC GLPE GORO	GLAC1 NOCA1 WHPA1	MT WA WA	36km 36km 36km	7.1 3.0 1.6	19.6 13.3 12.7	6.8 2.9 1.5	8 19.1 9 12.6 5 11.9	6.8 2.9 1.5	19.0 12.6 11.9	6.8 2.9 1.5	19.0 12.6 11.9	0.0	0.0	0.0	0.0 0.0 -0.1
Grand Canyon NP Grand Teton NP Hells Canyon Wilderness	GRCA GRTE HECA	GRCA2 YELL2 HFCA1	AZ WY OR	36km 36km 36km	2.2	11.9	1.9	0 11.0 0 10.9 18 3	1.9 2.0 4.7	10.9 10.9	1.9 2.0 4.7	11.0 10.9	0.0	-0.1	0.0	-0.1 0.0
Hoover Wilderness Jarbidge Wilderness	HOOV JARB	HOOV1 JARB1	CA NV	36km 36km	1.5	11.6	1.	3 11.2 3 12.0	1.3	11.2	1.3	11.2 12.0	0.0	0.0	0.0	0.0
Joshua Tree NM Kaiser Wilderness	JOSH KAIS	JOSH1 KAIS1	CA CA	36km 36km	5.7	13.2	5.5	14.0	5.5	14.0	5.5	14.0	0.0	0.0	0.1	0.0
Kalmiopsis Wilderness Kings Canyon NP Lava Beds NM	KALM KICA LABE	KALM1 SEQU1 LABE1	OR CA CA	36km 36km 36km	6.4 8.2 3.0	16.4 23.7 14.1	6.1 7.6 2.9	16.1 21.5 13.5	6.1 7.6 2.9	16.1 21.5 13.5	6.1 7.6 2.9	16.0 21.5 13.5	0.0	0.0	0.0	-0.1 0.0 0.0
Lassen Volcanic NP Mazatzal Wilderness Mission Mountains Wilderness	LAVO MAZA MIMO	LAVO1 IKBA1 MONT1	CA AZ MT	36km 36km 36km	2.5	13.7 14.0 16.1	2.3	13.2 12.9 15.8	2.3 5.0 3.1	13.2 13.2 15.8	2.3 5.0 3.1	13.1 13.2 15.8	0.0	0.0	0.0	0.0 0.2 -0.1
Mount Hood Wilderness Mount Jefferson Wilderness Mokelumne Wilderness	MOHO MOJE MOKE	MOHO1 THSI1 BUS1	OR OR CA	36km 36km 36km	1.8	14.7 15.8	2.0	i 13.9 i 15.4	1.6 2.6 2.1	13.8 15.3 12.4	1.6 2.6 2.1	13.8 15.3 12.4	0.0	-0.1	0.0	-0.1 0.0
Mountain Lakes Wilderness Mount Rainier NP	MOLA MORA	CRLA1 MORA1	OR WA	36km 36km	1.6	13.2	1.5	12.7	1.5	12.7	1.5	12.7	0.0	0.0	0.0	0.0
North Cascades NP Olympic NP	NOCA OLYM	NOCA1 OLYM1	WA WA	36km 36km	3.0	15.8 13.3 15.8	2.0	12.6	2.0 2.9 5.4	15.3	2.0	15.3 12.6 15.0	0.0	0.0	0.0	0.0
Pasayten Wilderness Petrified Forest NP Pine Mountain Wilderness	PASA PEFO PIMO	PASA1 PEFO1 IKBA1	WA AZ AZ	36km 36km 36km	2.6 5.0 5.4	5 15.4 0 13.6 1 14.0	2.4 4.4 5.0	14.8 13.4 12.9	2.4 4.3 5.0	14.7 13.4 13.2	2.4 4.3 5.0	14.7 13.2 13.2	0.0	-0.1 0.0 0.2	-0.1 0.0	-0.1 -0.2 0.2
Pinnacles NM Point Reyes NS San Rafael Wilderness	PINN PORE RAFA	PINN1 PORE1 RAFA1	CA CA CA	36km 36km 36km	8.3 9.7 5.9	17.9 22.4 19.4	7.8 9.0 5.3	16.5 21.2 18.2	7.8 9.0 5.3	16.5 21.2 18.2	7.8 9.0 5.3	16.5 21.2 18.2	0.0	0.0	0.0	0.0
Red Rock Lakes Redwood NP San Gabriel Wilderness	REDR REDW SAGA	YELL2 REDW1 SAGA1	CA CA	36km 36km 36km	2.2 5.8 4.5	11.2 18.6 18.4	2.0	10.9 8 18.0 9 16.4	2.0 5.8 3.9	10.9 18.0 16.4	2.0 5.8 3.9	10.9 18.0 16.4	0.0	0.0	0.0	0.0
San Gorgonio Wilderness Saguaro NM San Jacinto Wilderness	SAGO SAGU SAJA	SAGO1 SAGU1 SAGO1	CA AZ CA	36km 36km 36km	5.0 7.0 5.0	21.4 14.4 21.4	4.6 6.5 4 f	i 19.7 i 13.4 i 19.7	4.6 6.3 4.6	19.7 13.7 19.7	4.6 6.4 4.6	19.7 13.3 19.7	0.0 -0.2 0 0	0.0	0.0 -0.2 0 0	0.0 -0.1 0.0
Sawtooth Wilderness Scapegoat Wilderness Selway-Bitterroot Wilderness	SAWT SCAP SELW	SAWT1 MONT1 SULA1	ID MT MT	36km 36km 36km	3.7	15.0	3.0	i 14.8 15.8 16 °	3.6	14.8 15.8 16 °	3.6	14.8 15.8	0.0	-0.1	0.0	0.0
Sequoia NP Sierra Ancha Wilderness	SEQU	SEQU1 SIAN1	CA AZ	36km 36km	8.2	23.7	7.6	5 21.5 14.0	7.6	21.5	7.6	21.5	0.0	0.0	0.0	0.0
South Warner Wilderness Strawberry Mountain Wilderness Superstition Wilderness	SOWA STMO SUPE	LABE1 STAR1 TONT1	CA OR AZ	36km 36km 36km	3.0	14.1 17.3 14.2	2.9 3.5 5.5	13.5 16.9 13.5	2.9 3.4 5.5	13.5 16.9 13.4	2.9 3.4 5.5	13.5 16.9 13.4	0.0	0.0 0.0 -0.1	0.0	0.0
Sycamore Canyon Wilderness Teton Wilderness Three Sisters Wilderness	SYCA TETO THIS	SYCA1 YELL2 THSI1	AZ WY OR	36km 36km 36km	5.3	15.5 11.2	4.8	8 15.0 0 10.9 5 15.4	4.8 2.0 2.6	14.9 10.9 15 3	4.8 2.0 2.6	14.9 10.9 15 3	0.0	-0.1 0.0	0.0	-0.1 0.0
Thousand Lakes Wilderness Ventana Wilderness Mount Adams Wilderness	THLA VENT WHPA	LAVO1 PINN1 WHPA1	CA CA WA	36km 36km 36km	2.5	13.7	2.3	3 13.2 3 16.5	2.3	13.2	2.3	13.1	0.0	0.0	0.0	0.0
Yellowstone NP Yosemite NP	YELL YOSE	YELL2 YOSE1	WY CA	36km 36km	2.2	11.2	2.0	0 10.9 16.2	2.0	11.9	2.0	11.9	0.0	-0.1 0.0 0.0	0.0	0.0 0.0
									Avg visibilit Avg visibilit	ty change fo ty change fo	r 140 Class I a r 60 Class I a	reas	-0.1 -0.3	-0.7 -1.6	-0.1 -0.2	-0.5 -1.0

#### **CERTIFICATE OF SERVICE**

I hereby certify that on August 28, 2020, I filed the Petition for Partial Reconsideration of Denial of Petition for Reconsideration regarding Interstate Transport of Fine Particulate Matter: Revision of Federal Implementation Plan Requirements for Texas via email and Federal Express, to:

Administrator Andrew Wheeler Office of the Administrator U.S. Environmental Protection Agency William Jefferson Clinton Building – Mail Code 1101A 1200 Pennsylvania Ave., NW Washington, DC 20460 Wheeler.andrew@epa.gov

Further, I certify that on August 28, 2020, I served a courtesy copy of the foregoing, via email, to:

Matthew Z. Leopold, General Counsel Office of General Counsel U.S. Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Ave., NW Washington, DC 20460 Leopold.matt@Epa.gov

Lea Anderson Office of General Counsel U.S. Environmental Protection Agency William Jefferson Clinton Building 1200 Pennsylvania Ave., NW Washington, DC 20460 Anderson.Lea@epa.gov

Air & Radiation Docket A-and-R-Docket@epa.gov

August 28, 2020

/s/ Sean Woody Sean Woody