

**UNITED STATES COURT OF APPEALS
FOR THE TENTH CIRCUIT**

No. 14-9529

STATE OF WYOMING,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents,

and

POWDER RIVER BASIN RESOURCE
COUNCIL, *et al.*,

Intervenors.

No. 14-9530

POWDER RIVER BASIN RESOURCE
COUNCIL, *et al.*,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents,

and

STATE OF WYOMING, *et al.*,

Intervenors.

No. 14-9533

BASIN ELECTRIC POWER COOPERATIVE,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents,

and

POWDER RIVER BASIN RESOURCE
COUNCIL, *et al.*,

Intervenors.

No. 14-9534

PACIFICORP,

Petitioner,

v.

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, *et al.*,

Respondents,

and

POWDER RIVER BASIN RESOURCE
COUNCIL, *et al.*,

Intervenors.

Petition for Review of Final Action of the
United States Environmental Protection Agency

STATE OF WYOMING'S INTERVENOR-RESPONSE BRIEF
Preliminary Brief (Deferred Appendix Appeal)

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STATEMENT OF RELATED CASES

In this case, the Powder River Basin Resource Council, National Parks Conservation Association, and Sierra Club (conservation organizations) petitioned this Court to review portions of the United States Environmental Protection Agency's (EPA) partial approval of the State of Wyoming's regional haze implementation plan for nitrogen oxides (NO_x). The conservation organizations' petition is related to the following three cases, which challenge EPA's partial disapproval of Wyoming's plan:

- *Wyoming v. EPA*, No. 14-9529;
- *Basin Electric Power Cooperative v. EPA*, No. 14-9533; and
- *PacifiCorp v. EPA*, No. 14-9534.

The Court consolidated all four cases for purposes of submission and directed the parties to utilize the staggered briefing schedule to avoid duplicative argument.

To that end, Wyoming has not reiterated its statement of the case in this response brief. Instead, Wyoming relies on its explanation of the regional haze program and Wyoming's implementation plan in the State's opening Petitioner's brief, (*see* Wyo. Pet'r Br. 3-32 (No. 14-9529)), with additional facts provided only as necessary.

GLOSSARY

BACT	Best Available Control Technology
BART	Best Available Retrofit Technology
EPA	United States Environmental Protection Agency
NO _x	Nitrogen oxides
PM	Particulate matter
PSD	Prevention of Significant Deterioration
SO ₂	Sulfur dioxide

STATEMENT OF THE ISSUES

1. Congress gave states wide latitude to select BART for power plants with a generating capacity of less than 750 megawatts. Acting under that broad discretion to select controls for smaller power plants, Wyoming reasonably required PacifiCorp to install new low-NO_x burners and over-fire air controls at Naughton Units 1 and 2. Was EPA wrong to approve Wyoming's control decisions?

2. Wyoming requires the diverse array of emissions sources in oil and gas production to install the best available control technology (BACT). Because of the heterogeneity of oil and gas emission sources, the impacts of those sources on visibility in Class I areas and the improvements that could be achieved with any particular control are highly uncertain. Based on these scientific uncertainties and the existing control requirements, Wyoming did not require oil and gas sources to install additional controls during this ten-year implementation period. Was EPA wrong to approve Wyoming's judgment?

STANDARD OF REVIEW

In the Clean Air Act's regional haze program, Congress assigned different roles to the states and EPA, and those distinct responsibilities must inform a challenge to EPA's approval of a state regional haze plan. States select controls based on the flexible factors that define BART and "reasonable progress." 42

U.S.C. § 7491(g)(1), (2). EPA may disapprove those control selections only where they fail to meet the “applicable requirements” of the Act. *Id.* § 7410(k)(3). Congress’s flexible guidance to states for BART and reasonable progress define the “applicable requirements” of the Act. Thus, while the Court reviews EPA’s action on a state’s Clean Air Act implementation plan under the Administrative Procedure Act’s arbitrary and capricious standard, 5 U.S.C. § 706(2), it does so with the understanding that EPA’s discretion to disapprove a state plan is limited. *Oklahoma v. EPA*, 723 F.3d 1201, 1211, 1213 n.7 (10th Cir. 2013) (citation omitted).

SUMMARY OF THE ARGUMENT

The conservation organizations would lead this Court to believe that Wyoming has failed to meet Congress’s expectations for the regional haze program. Against that background omitting crucial details, the conservation organizations attack EPA’s approval of two control decisions in Wyoming’s overall plan to reduce haze-causing emissions of NO_x, sulfur dioxide (SO₂), and particulate matter (PM). They claim first that EPA should not have approved Wyoming’s determination of BART controls for two units at the Naughton power plant. Second, they assert that EPA wrongly approved Wyoming’s decision that the BACT controls that Wyoming imposes on oil and gas production sources will

ensure that NO_x emissions from such sources will not prevent Wyoming from maintaining reasonable progress toward Congress's visibility goal.

Both of the conservation organizations' arguments attack Congress's commitment of discretion to the states. Congress gave the states authority to decide which available retrofit technology is "best" and what progress is "reasonable" in their regional haze implementation plans. 42 U.S.C. § 7491(g)(1), (2). Stated simply, the conservation organizations ask this Court to ignore Congress and impose their preferences for which retrofit technology is "best" and what progress is "reasonable."

Wyoming's control technology decisions in its regional haze implementation plan fulfill the requirements of the Clean Air Act. Wyoming rationally identified the best available retrofit for the Naughton power plant and logically concluded that the best controls for oil and gas will ensure reasonable progress toward natural visibility. As a result, EPA had no authority under the Clean Air Act to disapprove Wyoming's control decisions, notwithstanding the conservation organizations' protests to the contrary. *See* 42 U.S.C. § 7410(k)(3) (EPA may disapprove a state plan only if it fails to fulfill the requirements of the Act). Therefore, this Court

should affirm EPA's approval of the control decisions in Wyoming's regional haze implementation plan.¹

ARGUMENT

I. The conservation organizations' arguments paint a misleading picture of the significant progress Wyoming's plan achieves.

The conservation organizations repeatedly point out that Wyoming will not achieve natural visibility conditions by 2064. (*See, e.g.*, Conserv. Org. Pet'r Br. 33). They apparently intend to suggest that, therefore, Wyoming's plan is inadequate. The complete facts tell a different story.

First, neither the Clean Air Act nor EPA's regulations obligate Wyoming to find a way to restore natural visibility by a particular date. When EPA established the 2064 "goal," the agency understood that visibility impairment is unique in every state and that each state would progress toward natural visibility at different rates. Regional Haze Rule, 64 Fed. Reg. 35,714, 35,731-32 (July 1, 1999). For that

¹ Wyoming has elected not to respond to the conservation organizations' argument that EPA unlawfully failed to establish deciview-based reasonable progress goals. (*See* Conserv. Org. Pet'r Br. 28-33). As EPA explained in its brief, the conservation organizations' argument is premised on the validity of EPA's disapproval of some of Wyoming's best available retrofit technology (BART) determinations. (*See* EPA Resp. Br. 176 ("EPA disapproved Wyoming's reasonable progress goals because the State relied on emissions reductions from its BART determinations, some of which EPA disapproved, in order to set the goals")). Because EPA's disapprovals of Wyoming's BART determinations were unlawful, (*see* Wyo. Pet'r Br. 36-63), the conservation organizations' argument is moot.

reason, EPA described the 2064 measure not as a “goal,” but rather as “an analytical requirement.” *Id.* at 35,732.

Second, the western states in general, and Wyoming in particular, demonstrate why 2064 is just an analytical requirement and not a “goal.” In Wyoming, as in other western states, uncontrollable sources greatly impact visibility in Class I areas. *See, e.g.*, [EPA-R08-OAR-2012-0026-0002 at 129 (“controllable emissions are only a small fraction of the total contribution to visibility impairment in the Western Class I areas”)]. In fact, visibility impairment caused by “natural or nonanthropogenic sources, such as natural wildfire and windblown dust,” is the primary reason Wyoming cannot maintain the rate of progress necessary to achieve natural visibility by 2064. [EPA-R08-OAR-2012-0026-0002 at 128]. As Wyoming explained in its plan, “As long as there are wildfires in the Western United States, there will be significant impact to visibility in Class I areas and there is little states can do about it.” [EPA-R08-OAR-2012-0026-0002 at 128].

But natural causes of visibility impairment are not the only sources beyond Wyoming’s control that impact visibility in Wyoming’s Class I areas. Sources in other states (including Utah and Idaho) and other countries (including Canada and Mexico) and emissions from marine shipping in the Pacific all impair visibility in Wyoming. [EPA-R08-OAR-2012-0026-0002 at 128, 136-38]. Mobile sources,

such as oil and gas drilling rig engines, which could also impact visibility in Wyoming, are normally beyond Wyoming's regulatory reach because only EPA has authority to regulate those sources under Section 202 of the Clean Air Act, 42 U.S.C. § 7521. *See* [EPA-R08-OAR-2012-0026-0002 at 124 (noting State's inability to control mobile source emissions)].

Notwithstanding Wyoming's lack of control over many of the principal causes of visibility impairment in its Class I areas, Wyoming's regional haze plan nonetheless ensures reasonable progress toward the national visibility goal. For example, the national goal of natural visibility at the Bridger Wilderness Area is 6.45 deciviews of impairment on the worst days. [EPA-R08-OAR-2012-0026-0002 at 173]. The 2000-2004 baseline period—the starting point for the regional haze program—showed visibility impairment at Bridger of 11.12 deciviews on the worst days. [EPA-R08-OAR-2012-0026-0002 at 173]. Thus, to maintain progress toward natural conditions by 2064, Wyoming would have to reduce visibility impairment at Bridger to 10.03 deciviews by 2018, the end of the first ten-year regional haze planning period. [EPA-R08-OAR-2012-0026-0002 at 173]. Although the impacts from uncontrollable sources make that very difficult to achieve, Wyoming's plan comes very close to accomplishing the feat, reducing impairment to 10.63 deciviews by the end of the first planning period. [EPA-R08-OAR-2012-0026-0002 at 173]. The difference between the two—0.60 deciviews—is not even

perceptible. 64 Fed. Reg. at 35,726-27 (explaining that the threshold for perceptibility is approximately one deciview). In each successive ten-year planning period for regional haze, Wyoming will re-evaluate its progress to ensure it maintains this reasonable glide path toward the national natural visibility goal by controlling the sources subject to Wyoming's regulatory authority.

Accordingly, the conservation organizations' repeated refrain that Wyoming will not achieve natural visibility conditions by the 2064 "goal" leaves a less than accurate impression. Given the limits to Wyoming's regulatory authority, its regional haze implementation plan makes noteworthy progress toward the national visibility goal. Were Wyoming on the path the conservation organizations advocate, no one, not even members of those organizations, could see the difference. But, the controllable sources of emissions in Wyoming, which play only a partial role in causing haze in Wyoming, would certainly feel the impact of bearing a disproportionate degree of responsibility for the problem.

II. The Clean Air Act required EPA to approve Wyoming's BART determinations for Naughton Units 1 and 2.

The professional technical staff of the Wyoming Department of Environmental Quality's Air Quality Division completed a comprehensive review of the BART applications and subsequent revisions that PacifiCorp's consultant prepared for Naughton Units 1 and 2. *See* [EPA-R08-OAR-2012-0026-0009]. Based on the materials presented, Wyoming considered in detail each of the five

statutory BART factors. *See generally* [EPA-R08-OAR-2012-0026-0009]. From those evaluations, Wyoming concluded that BART controls for Naughton Units 1 and 2 are new low-NO_x burners with advanced overfire air. *See* [EPA-R08-OAR-2012-0026-0009 at 48]. Capital costs for installing Wyoming's BART controls totaled \$9.6 million and \$9.1 million for Units 1 and 2 respectively, with respective emissions reductions of 2,334 and 2,649 tons of NO_x per year. [EPA-R08-OAR-2012-0026-0009 at 48].

Because Naughton's three units have a combined generating capacity of less than 750 megawatts, Units 1 and 2 are not subject to EPA's mandatory guidelines for large power plants. 40 C.F.R. Pt. 51, App. Y § (I)(F)(1); *see also* H.R. Rep. 95-564 at 155 (1977) (Conf. Rep.), *reprinted in* 1977 U.S.C.C.A.N. 1502, 1536 ("The regulations and Federal guidelines ... are eliminated for all sources other than fossil fuel electric generating plants with a total generating capacity in excess of 750 megawatts."). Accordingly, for these smaller power plants, Wyoming had "the discretion to adopt approaches that differ from the guidelines." 40 C.F.R. Pt. 51, App. Y § (I)(H). And, as a result, Congress provided Wyoming with broad discretion to determine which retrofit technology was "best" for Naughton Units 1 and 2.

A. Under Section 169A of the Clean Air Act, “best” available retrofit technology does not mean “most stringent” retrofit technology.

In Section 169A of the Clean Air Act, Congress required states to determine the “best available retrofit technology” for certain categories of large stationary sources placed in operation between 1962 and 1977. 42 U.S.C. § 7491(b)(2)(A). The conservation organizations claim that Congress meant the word “best” to mean ‘most stringent.’ (*See, e.g.,* Conserv. Org. Pet’r Br. 35 (equating the “best” control with the most stringent control)). They are wrong.

Congress intentionally defined the term “best available retrofit technology” only as five factors for the states to consider:

in determining best available retrofit technology the State ... shall take into consideration [1] the costs of compliance, [2] the energy and nonair quality environmental impacts of compliance, [3] any existing pollution control technology in use at the source, [4] the remaining useful life of the source, and [5] the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

42 U.S.C. § 7491(g)(2). Congress included these five factors in the Act “to assure that the requirements of this section would not be unduly burdensome or costly[.]” H.R. Rep. 95-294 at 206, *reprinted in* 1977 U.S.C.C.A.N. 1077, 1285. Indeed, in some cases the “best available retrofit technology” can be no new retrofit technology at all. BART Guidelines, 70 Fed. Reg. 39,104, 39,116-17 (July 6, 2005).

If, as the conservation organizations claim, Congress intended the term “best” to be synonymous with most stringent, Congress would have said just that. *Conn. Nat. Bank v. Germain*, 503 U.S. 249, 253-54 (1992) (“courts must presume that a legislature says in a statute what it means and means in a statute what it says there”) (citation omitted). Certainly, if Congress had intended “best” to mean most stringent, Congress would not have been concerned with burdensome costs. *See City of Portland, Or. v. EPA*, 507 F.3d 706, 711-12 (D.C. Cir. 2007) (distinguishing the “most stringent” control from a control selected based on assessment of costs and benefits). Instead, contrary to the conservation organizations’ preferred conception of “best,” Congress gave the states wide latitude in determining what retrofit technology would be “best” for each source based on a case-by-case consideration of the BART factors.

In fact, nowhere in the Clean Air Act did Congress require the most stringent controls without qualification. Under the prevention of significant deterioration program, created at the same time as the visibility protection program, major sources must install the “best available control technology.” 42 U.S.C. § 7475(a)(4).² That control technology selection requires case-by-case

² Congress intended the “best available retrofit technology” requirement to serve as a gap-filler for large sources constructed in the years immediately preceding enactment of the “best available control technology requirement.” H.R. Rep. 95-564 at 155, *reprinted in* 1977 U.S.C.C.A.N. 1502, 1536.

consideration of “energy, environmental, and economic impacts and other costs[.]” *Id.* § 7479(3). There, as here, “best” does not necessarily mean most stringent.

Even where Congress did impose the most stringent Clean Air Act pollution control requirements—for hazardous air pollutants—Congress required “consideration [of] the cost of achieving such emission reductions, and any non-air quality health and environmental impacts and energy requirements[.]” *Id.* § 7412(d)(2). The conservation organizations are, therefore, mistaken to suggest that the “best available retrofit technology” for Naughton Units 1 and 2 must be the most stringent, irrespective of costs and benefits.

B. The conservation organizations ignore that Congress gave EPA only limited authority to disapprove state BART determinations.

The conservation organizations claim that EPA’s approvals of Wyoming’s BART determinations for Naughton Units 1 and 2 were unlawful because EPA relied on the metric of incremental cost effectiveness. (Conserv. Org. Pet’r Br. 36-42). They explain that EPA “gave a single cost metric—incremental cost-effectiveness—controlling weight in rejecting [selective catalytic reduction] for Naughton 1 and 2, in violation of statutory and regulatory mandates to determine BART from a reasoned analysis of five specified factors.” (*Id.* at 36-37 (emphasis omitted)). This argument implies that EPA was supposed to conduct its own, independent, *de novo* re-weighing of the five BART factors to determine whether

to approve Wyoming's control technology selection. That is not the role Congress assigned to EPA.

Congress gave Wyoming the authority to determine which control technology should be BART for Naughton Units 1 and 2. The Act provides that BART is to be "determined by the State[.]" 42 U.S.C. § 7491(b)(2)(A). The purpose of that statutory language is to ensure that "the State shall determine what constitutes 'best available retrofit technology' ... in establishing emission limitations on a source-by-source basis[.]" H.R. Rep. 95-564 at 155, *reprinted in* 1977 U.S.C.C.A.N. at 1536 (explaining conference agreement); *see also Am. Corn Growers Ass'n v. EPA*, 291 F.3d 1, 9 (D.C. Cir. 2002) ("Congress intended the states to decide which sources impair visibility and what BART controls should apply to those sources.") (citing conference agreement). And because EPA's BART Guidelines are not mandatory for Naughton, Wyoming had broad discretion to choose the best retrofit technology for Naughton. 40 C.F.R. Pt. 51, App. Y § (I)(F)(1).

In turn, EPA's authority to review Wyoming's BART determination was limited to determining whether it met the "applicable requirements" of the Act. 42 U.S.C. § 7410(k)(3). The Act does not dictate what controls states must select as BART. *Id.* § 7491(b)(2)(A). As a result, Wyoming had "wide discretion" to design its regional haze implementation plan and BART determinations to account for its

particular needs. *Cf. Union Elec. Co. v. EPA*, 427 U.S. 246, 250 (1976) (interpreting predecessor to § 7410(k)); *see also BCCA Appeal Grp. v. EPA*, 355 F.3d 817, 821-22 (5th Cir. 2003) (holding that states have “broad authority to determine the methods and particular control strategies [to] use to achieve the statutory requirements”) (citing *Union Elec. Co.*, 427 U.S. at 266).

Indeed, the Act gives EPA “no authority to question the wisdom of a State’s choices of emissions limitations if they are part of a plan which satisfies the [requirements of the Act.]” *Train v. Natural Res. Def. Council*, 421 U.S. 60, 79 (1975) (interpreting predecessor to § 7410(k)). Yet, that is precisely what the conservation organizations’ argument presupposes—that EPA should question the wisdom of Wyoming’s BART determination based on their preferred metrics. (*See Conserv. Org. Pet’r Br.* 38 (arguing that the BART factors supported selection of a different control)). Congress gave EPA no such authority.

Even if Congress had given EPA the authority to second guess state control technology determinations, Wyoming’s and EPA’s reliance on incremental cost effectiveness as one factor informing the BART determination is plainly allowed under the BART Guidelines (which are not binding for Naughton). Those Guidelines provide that incremental cost effectiveness is one of the key metrics in the cost analysis component of a BART determination. 40 C.F.R. pt. 51, App. Y at (III)(D)(4)(e)(1). Incremental cost effectiveness “compares the costs and

performance level of a control option to those of the next most stringent option,” by dividing the difference in annualized costs of two control options by the difference in annual emissions under the same two controls. *Id.* In simple terms, the metric demonstrates the cost per additional ton of pollutant removed with the addition of the more stringent control. *Id.* Accordingly, EPA advised in the BART Guidelines that a BART analysis “should consider the incremental cost effectiveness ... when considering whether to eliminate a control option.” *Id.*

Consistent with that guidance (which is not mandatory for Naughton), Wyoming evaluated incremental cost effectiveness for the different NO_x BART control options at Naughton 1 and 2. *See* [EPA-R08-OAR-2012-0026-0009 at 14-15 (Tables 6 and 8)]. Those analyses showed that capital costs to install the most stringent controls, which the conservation organizations argue are required, would cost \$94,600,000 at Unit 1 and \$115,900,000 at Unit 2. [EPA-R08-OAR-2012-0026-0009 at 14-15 (Tables 5 and 7)]. Those controls would yield incremental cost effectiveness of \$8,089 and \$7,852 per ton of emissions reduced at Units 1 and 2 respectively. [EPA-R08-OAR-2012-0026-0009 at 14-15 (Tables 6 and 8)]. While Wyoming considered those incremental costs to be within the upper range of reasonableness, Wyoming evaluated three other cost metrics that counseled against installation of the most stringent control. [EPA-R08-OAR-2012-0026-0009 at 48 (weighing capital cost, annual cost, and average cost effectiveness in BART

determination)]; *see also* 70 Fed. Reg. at 39,127 (“States have flexibility in how they calculate costs”). In light of the high costs and the negligible expected additional visibility improvement from installing the most stringent control (0.11 and 0.14 deciviews from Units 1 and 2 respectively), Wyoming concluded that the most stringent control was not warranted. [EPA-R08-OAR-2012-0026-0009 at 48-49; [EPA-R08-OAR-2012-0026-0255 at 5043].

EPA’s unwarranted independent analysis of the BART factors for Naughton 1 and 2 only reaffirmed Wyoming’s BART determination. Contrary to the conservation organizations’ assertion that EPA approved Wyoming’s BART determination based solely on incremental cost effectiveness, (Conserv. Org. Pet’r Br. 36), EPA explained that it based its action on not only “costs of compliance and visibility impacts” but also Wyoming’s analysis of the other BART factors. *See* [EPA-R08-OAR-2012-0026-0255 at 5045; EPA-R08-OAR-2012-0026-0093 at 34,759 (agreeing with Wyoming’s analysis of other BART factors)]. EPA found the most stringent control to be incrementally even less cost effective than Wyoming did. [EPA-R08-OAR-2012-0026-0255 at 5043 (\$10,384 and \$8,440 per ton respectively at Units 1 and 2)]. And EPA found that those controls would yield even less visibility improvement than Wyoming predicted. [EPA-R08-OAR-2012-0026-0255 at 5050 (0.33 and 0.42 deciviews, which included improvement from Wyoming’s controls)]. Thus, even if EPA had the authority to second guess how

Wyoming weighed the BART factors to select a BART control, EPA's analyses confirmed the propriety of Wyoming's choice.

C. The conservation organizations misunderstand the impact that Naughton's NO_x emissions have on visibility.

The conservation organizations repeatedly point to the impacts that Naughton's emissions supposedly have on visibility and the fact that Wyoming's plan will not achieve natural visibility by EPA's 2064 benchmark. (*See, e.g.*, Conserv. Org. Pet'r Br. 33). Each of those statements gives a misleading impression by omitting important qualifications.

For example, the conservation organizations claim that: "Together, Naughton 1 and 2 perceptibly degrade visibility in all seven Class I Areas in Wyoming—including Yellowstone and Grand Teton National Park and the Bridger and Fitzpatrick wilderness areas in the Wind River Range[.]" (Conserv. Org. Pet'r Br. 33 (citing EPA-R08-OAR-2012-0026-0253, Tables H.5 and H.6)). Read in light of this statement, the conservation organizations' argument that the most stringent NO_x controls should be installed gives the impression that those controls would create a perceptible difference in visibility at those Class I areas.

But that is not the case. The modeling the conservation organizations cite to support their claim that Naughton 1 and 2 perceptibly impact visibility in all of Wyoming's Class I areas included impacts from **all three visibility impairing pollutants**—SO₂, PM, and NO_x. [EPA-R08-OAR-2012-0026-0253 at 4]. Only

impacts from the final pollutant—NO_x—are at issue in this case.³ And when considering just that pollutant, installing the most stringent controls on Naughton 1 and 2 would not lead to a perceptible visibility improvement at **any** Class I area in Wyoming. [EPA-R08-OAR-2012-0026-0255 at 5050 (finding combined improvement of 0.75 deciviews at the most impacted area)]; *see also* 64 Fed. Reg. at 35,726-27 (explaining that the threshold for perceptibility is approximately one deciview).

The conservation organizations next relate that “Wyoming projected that visibility in the Class I area most impacted by Naughton—the Bridger Wilderness—will remain impaired for over one hundred years beyond EPA’s 2064 benchmark for eliminating human-caused haze.” (Conserv. Org. Pet’r Br. 33 (citing EPA-R08-OAR-2012-0026-002 at 115)). Here again, the conservation organizations give the impression that installing the most stringent NO_x controls at Naughton Units 1 and 2 will make a difference. Not true.

The very same document the conservation organizations cite—Wyoming’s implementation plan—shows that completely shutting down Naughton Units 1 and 2, not just installing the most stringent controls, still would not lead to natural visibility in Bridger Wilderness by EPA’s 2064 goal. [EPA-R08-OAR-2012-0026-

³ EPA approved Wyoming’s controls for SO₂ in another action, which this Court upheld. *WildEarth Guardians v. EPA*, 770 F.3d 919 (10th Cir. 2014). And EPA approved Wyoming’s controls for PM, which the conservation organizations have not challenged. 79 Fed. Reg. 5032, 5038 (Jan. 30, 2014).

002 at 32]. NO_x emissions, which form haze after joining with ammonia in the atmosphere to become nitrates, contribute less than ten percent of the visibility impairment at Bridger Wilderness on the worst days. [EPA-R08-OAR-2012-0026-002 at 32].⁴ As result, eliminating emissions of all of the nitrate-causing NO_x emissions that impair visibility at Bridger Wilderness would not lead to natural visibility there by 2064. [EPA-R08-OAR-2012-0026-002 at 32].

Moreover, many of the NO_x emissions impacting Bridger Wilderness do not come from Wyoming. [EPA-R08-OAR-2012-0026-002 at 64, 67]. Wyoming-based sources of NO_x have a small impact on reaching the natural visibility goal at Bridger. And, because Naughton 1 and 2 contribute only a fraction of the Wyoming-based NO_x emissions impacting Bridger, installing the most stringent controls at Naughton would have only a minute impact on reaching the visibility goal.

Finally, the conservation organizations assert that installing the most stringent controls “on all three Naughton units alone would improve visibility in Bridger Wilderness by 1.24-1.45 deciviews.” (Conserv. Org. Pet’r Br. 38). The import appears to be that, if conservation organizations are right that the most

⁴ In Bridger, like all of Wyoming’s Class I areas, sulfates formed from SO₂ emissions and ammonia are the dominant source of haze on the best days, while particulate matter is the primary problem on the worst days. [EPA-R08-OAR-2012-0026-002 at 37]. NO_x emissions, and the nitrates they can produce, play only a minor role in haze at Bridger. [EPA-R08-OAR-2012-0026-002 at 32].

stringent controls should be installed, then Bridger Wilderness will experience a perceptible (greater than 1.0 deciview) improvement in visibility. Again, not so.

The critical point is that such improvement would follow installing the most stringent controls “on all **three** Naughton units.” At issue in this case are only the smaller Unit 1 (160 megawatts) and Unit 2 (210 megawatts). [EPA-R08-OAR-2012-0026-0009 at 3]. The greatest visibility improvement at Bridger came from installing the most stringent controls on the larger Naughton Unit 3 (330 megawatts), which Wyoming already required as the BART control at Unit 3. *See, e.g.*, [EPA-R08-OAR-2012-0026-0255 at 5043]. Installing the most stringent controls on Units 1 and 2, by contrast, would respectively achieve additional visibility improvements of only 0.11 deciviews and 0.14 deciviews over Wyoming’s chosen BART controls. [EPA-R08-OAR-2012-0026-0255 at 5043]. In exchange for those imperceptible benefits, those controls would cost nearly \$200 million more than Wyoming’s controls. [EPA-R08-OAR-2012-0026-0009 at 48].

In sum, the conservation organizations give the impression that installing the most stringent NO_x controls at Naughton Units 1 and 2 will make a meaningful difference in Wyoming’s effort to reach the natural visibility goal. It will not. NO_x plays only a small role in regional haze in Wyoming. The more than \$200 million in capital costs alone to install the most stringent controls at Naughton 1 and 2—which the conservation organizations fail to mention—cannot be justified in view

of the negligible visibility improvement such costs would obtain. That was Wyoming's BART determination, which EPA rightly approved.

III. Wyoming correctly concluded that its existing oil and gas regulations satisfy the reasonable progress requirement during this planning period.

A. Wyoming's regulations already require oil and gas sources to install the best available control technology

The conservation organizations assert that Wyoming's regional haze plan for NO_x did not "require **any** NO_x controls for Wyoming's massive oil and gas industry[.]" (Conserv. Org. Pet'r Br. 48 (emphasis in original)). That is simply incorrect. Wyoming has adopted rules requiring every source of emissions, including those in the oil and gas industry, to install the best available control technology. Rules Wyo. Dep't Env'tl. Quality, Air Quality Div. Ch. 6, § 2(c)(v).⁵ Those rules prohibit the construction of new emission sources that would interfere with Wyoming's visibility protection obligations. *Id.* § 2(c)(iii), (viii). Wyoming identified this pollution control regime in its regional haze implementation plan as part of its long-term strategy to improve visibility. [EPA-R08-OAR-2012-0026-0002 at 142].

⁵ See also Wyo. Dep't Env'tl. Quality, *Oil & Gas Production Facilities Chapter 6, Section 2 Permitting Guidance* (Sept. 2013), available at http://deq.state.wy.us/aqd/Resources-New%20Source%20Review/Guidance%20Documents/2013-09_%20AQD_NSR_Oil-and-Gas-Production-Facilities-Chapter6-Section2-Permitting-Guidance.pdf (Wyo. Oil and Gas BACT Guidance).

Notably, however, the control of emissions from oil and gas production facilities is quite unlike the control of emissions from large stationary sources, such as coal-fired power plants. In the latter case, emissions profiles are well understood and a select suite of control options are available. *See* BART Guidelines, 69 Fed. Reg. 25,184, 25,202 (proposed May 5, 2004) (discussing the two techniques for controlling NO_x emissions from coal-fired power plants).

Oil and gas production, on the other hand, involves “[a]n extensive fleet of field equipment” involved in a broad array of diverse activities, including “seismic studies, engineering, well testing, drilling operations, and transportation of personnel or equipment to and from sites.” [EPA-R08-OAR-2012-0026-0002 at 169]. Emissions sources can include “turbines, diesel engines, glycol hydrators, amine treatment units, flares and incinerators.” [EPA-R08-OAR-2012-0026-0002 at 123]. Among these many differing sources, emissions vary based on the equipment type and fuel used. [EPA-R08-OAR-2012-0026-0002 at 124]. Moreover, emissions vary based on the production rates of individual wells, a factor that remains unknown until the well commences production. *See* Wyo. Oil and Gas BACT Guidance 3.

In short, there exists no one-size-fits-all approach to controlling oil and gas sector NO_x emissions. For that reason, Wyoming’s existing regulation through best available control technology, which allows adaptation to particular emission

sources and experimentation with the many control technologies applicable to the varying emission sources in oil and gas production, is the best and most innovative approach available. [EPA-R08-OAR-2012-0026-0002 at 129]. The conservation organizations have not shown otherwise.

B. Best available control technology satisfies the reasonable progress control requirement.

The conservation organizations argue that NO_x emissions from oil and gas sources impact visibility, and EPA should have required Wyoming to do more than require sources to install the best available control technology to ensure reasonable progress toward the visibility goal. (Conserv. Org. Pet'r Br. 48-61). They do not state which sources in oil and gas production—e.g., flares, compressor engines, or mobile sources—impact visibility, let alone where or to what extent. Nor do they offer any supposed control for those unspecified sources that would be better for visibility than the controls Wyoming already requires. Therefore, the conservation organizations' sweeping, unsubstantiated claims do not even begin to undertake, let alone carry, the burden of showing that Wyoming's control decision for oil and gas sources prevents Wyoming's regional haze plan from achieving reasonable progress toward the visibility goal.

Congress did not establish a deadline for achieving the natural visibility goal. Instead, Congress merely required states to develop strategies to ensure "reasonable progress" toward the goal. 42 U.S.C. § 7491(b)(2). Though the draft

legislation initially required “maximum feasible progress,” Congress lessened the standard to “reasonable progress.” H.R. Rep. 95-564 at 155, *reprinted in* 1977 U.S.C.C.A.N. 1520, 1536. To determine what rate of progress is reasonable, Congress directed states to consider “the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements.” 42 U.S.C. § § 7491(g)(1). Congress did not tell the states how to weigh these considerations in light of the visibility goal. *Id.*

Wyoming’s implementation plan evaluated these factors in relation to common oil and gas industry emissions sources, such as reciprocating engines and turbines, process heaters, flares and incinerators, and sulfur recovery units. [EPA-R08-OAR-2012-0026-0002 at 124-29]. Consistent with the diversity of emissions sources in oil and gas production, Wyoming identified an array of controls, many of which Wyoming already requires as best available control technology. [EPA-R08-OAR-2012-0026-0002 at 124]. The cost effectiveness of those controls varied widely based on the unique characteristics of the many differing individual sources in oil and gas production. [EPA-R08-OAR-2012-0026-0002 at 125 (noting, for example, that “capital and annual costs for each technology is dependent on the engine size or on the process throughput”)]. Cost effectiveness of controls for just one type of source—compressor engines—ranged from \$68 to more than \$79,000

per ton of NO_x removed. Using its best available control technology requirement, “Wyoming is evaluating and testing many of the control strategies[.]” [EPA-R08-OAR-2012-0026-0002 at 129].

However, critically absent from the field of regulatory knowledge is the relationship between the many different oil and gas NO_x emissions sources and visibility impacts. Because NO_x emissions do not translate directly to haze, Wyoming and other western states have been engaged in a collaborative three-phase, multi-year study of oil and gas emissions through the Western Regional Air Partnership. [EPA-R08-OAR-2012-0026-0002 at 124]; [EPA-R08-OAR-2012-0026-0002 at 169]. Until that study is complete, neither Wyoming nor any other air quality regulator will know enough to formulate an understanding of how particular sources of NO_x in oil and gas production impact visibility in any given location. *Cf. Am. Corn Growers Ass’n*, 291 F.3d at 8 (rejecting argument to require “controls at sources without any empirical evidence of the particular source’s contribution to visibility impairment in a Class I area”).

Indeed, NO_x emissions from oil and gas sources do not directly translate to visibility impairment as the conservation organizations would have the Court believe. In reality, the relationship between NO_x emissions from any particular source and visibility impairment at a Class I area is far more complicated. At the simplest level, after quantifying a particular source’s emissions, determining the

visibility impacts of those emissions requires evaluating how meteorological conditions disperse and transport those emissions in relation to potentially impacted Class I areas.

At a much more intricate level, understanding the impact of a certain source's NO_x emissions on visibility in a given Class I area requires, among other things, complicated chemistry modeling. Emissions of NO_x and SO₂ impair visibility principally only after combining with ammonia to form nitrates or sulfates. [EPA-R08-OAR-2012-0026-0002 at 47]; [EPA-R08-OAR-2012-0026-0058, Ex. 9 at 1]. Because there exists only so much ammonia in the atmosphere, only a limited quantity of nitrates and sulfates can form and, in turn, impair visibility. [EPA-R08-OAR-2012-0026-0058, Ex. 9 at 3]. As a result, understanding the visibility impacts of NO_x emissions from oil and gas sources requires knowing not just the quantity of emissions and how those emissions travel, but also how those emissions interact with other constituents in the air in relation to a particular geographic location's topography and weather patterns. Without that knowledge, which Wyoming is working to develop, neither Wyoming nor any other regulator can make an intelligent decision about what NO_x controls are necessary in the oil and gas sector to ensure reasonable progress toward the visibility goal. [EPA-R08-OAR-2012-0026-0002 at 169 (“Understanding the sources and volume of

emissions at oil and gas production sites is key to recognizing the impact that these emissions have on visibility.”)].

In light of that knowledge gap, as well as the multi-decade duration of the regional haze program, Wyoming reasonably concluded that its best available control technology requirement will ensure reasonable progress toward the visibility goal during this first planning period. [EPA-R08-OAR-2012-0026-0002 at 142]. Moreover, Wyoming’s best available control technology requirement is sufficient as a matter of law to fulfill the reasonable progress control requirement.

The most stringent control requirement during the first phase of regional haze implementation is the mandate to install “best available retrofit technology” on large, old stationary sources put in operation between 1962 and 1977. 42 U.S.C. § 7491(b)(2)(A). Congress created that requirement because those existing sources would not automatically be subject to the new prevention of significant deterioration permitting program for major sources that Congress enacted at the same time. H.R. Rep. 95-294 at 205, *reprinted in* 1977 U.S.C.C.A.N. 1284; *see also* 42 U.S.C. § 7475(a)(1) (requiring major sources to obtain prevention of significant deterioration construction permits). The linchpin to the prevention of significant deterioration program is the requirement to install best available control technology. 42 U.S.C. § 7475(a)(4). Thus, for oil and gas sources, Wyoming’s plan requires the functional equivalent of the most stringent controls required under the

first phase of the regional haze program. Certainly, that satisfies the low bar of “reasonable progress.”

CONCLUSION

Wyoming has diligently carried out its obligation to create and implement plans to improve visibility in Class I areas. EPA approved entirely Wyoming’s plans to reduce emissions of SO₂ and PM, the principle causes of haze in Wyoming, and approved the majority of Wyoming’s efforts to reduce emissions of NO_x, which play a proportionately much smaller role in forming haze. As a result of the hundreds of millions of dollars of controls Wyoming has required its sources to install, Wyoming is well on the path to achieving Congress’s natural visibility goal.

Therefore, Wyoming asks this Court to deny the conservation organizations’ challenge to EPA’s approval of Wyoming’s well-reasoned plan for controlling haze-contributing emissions of NO_x.

Submitted this 12th day of December 2014.

s/ Jeremiah I. Williamson

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STATEMENT REGARDING ORAL ARGUMENT

This case questions the validity of Wyoming's regional haze implementation plan and implicates the division of authority between EPA and Wyoming under the Clean Air Act. Therefore, Wyoming requests oral argument in this matter.

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CERTIFICATE OF WORD COUNT

I hereby certify that this brief complies with the type-volume limitation in the Court's May 15, 2014 Order because this brief contains 6,060 words, excluding parts of the brief exempted by Fed. R. App. P. 32(a)(7)(B)(iii).

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CERTIFICATE OF SERVICE

I hereby certify that on this 12th day of December, 2014, the foregoing *State of Wyoming's Intervenor-Response Brief* was served by the Clerk of Court through the Court's CM/ECF system on all attorneys of record.

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CERTIFICATES OF VIRUS SCANNING AND PRIVACY REDACTIONS

I hereby certify that a copy of the foregoing *State of Wyoming's Intervenor-Response Brief* has been scanned for viruses with the Symantec™ Endpoint Protection, version 12.1.4112.4156, Virus Definition File dated December 12, 2014, rev. 4 and, according to the program, is free of viruses. In addition, I certify all required privacy redactions have been made.

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