December 16, 2025

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Re: Comments on Proposed Air Plan Approval; Alaska; Regional Haze Plan for the Second Implementation Period, 90 Fed. Reg. 48855 (proposed Oct. 30, 2025) [Docket ID. No. EPA–R10–OAR–2023–0348]

Dear Ms. Hall,

The National Parks Conservation Association (NPCA), Sierra Club, Center for Biological Diversity and the Coalition to Protect America's National Parks (collectively, the Conservation Groups) submit the following comments on the Environmental Protection Agency's (EPA) proposal to approve[1] Alaska Department of Environmental Conservation's (Alaska, State) Amendments to: State Air Quality Control Plan; Vol. II: Analysis of Problems, Control Actions; Section III. Area Wide Pollutant Control Program; Subsection K.13 Regional Haze; 2nd Implementation Period; July 5, 2022 (2022 SIP Revision).[2] The Conservation Groups submitted public comments to Alaska on the State's draft 2022 SIP Revision on May 24, 2022,[3] which, along with relevant exhibits, are incorporated into these comments. Submitted with these comments are also expert reports prepared by Joe Kordzi[4] and Victoria Stamper,[5] which are

[1] 90 Fed. Reg. 48855 (proposed Oct. 30, 2025).
[2] Alaska Dep't of Env't Conservation, Amendments to: State Air Quality Control Plan: Vol. II: Analysis of Problems, Control Actions: Section III. Area Wide Pollutant Control Program: Subsection K.13 Regional Haze 2nd Implementation Period (July 5, 2022), EPA Docket No. EPA–R10–OAR–2023–0348–0016 [hereinafter "2022 SIP Revision"].
[3] NPCA, et al., Conservation Organization's Comments on Alaska's Regional Haze State Implementation Plan (May 24, 2022) [hereinafter "Conservation Groups 2022 SIP Revision Comments"] and (attached as Ex. 1, including exhibits, D. Howard Gebhart, Technical Review of Visibility Modeling for the Second Round of Regional Haze State Implementation Plans: State of Alaska, (May 2022) [hereinafter "Gebhart Report"] (attached as Ex. 1a, and remaining Exs. 1b-1h).
[4] Joe Kordzi, A Partial Review of EPA's Proposed Approval of the Alaska Regional Haze State Implementation Plan (Dec. 2025) [hereinafter "Kordzi 2025 Report"] (attached as Exs. 2, 2a).
[5] Victoria Stamper, Comments on the EPA's October 30, 2025 Proposed Action on the State of Alaska's Regional Haze Plan for the Second Implementation Period Regarding Three Facilities: The Swanson River Field, the Central

incorporated in their entirety. The Conservation Groups appreciate EPA granting our request for a short extension to the comment period.[6]

National Parks Conservation Association (NPCA) is a national organization whose mission is to protect and enhance America's national parks for present and future generations. NPCA performs its work through advocacy and education. NPCA has over 1.9 million members and supporters nationwide, including nearly 6,000 in Alaska, with its main office in Washington, D.C. and 24 regional and field offices. NPCA is active nationwide in advocating for strong air quality requirements to protect our parks, including submission of petitions and comments relating to visibility issues, Regional Haze SIPs, climate change and mercury impacts on parks, and emissions from individual power plants and other sources of pollution affecting national parks and communities. NPCA's members live near, work at, and recreate in all the national parks, including those directly affected by emissions from Alaska's sources.

The Coalition to Protect America's National Parks represents over 4,600 current, former, and retired employees and volunteers of the National Park Service, with over 50,000 collective years of stewardship of America's most precious natural and cultural resources. The Coalition consists of protection rangers and interpreters, scientists and maintenance workers, managers and administrators, and specialists in the full spectrum of the parks' resources. The Coalition's membership also includes former National Park Service directors, deputy directors, regional directors, and park superintendents. Recognized as the Voices of Experience, the Coalition educates, speaks, and acts for the preservation and protection of the National Park System, and mission-related programs of the National Park Service.

Sierra Club is a national nonprofit organization with 67 chapters and more than 613,000 members—including approximately 1,250 in Alaska—dedicated to exploring, enjoying, and protecting the wild places of the earth; to practicing and promoting the responsible use of the earth's ecosystems and resources; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and to using all lawful means to carry out these objectives. The Sierra Club has long participated in regional haze rulemakings and litigation across the country to advocate for public health and our nation's national parks.

The **Center for Biological Diversity** is a nonprofit organization dedicated to protecting endangered species and a healthy environment. The Center has over 93,000 members throughout the United States and the world and more than 300 members in Alaska.

In its 2022 SIP Revision, Alaska focused solely on sulfur dioxide (SO_2) emissions,[7] ignoring nitrogen oxides (NOx) emissions. To identify sources, Alaska followed a two-step process: "In step one, Alaska identified the geographic areas in which a variety of sources may have the potential to impact visibility at Alaska Class I areas."[8] The State relied on HYSPLIT modeling and identified 26 point and area sources, which the State then ranked based on 2014 and 2017 SO_2 emissions and Weighted Emission Potential (WEP) sulfate potential. In step two,

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Compressor Plant, and the Central Gas Facility (Dec. 10, 2025) [hereinafter "Stamper 2025 Report"] (attached as Ex. 3).

[6] 90 Fed. Reg. 52308 (Nov. 20, 2025).

[7] 90 Fed. Reg. at 48865.

[8] *Id.*

the 2022 SIP Revision followed the emissions over distance, or Q/d, methodology, which was further revised per the information submitted in a subsequent letter from the State. Using this process, Alaska selected for further analysis five sources with SO_2 Q/d values greater than or equal to 1.0.[9]

EPA proposes to approve Alaska's 2022 SIP Revision, including the information contained in an October 6, 2025, letter,[10] along with the additional documents submitted with that letter. As discussed in these comments, the State's October 6, 2025, letter to EPA is incorrectly characterized as a "clarification letter." Alaska did not merely clarify the 2022 SIP Revision in that letter. Rather, the State provided substantively new information that effectively amended the SIP without having provided public notice and an opportunity for the public to comment on the letter and substantive enclosures prior to submittal to EPA. EPA ignores the fatal flaws in Alaska's submittal, and EPA's proposal is arbitrary and capricious for several reasons:

- EPA ignores that Alaska failed to conduct Four-Factor Analyses for NOx emissions and include reasonable control determinations for NOx.

- EPA fails to grapple with flaws and errors in Alaska's 2022 SIP Revision and the information contained in Alaska's October 2025 letter:
    - The Conservation Organizations raised a number of errors in comments to the State on the 2022 SIP Revision, highlighting that the State did not properly analyze multiple reasonable and cost-effective emission reduction measures and failed to consider controls on NOx emissions. EPA's proposal to approve the 2022 SIP Revision does not address the issues raised by the Conservation Groups, and so, is arbitrary and capricious.
    - Moreover, the Agency's refusal to require Four-Factor Analyses and reasonable progress determinations for the three facilities (*i.e.*, Healy Facility, the Hilcorp Alaska, LLC, Swanson River Field facility, and the BP Exploration Central Compressor Plant and Central Gas Plant) violates the Clean Air Act and the Regional Haze Rule (RHR).

To comply with the requirements of the Clean Air Act and Regional Haze Rule (RHR), EPA must withdraw its proposal to approve the Alaska 2022 SIP Revision and disapprove the SIP. EPA must require that the State conduct Four-Factor Analyses and make reasonable progress determinations for the Healy Facility, the Hilcorp Alaska, LLC, Swanson River Field facility, and the BP Exploration Central Compressor Plant and Central Gas Plant.

[9] *Id.*
[10] Letter from Randy Bates, Commissioner, Alaska Dep't of Env't Conservation, to Dan Opalski, Deputy Regional Administrator, Environmental Protection Agency, Region 10, Alaska Regional Haze Second Implementation Period State Implementation Plan Clarification Memo, including Enclosures 1-2 (Oct. 6, 2025), EPA Docket Document No. EPA-R10-OAR-2023-0348-0072 [hereinafter "October 6, 2025 Letter"].

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I. The Clean Air Act's Regional Haze Program

To improve air quality in our most treasured landscapes, Congress enacted the Clean Air Act's Regional Haze Program, establishing "as a national goal the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution."[11] In order to protect the "intrinsic beauty and historical and archeological treasures"[12] found in national parks, wilderness areas, and other "Class I" areas, the Regional Haze Program sets a national regulatory floor and requires states to design and implement programs to curb haze-causing emissions within their jurisdictions. To meet Congress's natural visibility goal, EPA issued the RHR, which requires states (or EPA where a state fails to act) to make "reasonable progress" toward eliminating human-caused visibility impairment at each Class I area.[13]

Together, the Clean Air Act and RHR establish an iterative process that requires states to prepare and submit Regional Haze SIPs every ten years to further reduce visibility-impairing pollution at each Class I area.[14] The RHR sets out a planning sequence that states must follow when developing their SIPs.[15] States first calculate baseline, current, and natural visibility conditions, as well as the uniform rate of progress (URP) for each Class I area within their borders, which is the amount of progress that would ensure that natural visibility conditions are achieved if kept constant each year.[16] This calculation shows a straight-line "glidepath" between baseline visibility conditions and natural visibility conditions. Second, states develop their long-term strategies for addressing regional haze pollution.[17] Third, they develop reasonable progress goals (RPGs) and then compare those goals to the URP to track the amount of progress that will be made at each Class I area by the end of the planning period based on the controls included in the long-term strategy.[18] Finally, states adopt monitoring strategies and other measures to ensure compliance with their SIPs.[19]

A. Long-Term Strategy

In developing its long-term strategy, a state must consider its anthropogenic sources of visibility impairment and evaluate different emission reduction strategies to control haze-forming emissions from those sources. In selecting sources for reasonable progress analyses, a state should consider "major and minor stationary sources or groups of sources, mobile sources and area sources."[20] The state's reasonable progress analyses (a.k.a., Four-Factor Analyses) for selected sources, which form the basis for the state's long-term strategy, must address the four factors identified in the Clean Air Act and RHR: (1) the cost of compliance; (2) the time necessary for compliance; (3) the energy and non-air quality environmental impacts of

[11] 42 U.S.C. § 7491(a)(1).
[12] H.R. Rep. No. 95-294, at 203-04 (1977), reprinted in 1977 U.S.C.C.A.N 1077, 1282.
[13] 40 C.F.R. § 51.308(d)(1)-(3), (f)(2)-(3).
[14] *Id.* § 51.308(f).
[15] 82 Fed. Reg. 3078, 3091 (Jan. 10, 2017).
[16] 40 C.F.R. § 51.308(f)(1).
[17] *Id.* § 51.308(f)(2).
[18] *Id.* § 51.308(f)(3).
[19] *Id.* § 51.308(f)(6); 82 Fed. Reg. at 3091.
[20] 40 C.F.R. § 51.308(f)(2)(i).

compliance; and (4) the remaining useful life of the source.[21] Notably, neither the statute nor the RHR lists visibility improvement as a fifth factor in the reasonable progress analysis. The state "must include in its implementation plan a description of the criteria it used to determine which sources or groups of sources it evaluated and how the four factors were taken into consideration in selecting the measures for inclusion in its long-term strategy."[22]

In addition to reasonable progress analyses for selected sources, states must also consider five additional factors in developing their long-term strategies: (1) emission reductions due to ongoing air pollution control programs; (2) measures to mitigate pollution from construction activities; (3) source retirement and replacement schedules; (4) smoke management techniques for agricultural and forestry management purposes; and (5) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy.[23] States must further document the technical basis for the SIP, including monitoring data, modeling, and emission information, and the baseline emission inventory upon which its strategies are based.[24]

A State's long-term strategy must contain "emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal."[25] The emission limits and other measures included in a state's long-term strategy must be sufficient to achieve reasonable progress for the Class I areas within the state's borders, as well as the out-of-state Class I areas affected by the state's emissions.[26] A state cannot exclude sources from a reasonable progress analysis or reject controls identified in an analysis because Class I areas impacted by in-state sources are projected to be at or below their respective URP glidepaths. EPA has made clear that the URP is not a "safe harbor."[27] Rather, the rate of progress that is achieved by the implementation of all reasonable controls as determined by a review of the four statutory factors "is, by definition, a reasonable rate of progress."[28]

B. Reasonable Progress Goals

In addition to long-term strategies, states must also establish in their SIPs reasonable progress goals, expressed in deciviews, that provide for progress towards the natural visibility goal for all in-state Class I areas.[29] The reasonable progress goals must reflect the visibility conditions that will be achieved at the end of the implementation period as a result of the measures included in a state's long-term strategy.[30] As EPA has explained, states must follow the "long-standing" SIP planning sequence whereby states first identify in their long-term strategies the controls that are necessary to make reasonable progress based on an analysis of the

[21] 42 U.S.C. § 7491(g)(1); 40 C.F.R. § 51.308(f)(2)(i).
[22] 40 C.F.R. § 51.308(f)(2)(i).
[23] *Id.* § 51.308(f)(2)(iv).
[24] *Id.* § 51.308(f)(2)(iii).
[25] 42 U.S.C. § 7491(b)(2); 40 C.F.R. § 51.308(f)(2)(i).
[26] 40 C.F.R. § 51.308(d)(3), (f)(2).
[27] 82 Fed. Reg. at 3093.
[28] *Id.*
[29] 40 C.F.R. § 51.308(f)(3)(i).
[30] *Id.*

four statutory factors *and then* develop reasonable progress goals by determining the amount of visibility improvement that will result from the controls included in the long-term strategies.[31]

Reasonable progress goals must provide for progress on the most impaired days and no degradation on the clearest days by the end of the planning period.[32] If a reasonable progress goal for either an in-state or an out-of-state Class I area impacted by in-state sources reflects a slower rate of improvement than the relevant URP glidepath at the end of the planning period, the state must provide a technically "robust demonstration" that there are no other available control measures that should be included in the SIP.[33]

C. Federal Land Manager Consultation

The Clean Air Act and RHR further require states to consult with Federal Land Managers (FLMs) on their Regional Haze SIPs. For FLM consultation, states must provide FLMs with an opportunity to consult in person and at a point early enough in the SIP development process that states "can meaningfully" consider information and recommendations provided by FLMs in making decisions on their long-term strategies.[34] States must consult with FLMs on (1) their assessment of visibility impairment in impacted Class I areas and (2) their recommendations on the development and implementation of strategies to address such impairment.[35] In order for the public and EPA to assess whether states have satisfied their consultation requirements, states must also document the timing and content of their consultation with FLMs, including a description of how states addressed any comments provided by FLMs.[36] Finally, states must provide "procedures for continuing consultation" with FLMs to address any substantive changes to their SIPs or to address any revisions, amendments, or supplements thereto.[37] The FLM consultation process is not a mere box checking exercise. Rather, it is a mandatory, iterative, and substantive process, requiring states to meaningfully consider and incorporate into their SIPs the FLMs' recommendations and to ensure the public has an opportunity to review and comment on those efforts.

D. EPA's Review of Regional Haze SIPs

The Clean Air Act's Regional Haze Program provides states with the initial opportunity to develop Regional Haze SIPs that clean up the air in our national parks and wilderness areas. However, EPA must determine if a state's SIP complies with the requirements of the Clean Air Act and RHR and is authorized to approve, disapprove, or partially approve and partially disapprove of a SIP or a SIP revision.[38] As courts have recognized, EPA plays an important role in overseeing the states' implementation of regional haze plans,[39] highlighting EPA's "substantive role in deciding whether state SIPs are compliant with the [Clean Air Act] and its

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[31] 82 Fed. Reg. at 3091.
[32] 40 C.F.R. § 51.308(f)(3)(i).
[33] *Id.* § 51.308(f)(3)(ii).
[34] 40 C.F.R. § 51.308(i)(2); *see also* 42 U.S.C. § 7491(d).
[35] 40 C.F.R. § 51.308(i)(2).
[36] *Id.* § 51.308(i)(2)-(4).
[37] *Id.* § 51.308(i)(4).
[38] 42 U.S.C §§ 7410(c)(1), (k)(3), (l), 7491.
[39] *North Dakota v. EPA*, 730 F.3d 750, 760-62 (8th Cir. 2013); *Oklahoma v. EPA*, 723 F.3d 1201, 1207-10 (10th Cir. 2013).

implementing regulations."[40] EPA is not limited to a ministerial role of verifying whether states made the required determinations under the Act but must instead review the substantive content of those same determinations "for consistency with the statute and regulations."[41] To that end, EPA may only approve of those SIPs, or portions of SIPs, that meet all the applicable requirements of the Act and must disapprove of SIPs or portions of SIPs that are based upon analyses that are neither reasoned nor moored to the Act's provisions.[42]

EPA actions on regional haze plans under the Clean Air Act cannot be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" and cannot be "in excess of" EPA's authority under the Act.[43] EPA's actions on SIPs are subject to the requirements of the Administrative Procedure Act (APA).[44] For any EPA actions under the Clean Air Act that are not subject to the APA, courts apply the "arbitrary and capricious" standard under the Clean Air Act the same way as that under the APA.[45] Agency action is arbitrary and capricious where "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."[46] Thus, EPA "must examine the relevant data and articulate a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made.'"[47]

Moreover, to ensure EPA's SIP actions are reasoned, the agency must act consistently across SIPs. In 1977, Congress amended the Clean Air Act to direct EPA to promulgate rules of general applicability governing EPA's actions to "assure fairness and uniformity in the criteria, procedures, and policies applied by the various [EPA] regions in implementing and enforcing" the Act and to "provide a mechanism for identifying and standardizing inconsistent or varying criteria, procedures, and policies being employed . . . in implementing and enforcing" the Act.[48] EPA, thus, interprets the statutory provision "as a mandate to assure greater consistency among the Regional Offices in implementing the Act [and] certainly not as a license to institutionalize the kind of inconsistencies that prompted Congress to enact this provision."[49] EPA promulgated final regulations to implement this mandate in 1980, providing a system for assuring fair and consistent application of rules, regulations, and policies throughout the country by establishing

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[40] *Arizona ex rel. Darwin v. EPA*, 815 F.3d 519, 532 (9th Cir. 2016); *see also Alaska Dep't of Envtl. Conservation v. EPA*, 540 U.S. 461, 485-86 (2004).
[41] *Arizona ex rel. Darwin*, 815 F.3d at 525 (citing 42 U.S.C. § 7410(c)(1)(A)); *see also North Dakota*, 730 F.3d at 761; *Nat'l Parks Conservation Ass'n v. U.S. Dep't of Interior*, 794 F. Supp. 2d 39, 41 (D.D.C. 2011) ("EPA must require these SIPs to include 'such emission limits, schedules of compliance, and other measures as may be necessary to make reasonable progress.'").
[42] *Arizona ex rel. Darwin*, 815 F.3d at 531; *North Dakota*, 730 F.3d at 760-62; *Oklahoma*, 723 F.3d at 1207-10.
[43] 42 U.S.C. § 7607(d)(9)(A), (C).
[44] *See id.* § 7607(d) (listing EPA actions that are considered rulemakings under the Clean Air Act but excluding EPA actions approving or disapproving SIPs in full or in part); *see Bahr v. EPA*, 836 F.3d 1218, 1229 (9th Cir. 2016) ("In reviewing a challenge to the EPA's approval of a SIP under § 7607(b)(1), we apply 'the general standard of review for agency actions set forth in the [APA].'").
[45] *Nat'l Ass'n of Clean Air Agencies v. EPA*, 489 F.3d 1221, 1228 (D.C. Cir. 2007).
[46] *Motor Vehicle Mfrs. Ass'n of the U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("*State Farm*").
[47] *Id.* (quoting *Burlington Truck Lines v. U.S.*, 371 U.S. 156, 168 (1962)).
[48] 42 U.S.C. § 7601(a)(2).
[49] 44 Fed. Reg. 13043, 13045 (Mar. 9, 1979).

procedures and policies that EPA regional staff must follow in implementing the Clean Air Act programs delegated to the regions.[50] Since that time, EPA has issued numerous guidance documents outlining the SIP consistency process Regional Offices must adhere to in their review of state-submitted SIPs to assure consistent application of national programs, policy and guidance.[51]

II. Reducing Haze Pollution from Alaska Facilities Will Improve Visibility in Class I Areas and Result in Economic, Public Health, and Environmental Benefits.

Alaska is home to four Class I areas: Denali National Park and Preserve, Tuxedni National Wildlife Refuge and National Wilderness Area, Simeonof National Wildlife Refuge and National Wilderness Area, and Bering Sea National Wildlife Refuge and National Wilderness Area. Denali mountain rises from the Alaska Range in Denali National Park and Preserve to astound the eye. Protected within the park's boundaries, the mountain dominates the landscape of this magnificent park. Denali is a premier refuge for native wildlife species in a natural setting rarely found in any protected area of the country. The six-million-acre park protects about 160 bird species and 38 mammal species, including wolves, moose, caribou, Dall sheep and grizzly bears. Denali's remoteness, coupled with strict mandates to protect the park's wildlife habitat and large-scale functioning ecosystems, have helped this special place remain much as it has for millennia. Visitors are attracted and inspired by the massive scale of the mountains, sweeping natural landscapes, and wildlife. Scientists value the number of large predators, such as grizzlies and wolves, as well as the number of prey species that move unhampered across the landscape.[52] Denali and the other areas are iconic, treasured landscapes, and Alaska is rich in these resources.

Because these areas are designated as "Class I" under the Clean Air Act, their air quality is entitled to the highest level of protection. Yet, these areas are still affected by numerous sources of pollution in Alaska that negatively impact their air quality and viewsheds.[53] Today, iconic wilderness areas and national parks are marred by air pollution that diminishes long range scenic views and robs visitors of their connection to and appreciation of large landscapes. Much of the air pollution in these Class I areas stems from power plant and other industrial facility emissions of SO_2 and NOx, which react in the atmosphere to form "haze" pollution many miles downwind of the sources.

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[50] 40 C.F.R. Part 56; *see generally* 45 Fed. Reg. 85400 (Dec. 24, 1980).

[51] *See e.g.*, Memorandum from Janet McCabe, Deputy Assistant Admin., Off. Air & Radiation, Env't Prot. Agency, to Reg'l Admins., Regions I – X (Apr. 6, 2011) [hereinafter "2011 McCabe Consistency Memo"], https://www.epa.gov/ground-level-ozone-pollution/streamlining-sip-process (attached as Ex. 4); Memorandum from William L. Wehrum, Acting Assistant Admin., Off. of Air & Radiation, Env't Prot. Agency, to Air Div. Dirs., Region I - X (Sept. 7, 2007) [hereinafter "2007 Wehrum Consistency Memo"] (attached as Ex. 5).

[52] Nat'l Parks Conservation Ass'n, Center for State of the Parks: Denali National Park and Preserve at 2 (Dec. 28, 2006) https://www.npca.org/resources/1162-center-for-state-of-the-parks-denali-national-park-and-preserve (attached as Ex. 6).

[53] Nat'l Parks Conservation Ass'n, Regional Haze Interactive Map (last visited Dec. 10, 2025) [hereinafter "NPCA Haze Map"], https://experience.arcgis.com/experience/46dd650b65284b64bf38ccba0e90af8b/?org=npca.

Class I areas are an important component of Alaska's economy. Class I parks and wilderness areas draw hundreds of thousands of visitors from around the world each year, providing a boon to gateway communities and local recreation businesses.[54] In 2023, outdoor recreation activities in Alaska contributed over $3.1 billion in value to the state's economy, supporting more than 21,000 jobs.[55] Additionally, the National Park Service (NPS) reported that over 466,000 people visited Denali in 2024.[56] Recreation visits to Denali brought in more than $611,000 in visitor spending and supported more than 5,000 jobs.[57] However, when the air at a Class I area and other public lands is polluted, visitation can drop by eight percent, harming local economies.[58] Air quality directly affects public use and enjoyment of our national parks and wilderness areas. As a result, a strong regional haze plan for Alaska is necessary to improve visibility at Class I areas and other public lands in the region to protect this critical contributor to local and state economies.

Reducing air pollution through Alaska's regional haze SIP would also improve public health, particularly for communities surrounding the State's various sources of air pollution. The same pollutants that mar scenic views at national parks and wilderness areas also cause adverse public health impacts. For example, NOx pollution is a precursor to ground-level ozone, which is associated with respiratory diseases, asthma attacks, and decreased lung function.[59] NOx reacts with ammonia, moisture, and other compounds to form particulates that can cause and worsen respiratory diseases, aggravate heart disease, and lead to premature death.[60] Similarly, SO_2 worsens asthma symptoms, leads to increased hospital visits, and can form particulates that aggravate respiratory and heart diseases and cause premature death.[61] Particulate matter (PM) can penetrate deep into the lungs and cause a host of health problems, such as aggravated asthma, decreased lung function, and heart attacks.[62] NOx and SO_2 emissions also harm

[54] U.S. Forest Serv., National Visitor Use Monitoring Survey Results: National Summary Report (Sept. 2023), https://www.fs.usda.gov/sites/default/files/2022-National-Visitor-Use-Monitoring-Summary-Report.pdf (providing information on visitation to national forests and wilderness areas from FY 2018 through FY 2022) (attached as Ex. 7); Nat'l Park Serv., 2024 National Park Visitor Spending Effects (Sept. 2024), https://www.nps.gov/subjects/socialscience/vse.htm [hereinafter "2024 Visitor Spending Report"] (attached as Ex. 8).

[55] Bureau Econ. Analysis, Outdoor Recreation Satellite Account (ORSA): 2023—Alaska (2024), https://www.bea.gov/data/special-topics/outdoor-recreation (attached as Ex. 9).

[56] 2024 Visitor Spending Report at 23.

[57] *Id.*

[58] *See* David Keiser et al., Air Pollution and Visitation at U.S. National Parks, 4 Sci. Advances 3-6 (July 18, 2018), https://www.science.org/doi/10.1126/sciadv.aat1613 (attached as Ex. 10).

[59] EPA, Health Effects of Ozone Pollution (last updated Mar. 13, 2025), https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution (attached as Ex. 11).

[60] EPA, Basic Information About NO_2 (last updated July 10, 2025), https://www.epa.gov/no2-pollution/basic-information-about-no2#:~:text=Nitrogen%20Dioxide%20(NO2)%20is,larger%20group%20of%20nitrogen%20oxides (attached as Ex. 12); EPA, Health and Environmental Effects of Particulate Matter (PM) (last updated May 23, 2025), https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm [hereinafter "EPA PM Health and Environmental Effects"] (attached as Ex. 13).

[61] EPA, Sulfur Dioxide Basics (last updated Jan. 10, 2025), https://www.epa.gov/so2-pollution/sulfur-dioxide-basics (attached as Ex. 14); EPA PM Health and Environmental Effects.

[62] EPA PM Health and Environmental Effects.

terrestrial and aquatic plants and animals through acid rain and nitrogen deposition, which in turn causes ecosystem changes, like eutrophication of mountain lakes.[63]

III. EPA's Proposal to Approve Alaska's SIP Revision Violates the Clean Air Act and RHR.

As an initial matter, in its proposal, EPA notes that it recently adopted a new policy that "where the State has considered the four statutory factors, and visibility conditions for a Class I area impacted by a State are projected to be below the URP in 2028, the State has presumptively demonstrated reasonable progress for the second implementation period for that area."[64] EPA, however, does not appear to rely on its new URP policy to justify its proposal to approve Alaska's 2022 SIP Revision, as the Agency does not discuss or otherwise apply the new URP policy in its evaluation of the SIP submission.[65] To the extent EPA may assert that its new URP policy justifies approval of Alaska's 2022 SIP Revision, the Agency has failed to provide any explanation of how the new policy informed the Agency's review and proposal to approve the SIP. As a result, the Agency will have failed to provide adequate notice and an opportunity to comment on that purported justification.[66] In any event, EPA's new URP policy is inadequately explained and violates the plain language, intent, and context of the Clean Air Act and the RHR.[67]

EPA also ignores that the Alaska 2022 SIP Revision contains a number of flaws that are inconsistent with the requirements of the Clean Air Act and the RHR. As discussed below, the Alaska 2022 SIP Revision fails to require that in-state sources of haze pollution adopt emission reductions measures that are necessary to make reasonable progress at the State's Class I areas, as required by the Act and RHR.

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[63] Nat'l Parks Conservation Ass'n, Polluted Parks: How Air Pollution and Climate Change Continue to Harm America's National Parks at 8-9 (2024), https://www.npca.org/reports/air-climate-report (attached as Ex. 15); EPA PM Health and Environmental Effects; EPA, Ecosystem Effects of Ozone Pollution (last updated Sept. 30, 2025), https://www.epa.gov/ground-level-ozone-pollution/ecosystem-effects-ozone-pollution (attached as Ex. 16).

[64] 90 Fed. Reg. at 48859-60.

[65] 90 Fed. Reg. at 48861-78.

[66] *State Farm*, 463 U.S. at 43; *Cboe Futures Exch., LLC v. SEC*, 77 F4th 971, 977 (D.C. Cir. 2023) (holding that agency "failed adequately to explain its rationale and failed to consider an important aspect of the problem" and that "those deficiencies require vacatur"); *MCI Telecommunications Corp. v. F.C.C.*, 57 F.3d 1136, 1140 (D.C. Cir. 1995) ("The APA requires the Commission to provide notice of a proposed rulemaking adequate to afford interested parties a reasonable opportunity to participate in the rulemaking process." (internal quotation and citation omitted)).

[67] *See* Nat'l Parks Conservation Ass'n, Comments on Proposed Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State Implementation Plan for the Second Implementation Period, 90 Fed. Reg. 48481 (proposed October 23, 2025) [Docket ID No. EPA-R09-OAR-2025-0101] at 7-32 (Nov. 24, 2025) (attached as Ex. 17).

A. EPA Incorrectly Endorses Alaska's Decision Not to Consider NOx Emissions in any Four-Factor Analysis.

EPA proposes to find that it is reasonable for Alaska to focus on SO_2 emissions in the second regional haze implementation period.[68] EPA endorses Alaska's decision not to consider NOx controls in any Four-Factor Analyses for sources. EPA's proposed conclusion is contradicted by the record.

EPA ignores all the significant flaws in Alaska's analysis of the monitoring and modeling data for its Class I areas. An independent report conducted to evaluate Alaska modeling performance and accuracy conducted by Mr. Gebhart explained that,

> In addition to limiting the four-factor emissions control analysis to a small subset of emission sources, Alaska also erred by limiting the four-factor analysis to only SO_2 emissions. Anthropogenic visibility impairment from point source emissions is generally attributable to both sulfate (linked to SO_2 emissions) and nitrate (linked to NOx emissions). By ignoring the contribution of NOx emissions in the draft regional haze SIP, Alaska has failed to meet the regulatory burden to control a 'meaningful portion' of the existing visibility impairment.[69]

Second, Alaska and EPA attempt to justify the State's choice to focus on SO_2 emission controls in part based on a cursory evaluation of the existing visibility impairment at Alaska's Class I areas. As Mr. Gebhart explained, for example, Alaska reports in the SIP that the sulfate extinction component to visibility impairment is dominated by volcanic emissions at the more remote Alaska IMPROVE monitoring sites. Specifically, the State identified that volcanic contributions generate roughly 50% of the measured sulfate at Denali National Park at Trapper Creek monitor (TRCR1) on the most-impaired days (Figure III.K.13.G-21) and roughly 85% of the measured sulfate at the Tuxedni monitor (TUXE1) on the most-impaired days (Figure III.K.123.G-22).[70] However, by merely looking at the monitoring without examining the types of sources of impairment identified by that monitoring, Gebhart explained, Alaska ignored that the large volcanic contribution to sulfate extinction from natural sources masks the contribution of anthropogenic sources of both SO_2 *and* NOx when selecting industrial point sources for Four-Factor Analyses. As stated previously, Alaska focused the emissions control program presented in the SIP exclusively on point source SO_2 emissions. A broader approach to capture additional emission sources and especially larger NOx emission sources is required.[71]

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[68] 90 Fed. Reg. at 48885 (citation omitted) ("In the regional haze plan for the second implementation period, Alaska provided data that showed ammonium sulfate is the dominant haze species, comprising approximately 60% of the annual average light extinction composition on the 20% most impaired days. When looking at the most anthropogenically impaired days, Alaska estimated ammonium sulfate comprised over 95% of the annual extinction composition at Alaska Class I areas. Therefore, Alaska focused on SO_2 emissions in the regional haze second implementation period. Based on a review of the submission and a review of IMPROVE data from the FLM Environmental Database, we propose to find that it is reasonable for Alaska to focus on SO_2 emissions in the second implementation period." (citations omitted)).

[69] Gebhart Report at 2.

[70] *Id.* at 3; 2022 SIP Revision at PDF pp. 36 (DENA1), 39 (TRCR1), 48 (TUXE1).

[71] Gebhart Report at 3.

Third, on the most-impaired days at the TUXE1 monitor, removing the volcanic contribution demonstrates that nitrate extinction is roughly equivalent to sulfate extinction. As discussed in detail in the Gebhart Report, Alaska's failure to appropriately include NOx emission controls in the 2022 SIP Revision is especially troublesome at TUXE1.[72] Specifically, as the Report explained, "[i]f Alaska had attempted to correct the sulfate concentrations on the most-impaired days to remove the volcanic contribution (85% based on Figure III.K.13.G-22), it would have become evident that the extinction attributable to nitrate would have been roughly equivalent to the corrected sulfate extinction."[73] Notably, "[v]isibility improvements at TUXE1 in particular were penalized by Alaska's choice to focus only on SO_2 emission controls."[74]

Gebhart's Report underscored the importance of controlling NOx emissions impacting Tuxedni, explaining that,

> The Alaska regional haze SIP presents data which actually showed that NOx emission controls had the potential to be effective at improving visibility conditions at TUXE1. In the draft SIP (Ranking of Potential Contributions by Facility), ADEC reports the potential for each point source to contribute to visibility impairment based on the Weighted Emissions Potential (WEP) modeling results. Based on a review of the TUXE1 modeling results, the modeled WEP for NOx emissions at the "Top-Ten" emission sources are reported to be roughly equal to the modeled WEP based on SO_2 emissions for the sources impacting TUXE1.[75]

Gebhart's Report states that all of the above (as well as other information in his Report) leads to the reasonable conclusion that NOx emission controls have the potential to be effective at improving visibility conditions at the Tuxedini National Wildlife Refuge / Wilderness Area.[76] However, the Alaska 2022 SIP Revision failed to consider such controls to improve regional haze and as such, Alaska's SIP falls short of the legal requirement to address a "meaningful portion" of the ongoing visibility impairment.[77]

EPA itself has established an expectation that states will, at a minimum, consider both SO_2 and NOx in this planning period[78] and has explained that "the rate of progress that will be achieved by the emission reductions resulting from all reasonable control measures is, by definition, a reasonable rate of progress."[79] As discussed in more detail below, there are multiple sources of significant NOx emissions that Alaska should have, but failed to, analyze for NOx controls. By endorsing Alaska's decision to completely exclude consideration of NOx controls, EPA ignores an important aspect of the problem.[80]

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[72] *Id.*
[73] *Id.*
[74] *Id.*
[75] *Id.* (citations omitted).
[76] *Id.* at 4.
[77] *Id.*
[78] 2021 Clarification Memo at 4-5; Memorandum from Peter Tsirigotis, Dir., Env't Prot. Agency, to Reg'l Air Dirs., Regions 1-10 at 4-5 (July 8, 2021), https://www.epa.gov/visibility/clarifications-regarding-regional-haze-state-implementation-plans-second-implementation [hereinafter "2021 Clarification Memo"] (attached as Ex. 18).
[79] 82 Fed. Reg. at 3093; 2021 Clarification Memo at 7.
[80] *State Farm*, 463 U.S. at 43.

B. Alaska's 2022 SIP Revision Does Not Contain the Required Documentation.

As discussed in the Conservation Groups 2022 SIP Revision Comments, Alaska failed to provide required documentation when proposing the SIP, and the public lacked needed information to evaluate and meaningfully comment on the State's Draft SIP.[81] In the final 2022 SIP Revision submitted to EPA, Alaska still did not include required documentation to support its Four-Factor Analysis and reasonable progress determination, failing to provide necessary unit-specific emissions information for selected sources. EPA's proposal ignores this issue. Mr. Kordzi's Report explains:

> Knowing and verifying the emissions from and the existing controls installed on individual units at facilities that emit hundreds to thousands of tons of air pollution annually is an important part of administrating an air agency that must control the emissions from these sources under a variety of state and federal programs. Providing this data to the public is an essential part of transparent fair public review process under the Regional Haze Rule.[82]

Indeed, the Kordzi Report further explains that "unit-specific emission information is in fact required by Section 51.308(f)(2)(iii), which states '[t]he State must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects.'"[83] As Mr. Kordzi explains, he requested unit-specific emissions information from Alaska. "[B]ecause controls are evaluated on a unit-specific basis, without this data, there is simply no way to (1) verify that the right units at facilities have been identified to receive four-factor analyses and (2) verify that the emissions from these units used in cost-effectiveness calculations are actually representative of expected future operations."[84] Alaska failed to provide the data, instead referring Mr. Kordzi to a website that did not contain the requested information.[85]

Because this data is unavailable to the public, Alaska's SIP violates another fundamental SIP requirement: that applicable requirements be "practically enforceable." As EPA has previously explained, state rules are not approvable if they "do not include sufficient reporting requirements to ensure that citizens will be able to enforce the SIP requirements, as is necessary under the Clean Air Act and EPA regulations."[86] Here, neither Alaska's SIP-approved rules, nor the title V permits relied on in its Regional Haze submittal,[87] include sufficient reporting requirements to allow citizens to obtain data on source compliance—a fact borne out in practice, as explained above. Thus, EPA must require Alaska to submit provisions for inclusion into the

[81] Conservation Groups 2022 SIP Revision Comments at 28-30.
[82] Kordzi 2025 Report at 2.
[83] *Id.* at 3.
[84] *Id.*
[85] *Id.* at 2-3.
[86] 88 Fed. Reg. 29827, 29828 (May 9, 2023) (citing 40 C.F.R. § 51.211).
[87] *See, e.g.*, Alaska Dep't of Env't Conservation, Air Quality Operating Permit, Healy Power Plant, Permit No. AQ0173TVP03 (Issued Dec. 24, 2018, Expired Dec. 24, 2023), Condition 51 (imposing no obligation to report CEMS data) (attached as Ex. 19) [hereinafter "Healy Title V Permit"].

SIP that provide for citizens to obtain data reported on source compliance, which include the regulatory emission reporting provisions EPA proposes to approve in this action.[88]

C. Alaska Failed to Provide Public Notice and Opportunity for Comment on Significant Substantive Changes to the SIP.

The Clean Air Act requires that "[o]ne of the criteria that the Agency is required to apply when considering a [SIP] submitted by a state is whether it was 'adopted by the State after reasonable notice and public hearings.'"[89] Indeed, a SIP revision "becomes effective only after two levels of review. First, the state holds public hearings and adopts the plan; then, [EPA's] rule-making procedure, including public comment, takes place."[90] Indeed, Congress did *not* include these public notice and comment provisions to "indicate . . . that the state . . . should have a[n] [independent] power of amendment."[91]

Here, Alaska failed to provide notice and comment on the contents in its October 6, 2025, letter, which included:

- Significant and substantial updates to the Four-Factor Analysis for the Healy Plant, including updates to the dry sorbent injection (DSI) cost analysis for the Healy Plant;
- A new June 30, 2023, Four-Factor Analysis for the Healy Plant;
- A new July 5, 2022, Response to Comments Document; and
- New discussion of the 2024 Amendments to the Fairbanks North Star Borough (FNSB) Serious Nonattainment Area (NAA) $PM_{2.5}$ SIP, Appendix III.D.7.07 (composed of 10 separate documents).[92]

Alaska failed to follow the Clean Air Act requirements for public notice and comment on the contents of its letter and the revisions to the SIP.

As the Kordzi Report explains, subsequent to Alaska submitting the July 5, 2022, Regional Haze SIP to EPA, the State submitted the additional letter and documents to EPA more than three years later. EPA and Alaska incorrectly characterize the additional letter as a "Clarification Letter." It is incorrect to characterize the letter and the 55-pages of information it contained as "clarification" because the letter and enclosures contain substantive information pertinent to the SIP, which was not included as part of the State's public notice and comment.[93] Notably, as the Conservation Groups 2022 Letter pointed out, the State appeared to merely rely on 2012 consent decree stipulations and did not include those stipulations as federally

[88] 90 Fed. Reg. at 48856, 48879 (citing Alaska Administrative Code Title 18 Environmental Conservation, Chapter 50 Air Quality Control (18 AAC 50), specifically, 18 AAC 50.265, State effective August 21, 2022).
[89] *Conn. Fund for Env't, Inc. v. EPA*, 696 F.2d 179, 185 (2d Cir. 1982) (citing 42 U.S.C. § 7410(a)(3)(A)).
[90] *Conn. Fund for Env't, Inc.*, 696 F.2d at 185.
[91] *Nat. Res. Def. Council, Inc., Project on Clean Air v. EPA*, 478 F.2d 875, 883 (1st Cir. 1973), *supplemented* 484 F.2d 1331.
[92] Kordzi 2025 Report at 2.
[93] *Id.*

enforceable in the SIP, and failed to propose monitoring, recordkeeping and reporting requirements for the stipulations.[94] Not only did the State fail to propose to include the consent decree's stipulations in the SIP—for installation of emission controls and the option of retirement—the State failed to conduct accurate and complete Four-Factor Analyses for the Healy emission units. As listed above, the State substantively updated its Healy analysis (as well submitted to EPA an entirely new analysis for the FNSB NAA) and in doing so failed to provide for public notice and comment prior to submitting the revisions and additions to the SIP to EPA.

EPA's final action on the Alaska 2022 SIP Revision must only reflect the SIP package that was subject to the Act's required rulemaking procedures.[95] EPA must ensure that the State follows the two-step public notice required by the Clean Air Act and require that Alaska first provide for public notice and comment on the changes to the 2022 SIP Revision contained in the October 6, 2025, letter. As proposed, EPA's action is arbitrary, capricious, and an abuse of authority.

D. Alaska's Four-Factor Analyses and Reasonable Progress Determinations for the Healy Power Plant Were Arbitrary and Capricious.

NPCA retained air pollution expert Joe Kordzi to prepare a report evaluating the Alaska and EPA analyses of the Healy Power Plant.[96] Mr. Kordzi's report identified numerous significant problems in Alaska's and EPA's analyses for the Healy Power Plant. Notably, EPA's proposal and the record fail to support EPA's concurrence with the State's findings for emission unit 1 (EU 1) that "the unit is effectively controlled and that optimizing the existing SO_2 controls to meet a lower SO_2 emission limit is not necessary for reasonable progress in the second implementation period."[97] The record also does not support EPA's conclusion for emission unit 2 (EU 2) "that the requirement to continue operating the spray dry absorber system to meet the associated SO_2 limit of 0.10 lb/MMBtu (30-day rolling average) on EU 2 is an existing effective control, because it is a [best available control technology] (BACT)-level control established as part of a Federal consent decree to resolve issues around [prevention of significant deterioration] (PSD) applicability."[98]

1. Background

The Healy Power Plant is owned by Golden Valley Electric Association (GVEA). It includes two coal-fired units. EU 1 was completed in 1967 and is 25 MW in size. EU 2 was completed in 1996 and is 54 MW in size. According to the Energy Information Administration

[94] Conservation Groups 2022 SIP Revision Comments at 26-28.
[95] EPA cannot argue that the deadline for its final Rule in the related failure to act suit and resulting Consent Decree prohibited the agency from providing an opportunity for public notice and comment. The Consent Decree allows EPA and/or EPA and the parties to negotiate and seek approval from the Court for alternate dates. *See* Consent Decree, *Sierra Club v. U.S. EPA*, No. 1:23-cv-01744-JDB (D.D.C. filed July 12, 2024), ECF Doc. 53-1 (attached as Ex. 20). Indeed, EPA has relied on this paragraph of the Consent Decree to modify the final action deadlines for other SIP actions subject to that Consent Decree. *See* Stipulation, *Sierra Club v. U.S. EPA*, No. 1:23-cv-01744-JDB (D.D.C. filed June 25, 2025), ECF Doc. 70-1 (attached as Ex. 21).
[96] *See* Kordzi 2025 Report.
[97] 90 Fed. Reg. at 48867.
[98] 90 Fed. Reg. at 48868 (citation omitted).

(EIA) both units burn a combination of lignite and waste coal.[99] "EU 1 was subject to [best available retrofit technology (BART)] requirements for the first regional haze implementation period. The EPA approved Alaska's determination that the existing SO_2 controls, specifically the requirement to limit SO_2 to 0.30 lb/MMBtu (30-day rolling average) using the existing dry sorbent injection (DSI) system, constituted BART for EU 1."[100] In 2012, GVEA and the Alaska Industrial Development and Export Authority became subject to a Federal consent decree concerning PSD program applicability.[101]

For EU 1, the State "determined that the unit was effectively controlled, and that it could be excluded from additional control measure review because: (1) the unit was already equipped with DSI technology and (2) the unit already went through a comprehensive BART analysis during the first implementation period."[102] Alaska relied on the 2012 Federal consent decree for EU 2, and "concluded that the unit remained effectively controlled using the existing spray dry absorber system to limit SO_2 emissions to 0.10 lb/MMBtu (30-day rolling average)."[103]

EPA rubber stamps the State's SIP submittal and October 6, 2025, letter. EPA's proposed approval states that for EU 1 "we concur with the State's finding that the unit is effectively controlled and that optimizing the existing SO_2 controls to meet a lower SO_2 emission limit is not necessary for reasonable progress in the second implementation period."[104] Similarly, for EU 2, EPA indicates that "we concur with the State's finding that the requirement to continue operating the spray dry absorber system to meet the associated SO_2 limit of 0.10 lb/MMBtu (30-day rolling average) on EU 2 is an existing effective control, because it is a BACT-level control established as part of a Federal consent decree to resolve issues around PSD applicability"[105] and "that [t]he requirement remains embodied in a Federal consent decree and title V operating permit,"[106] which, as discussed in these comments, is inadequate.

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[99] Kordzi 2025 Report at 12, n32 (citing https://www.eia.gov/electricity/data/eia923/, and explaining that Healy receives its coal from the Usibelli Coal Mine in Healy, as reported by EIA Form 860: https://www.eia.gov/electricity/data/eia860/. The Usibelli Coal mine reports this coal as being Subbituminous C: https://www.usibelli.com/coal/data-sheet, which is a slightly higher rank than lignite.).
[100] 90 Fed. Reg. at 48866 (citations omitted).
[101] *Id.* at 48867 (citation omitted) ("[i]f EU 1 continued to operate past 2024, the unit was to be retrofitted with selective catalytic reduction technology to limit NOx emissions to 0.070 lb/MMBtu (30-day rolling average). The consent decree also required the continued operation of the existing DSI system on EU 1 to limit SO_2 emissions to 0.30 lb/MMBtu (30-day rolling average). For EU 2, the consent decree required the installation of selective catalytic reduction technology to limit NOx emissions and the continued operation of the existing spray dry absorber system to limit SO_2 emissions to 0.10 lb/MMBtu (30-day rolling average)." (citations omitted)).
[102] 90 Fed. Reg. at 48867 (citing Alaska submission, Combined Section III.K.13, at page 27; and October 6, 2025, Letter).
[103] 90 Fed. Reg. at 48867 (citing Alaska submission, Combined Section III.K.13, Table III.K.13.F–22 (Final Determination for GVEA—Healy Power Plant)).
[104] *Id.* at 48867.
[105] *Id.* at 48868 (citation omitted).
[106] *Id.* (citing *United States* v. *Golden Valley Electric Association and Alaska Industrial Development and Export Authority,* No. 4:12–cv–00025, Consent Decree, November 19, 2012; *see also* conditions 44 and 45 of Healy Operating Permit AQ0173TVP03); *see also* 2022 SIP Revision, Appendix III.K.13.F Part 2.).

2. Alaska Improperly Exempted the Healy Units from a Four-Factor Analysis as Effectively Controlled.

Although Alaska selected the Healy Plant for a Four-Factor Analysis in its 2022 SIP Revision, the State exempted both EU 1 and EU 2 from proper Four-Factor Analyses by claiming that both units are "effectively controlled" for SO_2. EPA proposes to approve the State's determinations, making conclusory claims without any explanation or support that the Agency "concurs" with the State's conclusions. Both EPA and Alaska ignore that neither the Clean Air Act nor the RHR provides for exemption of sources from statutory analysis on the basis that they are "effectively controlled."

The plain language of the Clean Air Act requires that states consider the four statutory reasonable progress factors for "any existing source" that is "reasonably [] anticipated to cause or contribute to any impairment of visibility in any" Class I area.[107] Similarly, in establishing a long-term strategy, states must 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*."[108] The plain language of the RHR tracks that of the Clean Air Act. The RHR requires that each state identified in section 51.300(b), which includes Alaska, must develop a long-term strategy "that addresses regional haze visibility impairment" for each Class I area "that may be affected by emissions from the State" and requires the state to identify necessary measures pursuant to the four statutory factors.[109] Thus, the Act and the RHR require that, for any existing source subject to the requirements of the haze program, states must determine the emission reduction measures that are necessary to make reasonable progress based on the four statutory factors.

States address the regional haze visibility impairment that affects Class I areas by requiring emission reduction measures for the in-state sources of pollution that contribute to impairment in those affected Class I areas. Although EPA has issued guidance purporting to give states "flexibility and discretion" in selecting sources for further analysis in the SIP, that guidance cannot override the plain meaning of the statute or RHR. Here, Alaska chose to focus its long-term strategy on point sources and chose to conduct its Four-Factor Analyses on a source-specific basis. Alaska also developed its source selection process, which led the State to select Healy for further analysis. Thus, at that point, the State determined that Healy was "subject to" the requirements of the Act and RHR, and so, must undergo a Four-Factor Analysis.[110] By exempting Healy from analysis based on the claim that EU 1 and EU 2 are "effectively controlled," Alaska attempted to create an exemption from the Act's reasonable progress requirements that does not exist in the statute.

In any event, Alaska did not show that Healy EU 1 and EU 2 are "effectively controlled." The concept of "effectively controlled" sources appears only in EPA guidance on regional haze for the second planning period.[111] EPA has repeatedly explained that states cannot categorically

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[107] 42 U.S.C. § 7491(b)(2).
[108] *Id.* § 7491(g)(1) (emphasis added).
[109] 40 C.F.R. §§ 51.308(f)-(f)(2).
[110] 42 U.S.C. § 7491(g)(1).
[111] Memorandum from Peter Tsirigotis, Dir., Env't Prot. Agency, to Reg'l Air Dirs., Regions 1-10 at 22-25 (Aug. 20, 2019), https://www.epa.gov/sites/default/files/2019-08/documents/8-20-2019_-

exclude sources from a Four-Factor Analysis as "effectively controlled" simply because the source has existing controls. Rather, EPA explains in its 2019 Guidance that, even if sources have recently installed controls, states must provide a source-specific explanation as to why their decisions to exclude sources from Four-Factor Analyses are reasonable.[112] EPA re-emphasized this longstanding requirement in its 2021 Clarification Memo, noting that, if a state declines to select a source for further analysis based on the fact that it is already "effectively controlled" under the Regional Haze or other Clean Air Act programs, the state must "demonstrate why, for that source specifically, a four-factor analysis would not result in new controls and would, therefore, *be a futile exercise*."[113]

As shown below, applying the four statutory factors, there are likely available, feasible, and cost-effective measures to reduce NOx and SO_2 emissions from Healy EU 1 and EU 2 that would be necessary to make reasonable progress in this second planning period, which Alaska and EPA failed to consider. Moreover, neither Alaska nor EPA have demonstrated or can demonstrate that Healy EU 1 and EU 2 are, in fact, "effectively controlled."

3. Alaska's Effectively Controlled Analysis for the Healy Power Plant Has Significant Flaws.

The Kordzi 2025 Report identifies numerous significant issues with Alaska's Healy Power Plant analysis. First, the State's analysis was sent to EPA as part of the October 6, 2025, letter, and as noted earlier in these comments, was not subject to notice and comment and not submitted properly. EPA must require that the State follow the Act's two-step process and provide public comment at the state level.[114] Second, despite a public records request by Mr. Kordzi and the requirements to document daily and monthly emissions data in the SIP, the State failed to provide the requested unit-specific emissions information.[115] The State also failed to provide control efficiency information for two units and two pollutants. As noted in the Kordzi 2025 Report, "Alaska has not met the documentation requirements of Section 51.308(f) and Section 51.308(f)(2)(iii)" and EPA must disapprove the SIP on this basis.[116]

a. Alaska Failed to Conduct a Four-Factor Analysis for NOx Controls.

The Kordzi 2025 Report explains "how Alaska erred in not performing a NOx analysis for Healy EU 1 and EU 2, as the NOx impacts from these units greatly exceed the SO_2 impacts from any of the other units Alaska did assess."[117] Alaska—and EPA in proposing to approve the State's analysis—acted arbitrarily in treating the two pollutants in a different manner.[118] Additionally, while the SCR systems at EU 1 and EU 2 are required to meet the Consent Decree

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_regional_haze_guidance_final_guidance.pdf [hereinafter "2019 Guidance"] (attached as Ex. 22); 2021 Clarification Memo at 5.

[112] 2019 Guidance at 22-23.

[113] 2021 Clarification Memo at 5.

[114] Kordzi 2025 Report at 2.

[115] *Id.* at 2-5.

[116] *Id.* at 4-5.

[117] *Id.* at 15.

[118] *Nat'l Parks Conservation Ass'n v. E.P.A.*, 788 F.3d 1134, 1141, 1145 (9th Cir. 2015) (citation omitted) (EPA's actions must also be consistent; an internally inconsistent analysis is arbitrary and capricious).

requirements (30-day rolling average NOx emission rates of 0.070 lbs/MMBtu, and 0.080 lbs/MMBtu, respectively), EPA cannot rely on those requirements for regional haze purposes because they are not incorporated into the SIP. "[M]any coal-fired EGUs have continuously sustained a level of performance better than 0.050 lbs/MMBtu, as" demonstrated in Table 2 in Mr. Kordzi's report.[119] Indeed, Mr. Kordzi explains that:

> As can be seen from [the data in Table 2], there are 44 unique instances in which a coal-fired EGU with an SCR system has averaged below 0.05 lbs/MMBtu on an annual basis. In addition, there are twelve instances in which a coal-fired EGU with an SCR system has averaged below 0.04 lbs/MMBtu on an annual basis. In fact, modern SCR systems have long been able to consistently operate at average NOx level of 0.05 lbs/MMBtu or lower, even on a monthly basis.[120]

Moreover, additional detailed analysis by Mr. Kordzi shows that the facilities are capable of achieving even lower levels of control than those seen in Table 2, and the reason they do not continuously perform at lower levels is because their permits do not require them to do so.[121] EPA must disapprove Alaska's 2022 SIP Revision and require that Four-Factor Analyses of NOx controls are conducted for Healy EU 1 and EU 2, including an analysis of lowering the permitted NOx limits for each unit.

b. There are Numerous Problems with Alaska's SO_2 Analyses of Healy Unit 1.

i. Alaska's 2010 SO_2 BART Determination Contained Numerous Fatal Errors.

The Kordzi 2025 Report presents in detail the myriad issues with Alaska's SO_2 analysis of Healy EU 1.[122] First, Alaska erred in continuing to rely on the 2010 SO_2 BART determination, which was incorrect and must be rejected by EPA. EPA has repeatedly explained that states cannot categorically exclude BART sources from Four-Factor Analyses and that they must re-evaluate BART sources for reasonable progress.[123] Second, that BART determination relied on an eight-year remaining useful life assumption that was never federally enforceable.[124] In fact, Healy EU 1 has continued to operate well past the eight years assumed in the BART analysis, underscoring that the analysis is invalid. Third, Alaska also assumed the wrong starting year for equipment life, and in doing so, failed to follow the overnight method,[125] which is required by EPA's Control Cost Manual. Indeed, when Oklahoma challenged EPA's final action

[119] Kordzi 2025 Report at 15.
[120] *Id.* at 17.
[121] *Id.* at 17-19.
[122] *See generally* Kordzi 2025 Report at 19-28.
[123] 2019 Guidance at 25, 36 ("a state must reasonably consider all new public comments about the previous factual information that are substantive and relevant).
[124] Kordzi Report at 19 (citation omitted).
[125] Kordzi 2025 Report at 19-20. (case on overnight method)

that failed to follow the overnight method, the court found EPA had a reasonable basis for rejecting Oklahoma's cost estimates that failed to follow the overnight method costs.[126]

Fourth, Alaska assumed a firm-specific interest rate, which was not verified, instead of the Bank Prime Rate.[127]

Fifth, EPA cannot rely on the NOx and SO_2 limits for EU 1 and 2 in Healy's title V permit because those limits are not continuous. Condition 50 in the title V permit includes the relevant emission limits EU 1 and 2, and Condition 51 sets forth the methodology for demonstrating compliance with those limits. But, notably, Condition 51 includes a footnote that states: "The revised 2010 BART determination report specifically indicates that startup, shutdown and malfunctioin [sic], or emergency conditions should be excluded."[128] Thus, for purposes of determining the "30-boiler operating day rolling average emissions rates," Alaska allows Healy to exclude data collected during so-called startup, shutdown, malfunction, and emergency events.

Under the Clean Air Act, "emission limitation" is defined as "a requirement established by the State or the Administrator which limits the quantity, rate, or concentration of emissions of air pollutants *on a continuous basis*[.]"[129] The Clean Air Act's BART definition incorporates this statutory term, meaning it also forecloses reliance on non-continuous controls.[130] In addition, Section 110 of the Clean Air Act requires each SIP—including a regional haze SIP—to "include enforceable emission limitations and other control measures[.]"[131] Because these non-continuous permit requirements are not "emission limitations" within the meaning of the Act, they cannot be used to support approval of Alaska's regional haze SIP.

And even assuming Healy's permit and settlement terms constitute "emission limitations"—which they do not—it would be arbitrary and capricious as a technical and practical matter for EPA to rely on those limits here. Because the limits are not continuous, neither EPA nor Alaska can reliably estimate emissions from those units for purposes of evaluating visibility impacts. EPA must require Alaska to amend Healy's permit to make these limits continuous or promulgate alternative emission limitations that apply during startup,

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[126] *Oklahoma v. EPA*, 723 F.3d 1201, 1212 (10th Cir. 2013) (holding EPA has a reasonable basis for rejecting cost estimates where the agency explained the estimates "contain[ed] . . . fundamental methodological flaws, such as including escalation and Allowance for Funds Used During Construction (AFUDC)" and that "[t]he cost of scrubbers would not be substantially higher than those reported for other similar projects if OG & E had used the costing method and basis, *i.e.*, overnight costs in current dollars, prescribed by the Control Cost Manual") (internal citations omitted).

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

[128] Healy Title V Permit at 37 n.20.

[129] 42 U.S.C. § 7602(k) (emphasis added).

[130] *Id.* § 7491(g)(2); *see also id.* § 7491(b)(2) (requiring EPA regulations to mandate "such emission limits … as may be necessary to make reasonable progress toward meeting the national goal specified in [§ 7491(a)]").

[131] *Id.* § 7410(a)(2)(A). As the D.C. Circuit has interpreted this provision, a control needs to meet the definition of an "emission limitation"—including the requirement to be continuous—if it is "necessary and appropriate to meet the applicable requirements of this chapter." *See Comm. Of the Fla. Elec. Power Coordinating Grp., Inc. v. EPA*, 94 F.4th 77, 100 (D.C. Cir. 2024). But given that EPA is explicitly relying on these permit limits in its determination that Alaska's SIP satisfies regional haze requirements, it would be arbitrary and capricious for it to simultaneously contend that these limits are not "necessary and appropriate" to meet "applicable requirements" and, thus, need not be continuous. *See* 90 Fed. Reg. at 48867-68.

shutdown, malfunction, and emergency periods. Absent such guardrails, it would be arbitrary and capricious for EPA to rely on these emission limits to justify approval of Alaska's regional haze SIP.

Making the necessary corrections, the Kordzi 2025 Report presents a corrected 2010 BART EU 1 DSI optimization cost-effectiveness calculation, which shows that optimizing the EU 1 DSI system would have a low cost-effectiveness of $2,856/ton,[132] as compared to Alaska's assumed cost of $4,218/ton.[133] Mr. Kordzi further explains that:

> [E]ven this revision is very likely still too high, as it includes a $2,000,000 capital cost figure. As is demonstrated later in this report, it appears that the Healy [EU]…t 1 DSI system already has the capability to treat coal with a sulfur content that is 2.7 to 3 times the sulfur content considered in this BART analysis without that expenditure, which equates to approximately the same efficiency level considered in this 2010 BART analysis. This means the only additional cost would be due to the additional sodium bicarbonate used.[134]

Thus, Mr. Kordzi concludes that "the 2010 Healy [EU]… 1 DSI optimization should have been viewed as being cost-effective and it should have been required. EPA must acknowledge the mistakes made in the 2010 BART Healy [EU]… 1 DSI optimization in its final determination and require that any reliance on this determination now be based on the properly revised figure."[135]

ii. Alaska's 2025 DSI Four-Factor Analysis for Healy EU 1 Is Invalid.

Mr. Kordzi discusses the various flaws with Alaska's 2025 DSI Four-Factor Analysis for EU 1, including the following:[136]

- The State fails to present a Four-Factor Analysis and merely considers one factor—cost-effectiveness. This is inconsistent with the statutory and regulatory requirements to consider all four factors.[137]

- The State relies on the source's control efficiency claim, which is undocumented and higher than historical data.[138] Indeed the spare control efficiency demonstrated by Mr. Kordzi indicates that no additional capital cost would be required (*i.e.*, additional control is possible at the facility using the existing configuration[139]) to optimize the

[132] Kordzi Report at 21-22.
[133] *Id.* at 25.
[134] *Id.* at 22.
[135] *Id.*
[136] *See generally* Kordzi 2025 Report at 22-29.
[137] *Id.* at 22.
[138] *Id.* at 23-25.
[139] Spare means the extra capacity the unit has to achieve a higher SO_2 reduction. Specifically, the Kordzi 2025 report refers to EU 1's apparent much higher DSI efficiency than claimed by Alaska, as evidenced by the presumed ability of that system to treat the higher sulfur coal it has been burning in 2025 and still meet its permit limit. In other words, assuming EU 1 is in fact meeting its permit limit since burning the higher sulfur coal in 2025, it likely

EU 1 DSI system to the 70% level that Alaska has explored. The only cost would be due to the additional sodium bicarbonate—which Healy is apparently absorbing already—to treat the higher sulfur coal.[140] As the Kordzi 2025 Report concludes, in its final determination, EPA must acknowledge this information and incorporate it into its decision making. In particular, EPA must require that Alaska limit the coal sulfur content that Healy burns to its historical values and use the spare headroom in the existing EU 1 DSI efficiency to control that coal to a much lower limit.[141]

- The State failed to document its cost-effectiveness calculations and failed to satisfy the documentation requirements.[142]

- It was unreasonable for the State to rely on Healy's June 2023 Analysis, which evaluated optimizing DSI and concluded that the DSI system could not achieve an SO_2 emission rate lower than EU 1's current emissions limit of 0.03 lb/MMBtu through increased sorbent injection.[143] While the State acknowledged that optimizing the existing EU 1 DSI system is possible, it supported the source's assertion that "their DSI system could not achieve an SO_2 emissions rate lower than EU 1's current emissions limit of 0.30 lb/MMBtu through increased sorbent injection rates alone."[144]

As presented in Mr. Kordzi's report, Alaska's conclusion that EU 1's DSI system could not achieve an SO_2 emissions rate lower than 0.30 lbs/MMBtu through increased sorbent injection rates alone is not well founded.[145] Indeed, Mr. Kordzi outlines the numerous flaws in the State's conclusion.[146] Therefore, in its final determination, EPA must disapprove the Healy Four-Factor Analysis and require that Alaska require the DSI optimization testing.[147]

iii. There are Numerous Problems with Alaska's Current SO_2 Analyses of Healy EU 2.

The Kordzi 2025 Report also presents in detail the myriad issues with Alaska's SO_2 analysis of Healy EU 2.[148] Alaska claimed that EU 2 is effectively controlled for SO_2.[149] Mr. Kordzi points out in his report that "Alaska has not provided any information whatsoever that demonstrates "why it is reasonable to assume for the purposes of efficiency and prioritization that a full four-factor analysis would likely result in the conclusion that no further controls are necessary."[150] Moreover, "Alaska [failed] to investigate[] whether the SDA system for [EU] …

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had that "spare" efficiency all along. Therefore, it could have used that spare efficiency to have achieved much lower SO_2 emissions than claimed.

[140] *Id.* at 25.

[141] *Id.*

[142] *Id.* at 25.

[143] October 6, 2025 Letter at 1.

[144] Kordzi 2025 Report at 25 (citation omitted).

[145] Kordzi 2025 Report at 26.

[146] *Id.* at 25-28

[147] *Id.* at 28.

[148] *See generally* Kordzi 2025 Report at 29-33.

[149] 2022 SIP Revision at PDF p. 108 ("The conclusion of DEC's limited review for GVEA's Healy Power Plant is that EU 2 is effectively controlled…).

[150] *Id.* at 30 (internal quotation omitted).

2 has operated at a significantly lower emission rate . . . (e.g., associated with more efficient use of the effective existing controls) that may be reasonable and thus necessary for reasonable progress."[151]

EPA's evaluation and basis for proposing to approve the State's analysis and conclusions for SO_2 at EU 2 merely indicates that the emission limit was established as part of a Federal consent decree to resolve PSD applicability.[152] EPA goes on to list the factors that are part of a PSD / BACT process but does not indicate that the consent decree emission limit was a result of that process.[153] Even if the emission limit in the consent decree followed the BACT process, EPA fails to demonstrate that process is equivalent to the regional haze Four-Factor Analysis.

Finally, EPA notes that the SO_2 emission requirement is in the Federal consent decree and in a title V operating permit.[154] Neither the consent decree nor the permit can meet the statutory requirement that SIP measures are practically enforceable because the consent decree stipulations are not proposed to be included in the SIP and therefore permanent. Since these measures are not approved into the SIP, EPA's reliance on them here is inconsistent with Section 110(a)(2)(A) of the Clean Air Act, which requires that each SIP "*shall include* enforceable emission limitations and other control measures … as may be necessary or appropriate to meet the applicable requirements of this chapter."[155] As the Ninth Circuit Court of Appeals has explained, "[t]here is no viable justification for reading this section to simply permit, rather than affirmatively mandate, a SIP to include all measures necessary to achieve compliance with the NAAQS."[156] The same logic holds true for compliance with regional haze requirements—a conclusion EPA has also explicitly reached in its own guidance[157] Indeed, EPA fails to recognize this and fails to propose to approve the emission limitation and the monitoring, recordkeeping and reporting requirements into the SIP. Thus, EPA must require Alaska to submit these permit and consent decree terms for approval into the SIP before it can rely on them to justify approval of Alaska's SIP.

As the Kordzi 2025 Report explains, Alaska failed to provide calculations or documentation to support its assertions concerning the effectiveness of the Healy EU 2 SDA system.[158] Furthermore, as noted above, Alaska failed to provide information on the efficiency of that SDA system. Therefore, Alaska has failed to "demonstrate why, for that source specifically, a four-factor analysis would not result in new controls and would, therefore, be a futile exercise."[159] EPA must reject Alaska's undocumented assertions on that basis alone.[160]

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[151] *Id.*
[152] 90 Fed. Reg. at 48868.
[153] *Id.*
[154] *Id.*
[155] 42 U.S.C. § 7410(a)(2)(A) (emphasis added).
[156] *Comm. for a Better Arvin v. EPA*, 786 F.3d 1169, 1176 (9th Cir. 2015).
[157] 2019 Guidance at 44 (explaining that any permit term or provision in an "enforcement order" must be incorporated as a "source-specific SIP revision" to be relevant for regional haze purposes).
[158] Kordzi 2025 Report at 30.
[159] *Id.*
[160] *Id.*

Finally, Mr. Kordzi's report provides a survey of SDA vendors, which shows that numerous vendors commonly advertise higher SDA efficiencies than is apparently achieved by EU 2.[161] Indeed, in addition to the vendors' advertisements, Mr. Kordzi's survey of the best performing coal-fired EGU SDA scrubber systems conducted using EPA's CAMPD emission data show many examples of SDA systems fitted to coal-fired EGUs that achieve similar or even lower SO_2 rates.[162] All of which clearly demonstrate there are many examples of SDA scrubbers consistently achieving SO_2 levels below Healy EU 2's permit level of 0.10 lbs/MMBtu. The failure of the State to collect and consider this information was unreasonable. In its final determination, EPA must find that Alaska failed to properly subject the Healy EU 2 SDA system to a proper Four-Factor Analysis.[163]

E. Alaska Wrongly Exempted Sources from the Four-Factor Analysis Requirements.

The Conservation Groups commented to the State that it failed to consider emissions from the oil and gas sector, despite impacts from this sector to the Class I areas.[164] The comments further explained that the State must assess the oil and gas source sector, conduct Four-Factor Analyses, and include enforceable emission limitations in its SIP during this planning period to ensure strong regulations are in place to protect visibility at its Class I areas.[165] Finally, the letter cited to and included the NPCA-commissioned comprehensive report on reasonable progress Four-Factor Analyses for the oil and gas industry and explained that the State must consider review the report's contents in developing its SIP.[166] The State failed to include the oil and gas sources in its analysis of controls. State's claim that nitrate and NOx emissions are not a concern for Alaska's Class I areas was arbitrary and capricious and incorrect.

For this comment letter, NPCA retained expert Victoria Stamper to provide a report evaluating Alaska's oil and gas sources. The 2025 Stamper Report uses Alaska's source screening criteria of 1.0 Q/d for NOx and SO_2. Ms. Stamper's report identifies sources that meet the criteria for NOx emissions: the Hilcorp Alaska, LLC, Swanson River Field facility (Swanson River Field) and the BP Exploration Central Compressor Plant and Central Gas Plant (Central Compressor Plant and Central Gas Facility). As highlighted below, the 2025 Stamper Report describes in detail some of available NOx pollution controls that should have been considered by Alaska for these facilities in the State's regional haze plan.[167]

Despite the fact that the Conservation Groups raised the State's failure to consider these facilities in our state-level comments, which are included in the record for EPA's proposal here, EPA entirely ignores this significant aspect of the problem with the State's SIP. EPA must disapprove the State's source selection process and require that the State conduct proper Four-

[161] *Id.* at 30-33.
[162] *Id.*
[163] *Id.* at 33.
[164] Conservation Groups 2022 SIP Revision Comments at 20-1.
[165] *Id.* at 20-21.
[166] *Id.* at 20, citing Vicki Stamper, Megan Williams, "Oil and Gas Sector Reasonable Progress Four-Factor Analysis of Controls for Five Source Categories: Natural Gas-Fired Engines, Natural Gas-Fired Turbines, Diesel-Fired Engines, Natural Gas-Fired Heaters and Boilers, Flaring and Incineration (Mar. 6, 2020) (attached as Ex. 1d.) [hereinafter "Stamper and Williams 2020 Report"].
[167] Stamper 2025 Report at 2.

Factor Analyses of NOx controls for Swanson River Field, the Central Compressor Plant, and the Central Gas Facility.

1. Alaska Unreasonably Excluded the Hilcorp Alaska, LLC, Swanson River Field Facility from the Four-Factor Analysis Requirements.

Ms. Stamper's report explains that the Hilcorp Alaska, LLC, Swanson River Field facility is an oil and gas production area in the Cook Inlet in south-central Alaska. The State provided the following emissions information and NOx Q/d values for this facility in its regional haze plan, which is presented in Ms. Stamper's Report:

Table 1. Alaska's NOx Q/d Values for Swanson River Field Facility[168]

2017 NOx, tpy	NOx Q/d DENA1 at Denali National Park	NOx Q/d TRCR1 at Denali National Park	NOx Q/d at SIME1 at Simeonof National Wildlife Refuge/ Wilderness Area	NOx Q/d at TUXE1 at Tuxedni National Wildlife Refuge/ Wilderness Area
2,121 tpy	6.1	11.9	2.1	16

The State failed to include this facility in its analysis. The State's claim that nitrate and NOx emissions are not a concern for Alaska's Class I areas was arbitrary and capricious and incorrect. Applying the State's screening criteria, "[b]ased on the facility's NOx emissions and its distance to Class I areas, the Swanson River Field facility has NOx Q/d values that warrant an evaluation of regional haze pollution controls."[169] The Stamper 2025 Report identified that the "bulk of the NOx emissions come from 7 two-stroke lean burn (2SLB) reciprocating internal combustion engines (RICE) fired by natural gas (Emissions Units 08 through 14)" and that the engines are "Clark TLA-10 engines with capacities of either 3,777 horsepower (hp) or 4,000 hp" that "were installed or constructed between 1965 to 1974."[170] Ms. Stamper's review found that the engines lack NOx emission limits and explained that "it does not appear that any of these engines has NOx controls."[171]

The Stamper 2025 Report explains that:

> Low emissions combustion (LEC) technology is available for retrofit to these engines and can be a very cost effective NOx emissions control. LEC technology can achieve NOx emission rates that are generally no higher than 3 grams per

[168] Stamper 2025 Report at 2-3, citing 2022 SIP Revision at Table III.K.13.G-5 (PDF pp. 152-3), Table III.K.13.G-7 (PDF pp. 154-5), Table III.K.13.G-9 (PDF pp. 156-7), and Table III.K.13.G-11 (PDF pp. 158-9).
[169] *Id.* at 2.
[170] *Id.* at 3.
[171] *Id.*

horsepower-hour ("g/hp-hr") and often are significantly lower (e.g., as low as 0.5 g/hp-hr).[172]

Her report provides extensive discussion and documentation to support these emission rates.[173] Additionally, Ms. Stamper notes that these LEC retrofit controls have been available for many years, including for Clark TLA engines and that these LEC retrofit controls are very cost-effective with costs ranging from $300 to $600 per horsepower."[174] Due to the availability of cost-effective LEC upgrades, more than ten states and air districts have adopted NOx emission limitations reflective of LEC controls for lean burn engines, particularly for engines of the size of Emissions Units 08 through 14 at the Swanson River Field facility (*i.e.*, 3,777 to 4,000 hp).[175]

The Stamper 2025 Report summarizes that LEC NOx controls are available regional haze control technologies for the 2SLB engines at the Swanson River Field facility *(i.e.*, Emission Units 08 through 14), the LEC controls are cost-effective, and numerous state and local air agencies have adopted NOx limits for existing 2SLB engines that require the retrofit of LEC controls.[176] The Stamper Report concludes that Alaska should not have dismissed evaluating NOx controls for the Swanson River Field facility, particularly when the facility has such high Q/d impacts at several of the state's Class I areas. EPA must require that Alaska evaluate NOx regional haze controls for the higher emitting units (Emission Units 08 through 14) at the Swanson River Field facility in Four-Factor Analyses.[177]

2. Alaska Unreasonably Excluded the BP Exploration Central Compressor Plant and Central Gas Plant from the Four-Factor Analysis Requirements.

The BP Exploration Central Compressor Plant and Central Gas Plant are oil and gas facilities located in Prudhoe Bay in northern Alaska. The State provided the following emissions information and NOx Q/d values for these facilities in its regional haze plan, which are presented in Ms. Stamper's Report:

Table 2. Alaska's NOx Q/d Values at Denali National Park for the Central Compressor Plant and the Central Gas Facility[178]

Facility	2017 NOx, tpy	NOx Q/d DENA1 at Denali National Park	NOx Q/d TRCR1 at Denali National Park
Central Compressor Plant	8,724 tpy	11.3	Not Provided
Central Gas Facility	5,833 tpy	8.0	Not Provided

[172] *Id.*
[173] *Id.* at 3-5.
[174] *Id.* at 5-6 (citations omitted).
[175] *Id.* at 6 (citations omitted).
[176] *Id.* at 6.
[177] *Id.* at 6.
[178] *Id.* at 7 (citing 2022 SIP Revision at Table III.K.13.G-5 (PDF pp. 152-3)).

The State failed to include this facility in its analysis. The State's claim that nitrate and NOx emissions are not a concern for Alaska's Class I areas was arbitrary and capricious and incorrect. The Stamper 2025 Report explains that "[b]ased on these facilities' NOx emissions and distances to Class I areas, these two oil and gas facilities have NOx Q/d values that warrant an evaluation of regional haze pollution controls."[179] Based on information from the State's 2024 emission inventory, the bulk of the NOx emissions from the two facilities are from the combustion turbines:

- Emission Units 1 through 15 at the Central Compressor Plant, which are GE Frame 5PATP and 5C combustion turbines with sizes ranging from 35,400 hp to 38,000 hp, account for the bulk of NOx emissions at the Central Compressor Plant.[180]

- Emission Units 1 through 11 at the Central Gas Facility, which are GE and Rolls Royce combustion turbines ranging in size from 33,300 hp to 53,665 hp, account for the bulk of NOx emissions from the Central Gas Facility.[181]

Ms. Stamper explains that, while it appears a few of the Central Gas Plant combustion turbines have some level of NOx controls, none of the combustion turbines' NOx emission limits reflect the level of NOx emission rates generally achievable with the most commonly used combustion controls at gas turbines (*i.e.*, water or steam injection or dry low NOx combustors). These readily available NOx controls generally can achieve NOx rates in the range of 9 ppm to 42 ppm.[182] Indeed, even lower NOx emission rates can be achieved with the use of SCR technology.[183]

As the Stamper 2025 Report explains, given the high NOx emissions and significant Q/d values at Denali National Park, Alaska should have evaluated NOx controls for the combustion turbines at the Central Compressor Plant and the Central Gas Facility, which should have included SCR.[184] The Stamper Report explains that SCR can reduce NOx emissions by 80–90% or more,[185] and that there are several options for SCR catalysts at these turbines.[186]

Several local and state agencies have adopted NOx emission limits for compressor plant gas turbines, which are relevant examples of reasonable and cost-effective retrofit NOx controls for existing gas-fired combustion turbines.[187]

The Stamper 2025 Report summarizes that NOx controls are available for the compressor gas turbines at the Central Compressor Plant and the Central Gas Facility, which are cost-effective and have been adopted by other state and local air agencies.[188] The Stamper Report concludes that Alaska should not have dismissed evaluating NOx controls for these facilities,

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[179] *Id.* at 6.
[180] *Id.* at 7 (citations omitted).
[181] *Id.*.
[182] *Id.* at 8 (citation omitted).
[183] *Id.* at 8.
[184] *Id.*
[185] *Id.* at 8 (citation omitted).
[186] *Id.* at 9 (citations omitted).
[187] *Id.* at 10 (citations omitted).
[188] *Id.* at 10

particularly when the facilities have such high Q/d impacts at one of the state's Class I areas. EPA must require that Alaska evaluate NOx regional haze controls for the combustion turbines at the Central Compressor Plant (Emission Units 1 through 15) and at the Central Gas Facility (Emission Units 1 through 11) in Four-Factor Analyses.[189]

IV. EPA Should Analyze the Impact of Alaska Haze Pollution on Local Communities.

EPA did not analyze the impact of haze-forming pollution from Alaska's in-state sources on the communities that surround these facilities. Yet, Regional Haze Plans have significant potential to achieve co-benefits for people, in addition to protecting our parks and wilderness areas. Large and heavily polluting sources are often located in or near communities where people live, work, and play. The pollution reductions required by the Regional Haze Program could reduce the air pollution burdens these communities disproportionately face as compared to other communities located farther away.

These same pollutants that travel hundreds of miles, obscuring scenic views at national parks and wilderness areas, also contribute to disparate public health impacts for the people living closest to polluting facilities. These communities are impacted first and worst by the Alaska facilities that emit pollution. And polluting facilities are often located in low-income communities and communities of color, disproportionately exposing these communities to the severe and negative impacts of air pollution.

Studies have also found that those living in communities of color and low-income communities tend to experience higher levels of PM and NOx pollution than other communities.[190] These adverse health effects are particularly problematic for disproportionately impacted communities, as residents in these communities tend to have less access to quality health care to treat the health impacts of environmental pollution when they arise.[191]

EPA has explained that states can consider these community impacts in their Four-Factor Analyses under the statutory "non-air quality environmental impacts" factor. In its 2019 Guidance, EPA stated that "[s]tates may also consider any beneficial non-air quality environmental impacts," such as community health benefits, in developing their Regional Haze SIPs.[192] Thus, in its final action, EPA should consider the impacts from the Alaska facilities discussed above and explain how a strong Regional Haze Plan can mitigate harm to communities

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[189] *Id.*

[190] *See, e.g.*, Michael J. Cheeseman, et al., Disparities in Air Pollutants Across Racial, Ethnic, and Poverty Groups at US Public Schools, 6 GEO Health, 1-14 (2022) ("We find that in most regions of the US, students who attend schools with higher percentages of racial-ethnic minority students and higher levels of poverty . . . are associated with higher concentrations of both $PM_{2.5}$ and NO_2 compared to schools with lower percentages of racial-ethnic minority students and lower levels of poverty.") (attached as Ex. 23); Ihab Mikati, et al., Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status, 108 Am. J. Pub. Health, 408-85 (Apr. 2018) (attached as Ex. 24); EPA, Research on Health Effects from Air Pollution (last updated May 28, 2024), https://www.epa.gov/air-research/research-health-effects-air-pollution (attached as Ex. 25).

[191] Asthma and Allergy Found. Am., Asthma Disparities in America at 14, 53-63 (2020), https://aafa.org/wp-content/uploads/2022/08/asthma-disparities-in-america-burden-on-racial-ethnic-minorities.pdf (excerpt attached as Ex. 26).

[192] 2019 Guidance at 42.

by reducing haze-forming and unhealthy emissions across the state, including in communities that are exposed to more than their fair share of environmental pollution.

V. Conclusion

The Conservation Groups strongly oppose EPA's proposal to approve Alaska's 2022 SIP Revision, which is fundamentally flawed in multiple ways that make it ineffective at achieving reasonable progress in the second regional haze planning period. Alaska failed to satisfy the requirements of the Clean Air Act and RHR by ignoring its obligations to properly select, analyze, and propose controls for haze-polluting sources in the state. EPA must withdraw its proposal to approve and disapprove the 2022 SIP Revision for the reasons set forth above.

We look forward to further action from EPA to gain needed emission reductions to benefit our treasured national parks and wilderness areas during the second planning period.

Sincerely,

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VI. List of Exhibits

First Submission (Comment Letter and Exs. 1 – 10)

1 NPCA, et al., Conservation Organization's Comments on Alaska's Regional Haze State Implementation Plan (May 24, 2022)

1a D. Howard Gebhart, Technical Review of Visibility Modeling for the Second Round of Regional Haze State Implementation Plans: State of Alaska, (May 2022)

1b Alaska DEC, Amendments to: State Air Quality Control Plan, Volume III: Appendix III.K.13, 2021 Alaska Regional Haze State Implementation Plan, Appendix to Section III.K.13.K, Public Notice Draft (Mar. 30, 2022)

1c NPS Formal Consultation Call with Alaska Department of Environmental Conservation for Regional Haze SIP Development, (July 19, 2021), at Appendix III.K.13.K-17 - Appendix III.K.13.K-42

1d Vicki Stamper, Megan Williams, "Oil and Gas Sector Reasonable Progress Four-Factor Analysis of Controls for Five Source Categories: Natural Gas-Fired Engines, Natural Gas-Fired Turbines, Diesel-Fired Engines, Natural Gas-Fired Heaters and Boilers, Flaring and Incineration (Mar. 6, 2020)

1e Letter from National Parks Conservation Association, Western Environmental Law, to Sandra Ely, Michael Baca, Mark Jones, and Kerwin Singleton New Mexico Environment Department, "Comments responding to 4-factor analysis submittals from identified oil & gas operators," (July 10, 2020), with enclosure: Vicki Stamper, Megan Williams, "Assessment of Cost Effectiveness Analyses for Controls Evaluated Four – Factor Analyses for Oil and Gas Facilities For the New Mexico Environment Department's Regional Haze Plan for the Second Implementation Period," (July 2, 2020)

1f Letter from National Parks Conservation Association, Center for Biological Diversity, and Northern Alaska Environmental Center Comments on Preliminary Prevention of Significant Deterioration Permit No. AQ1539CPT01, Proposed in response to Application from Alaska Gasline Development Corporation to Construct a Liquefaction Plant in Nikiski, Alaska, (Dec. 10, 2020)

1g Email from Dave F. Jones, Environmental Engineering Associate I, ADEC, Air Quality, to Sara Laumann, Principal, Laumann Legal, LLC., Counsel to NPCA, (May 18, 2022)

1h Consent Decree, *USA v. Golden Valley Electric Association Inc. and Alaska Industrial Development and Export Authority*, No. 4:12-cv-00025-RRB (D.Alaska)

2 Joe Kordzi, A Partial Review of EPA's Proposed Approval of the Alaska Regional Haze State Implementation Plan (Dec. 2025)

2a Joe Korzdi, Exhibit, Workbook Healy.xlsx

3 Victoria Stamper, Comments on the EPA's October 30, 2025 Proposed Action on the State of Alaska's Regional Haze Plan for the Second Implementation Period Regarding Three Facilities: The Swanson River Field, the Central Compressor Plant, and the Central Gas Facility (Dec. 10, 2025)

4 Memorandum from Janet McCabe, Deputy Assistant Admin., Off. Air & Radiation, Env't Prot. Agency, to Reg'l Admins., Regions I – X (Apr. 6, 2011)

5 Memorandum from William L. Wehrum, Acting Assistant Admin., Off. of Air & Radiation, Env't Prot. Agency, to Air Div. Dirs., Region I - X (Sept. 7, 2007)

6 Nat'l Parks Conservation Ass'n, Center for State of the Parks: Denali National Park and Preserve (Dec. 28, 2006)

7 U.S. Forest Serv., National Visitor Use Monitoring Survey Results: National Summary Report (Sept. 2023)

8 Nat'l Park Serv., 2024 National Park Visitor Spending Effects (Sept. 2024)

9 Bureau Econ. Analysis, Outdoor Recreation Satellite Account (ORSA): 2023—Alaska (2024)

10 David Keiser et al., Air Pollution and Visitation at U.S. National Parks, 4 Sci. Advances 3-6 (July 18, 2018)

Second Submission (Exs. 11-26)

11 EPA, Health Effects of Ozone Pollution (last updated Mar. 13, 2025)

12 EPA, Basic Information About NO_2 (last updated July 10, 2025)

13 EPA, Health and Environmental Effects of Particulate Matter (PM) (last updated May 23, 2025), https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm

14 EPA, Sulfur Dioxide Basics (last updated Jan. 10, 2025)

15 Nat'l Parks Conservation Ass'n, Polluted Parks: How Air Pollution and Climate Change Continue to Harm America's National Parks (2024)

16 EPA, Ecosystem Effects of Ozone Pollution (last updated Sept. 30, 2025)

17 *See* Nat'l Parks Conservation Ass'n, Comments on Proposed Approval and Promulgation of Air Quality Implementation Plans; Nevada; Regional Haze State Implementation Plan for the Second Implementation Period, 90 Fed. Reg. 48481 (proposed Oct. 23, 2025) [Docket ID No. EPA-R09-OAR-2025-0101] (Nov. 24, 2025)

18 Memorandum from Peter Tsirigotis, Dir., Env't Prot. Agency, to Reg'l Air Dirs., Regions 1-10 (July 8, 2021)

19 Alaska Dep't of Env't Conservation, Air Quality Operating Permit, Healy Power Plant, Permit No. AQ0173TVP03 (Issued Dec. 24, 2018, Expired Dec. 24, 2023)

20 Consent Decree, *Sierra Club v. U.S. EPA*, No. 1:23-cv-01744-JDB (D.D.C. filed July 12, 2024), ECF Doc. 53-1

21 Stipulation, *Sierra Club v. U.S. EPA*, No. 1:23-cv-01744-JDB (D.D.C. filed June 25, 2025), ECF Doc. 70-1

22 Memorandum from Peter Tsirigotis, Dir., Env't Prot. Agency, to Reg'l Air Dirs., Regions 1-10 (Aug. 20, 2019)

23 Michael J. Cheeseman, et al., Disparities in Air Pollutants Across Racial, Ethnic, and Poverty Groups at US Public Schools, 6 GEO Health, 1-14 (2022)

24 Ihab Mikati, et al., Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status, 108 Am. J. Pub. Health, 408-85 (Apr. 2018)

25 EPA, Research on Health Effects from Air Pollution (last updated May 28, 2024)

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