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June 15, 2009

Mr. John Kuterbach, Air Permits Program Manager
Ms. Rebecca Smith, Environmental Program Specialist
Air Permit Program
Alaska Department of Environmental Conservation
410 Willoughby Avenue, Suite 303
Juneau, AK 99801

RE: Comments on preliminary Best Available Retrofit Technology (BART) Determination for the Healy Power Plant under Alaska Statues 46.14 and Regulation 18 AAC 50.260(j)

Dear Mr. Kuterbach and Ms. Smith:

This letter is written in response to the Alaska Department of Environmental Conservation's ("ADEC's") preliminary determination concerning best available retrofit technology ("BART") for two sources at Golden Valley Electric Association's ("GVEA's") Healy Power Plant in Healy Alaska: Auxiliary Boiler No. 1 and the 25 megawatt ("MW") Unit No. 1. GVEA agrees with ADEC's preliminary determination that the existing configuration for Auxiliary Boiler No. 1 is considered as BART. For the reasons discussed below, GVEA does not agree that the determination for Unit No. 1 is reasonable, necessary or ultimately defensible. Therefore, GVEA respectfully requests ADEC to determine that the existing configuration and emission limits for Unit No. 1 are BART and that such determination be advanced into the Regional Haze State Implementation Plan ("SIP").

Background

Golden Valley Electric Association

GVEA is a not for profit rural electric cooperative in Alaska. Alaska, like the rest of the nation, urgently needs reliable, reasonably priced electrical power. A number of issues in the BART process create unique challenges for GVEA with respect to the operation of the Healy Power Plant. In the extensive amount of information, including a number of responses to ADEC inquiries, GVEA has attempted to be responsive to the BART program and to the needs of GVEA's ratepayer/owners.

After nearly nine months of analyses, discussions, inquiries and responses, including intervention by the National Park Service ("NPS") after which ADEC's consultant Enviroplan Consulting revised its initial findings,[1] ADEC concluded that current technology was *not* BART, and that cost prohibitive new technology was required. The following summarizes the chronology of submittals and demonstrates the scope of the project and the responsiveness of GVEA to ADEC's extensive requests:

- July 28, 2008 *BART Analysis For Healy Power Plant* submitted by GVEA to ADEC
- September 23, 2008 ADEC Cursory Review and request for additional information
- October 3, 2008 *Healy BART Economic Analyses Documents* submitted by GVEA to ADEC
- October 13, 2008 ADEC Cursory Review 2 and request for additional information
- November 11, 2008 *GVEA Healy BART Report Response to Enviroplan Information Request* submitted by GVEA to ADEC
- December 3 and 4, 2008, ADEC Cursory Review 3 and request for additional information
- December 10, 2008 Draft *GVEA Healy BART Response to 12/3/08 Comments from Enviroplan,* draft
- January 2, 2009 *Final Report – BART Analysis for Healy Power Plant, January 2009 and response to Enviroplan's December 4, 2008 memo* submitted by GVEA to ADEC January 2, 2009
- January 27, 2009 *Initial Draft Findings Report, GVEA, Best Available Retrofit Technology ("BART")* prepared for ADEC by Enviroplan Consulting ("Enviroplan Initial Findings Report")
- February 11, 2009 discussions between the National Parks Service and ADEC and a February 12, 2009 follow-up e-mail from the National Parks Service to ADEC
- February 25, 2009 ADEC Request for SO_2 sorbent cost information
- February 25, February 27, and March 2, 2009 ADEC/GVEA conference calls providing explanations and discussing additional questions
- March 18, 2009 *Healy Power Plant, Unit 1 – BART Additional Information Request* submitted by GVEA to ADEC
- March 19, 2009 e-mail request from ADEC to GVEA regarding clarification of cost information

[1] The most significant revisions to Enviroplan's Initial Draft Findings Report concern the costs of installing SCR at Healy Unit No. 1. In its Final Findings Report, Enviroplan reduced its cost estimates for installing SCR, a revision GVEA demonstrates in these comments is incorrect.

- March 24, 2009 *Healy Power Plant, Unit 1 – BART Additional Information Request* letter to ADEC from GVEA
- March 30, 2009 GVEA e-mail response to Enviroplan regarding rate/power cost information
- April 27, 2009 *Final Findings Report, GVEA, Best Available Retrofit Technology ("BART")* prepared for ADEC by Enviroplan Consulting ("Enviroplan Final Findings Report")

ADEC's BART determination and the Enviroplan Final Findings Report supporting that decision have in many ways failed to reflect the realities of operating a small coal-fired power plant in the central interior of Alaska as well as the lack of actual impacts on a Class I Federal area. Along with our comments set forth below, GVEA is enclosing with this letter refined information regarding potential NOx control costs, further explanations of the details of some of the previously provided information, and information regarding potential future operating requirements.

The Regional Haze Rule

Pursuant to Section 169A of the Clean Air Act, EPA promulgated the regional haze regulations, 40 CFR 51.300 to 51.309 (July 1, 1999) (the "Regional Haze Rule"). Those regulations require states with Class I Federal areas (considered areas with "pristine" air) to, among other things, revise their State Implementation Plans (SIPs) to assure reasonable progress toward the national visibility goal; develop the BART program; and to develop, adopt, implement, and evaluate the long-term strategies for making reasonable further progress toward remedying any existing and preventing any future impairment in Class I Federal areas. In July 2005, EPA promulgated amendments to the Regional Haze Rule and Appendix Y *Guidelines for Best Available Retrofit Technology (BART) Determinations* (July 6, 2005) ("Appendix Y Guidelines"). 40 CFR 51 App. Y.

The Appendix Y Guidelines establish an approach for states to follow in establishing BART emission limitations for fossil fuel-fired power plants having a capacity in excess of 750 MW. *See* 40 CFR 51.308(e)(1)(ii)(B). The Guidelines establish an approach to implementing the requirements of the BART provisions of the Regional Haze Rule; however, states retain the discretion to adopt approaches that differ from the guidelines for sources other than those having a capacity in excess of 750 MW. Healy Unit No. 1, at 25 MW, is far below these capacity levels.

In addition to the Appendix Y Guidelines, the State of Alaska rules require the development of final BART determinations separately from the "reasonable further progress" SIP development. *See* 18 AAC 50.260. Unlike other states, Alaska is completing individual BART determinations before it completes its determination of the statewide "reasonable further progress" report that will be included in the Regional Haze SIP. Given the location of the Healy Power Plant and the global impacts on the Class I Federal area in the vicinity of the plant, GVEA believes the proposed BART for Unit No. 1 is untimely and untenable.

BART and Healy Unit 1

The Enviroplan Final Findings Report presents the consultant's opinion concerning what it considers BART for control of NOx, SO_2, and PM10 emissions at Unit No. 1. In arriving at these findings, Enviroplan purports to rely on the regulations found at Appendix Y to 40 CFR Part 51. As discussed above, the BART guidelines found at Appendix Y were developed to support implementation of the BART program. The guideline reads, "*States must follow the guidelines in making BART determinations on a source-by-source basis for 750 megawatt (MW) power plants but are not required to use the process in the guidelines when making BART determinations for other types of sources.*" 40 CFR 51 App. Y I.F.1. Here, at 25 MW, Healy comes nowhere near the size of plants of most interest and targeted in the regulations.

Yet even if the guidelines apply, an application of them within the letter and spirit of the law leads to a different result than the Enviroplan Final Findings Report. A more complete discussion of the relevant factors and how they apply to emissions from Healy Unit No. 1 follows. Before beginning this discussion, however, GVEA would like to highlight some of the fundamental problems with this BART process.

The BART guidelines specify the use of the peak 24-hour emission rates as the basis for modeling the pre-control configuration. The use of the 24-hour emission rates instead of an annual emission rate, while consistent with the BART guidelines, gives a distorted and larger degree of improvement for the various control options than would be reasonably anticipated. ADEC has the discretion to consider this factor when considering what is BART for Healy Unit No. 1. *Id.*

Another problem, and one more specific to this BART analysis, is that Enviroplan, seemingly under pressure from NPS, has let Healy Unit No. 1's proximity to Denali National Park and Preserve ("DNPP") hijack the BART analysis. Taken together, all of the months of analysis and discussion appear designed to justify a predetermined outcome; i.e., that SCR and permit limitations were necessary to achieve BART. As discussed below, Enviroplan's findings appear to ignore the language of the regulations and the statutory purpose of protecting visibility. They are also arbitrary and capricious as applied to the small and already-controlled Healy Unit No. 1.

NOx

The Enviroplan Final Findings Report concludes that SCR is BART for Healy Unit No. 1. This conclusion mistakes or ignores relevant facts and law. Section 169A(g) of the Clean Air Act lists, and the regulations repeat at 40 CFR § 51.308(e)(1)(ii) and Appendix Y, several factors to consider in identifying a level of control as BART. These factors are discussed in turn.

Cost

The first factor listed, and perhaps the most significant factor, is the cost of compliance. The Enviroplan Final Findings Report erroneously concludes that GVEA's estimated installed cost for SCR is high by at least 30%. This conclusion is based on outdated information and fails to tailor the costs to a small plant in a remote, Arctic climate.

The Enviroplan cost estimate is based on the 1996 OAQPS Cost Control Manual – fifth edition – also used by NPS in its cost analysis. This edition does not discuss SCR. SCR information was not published in this manual until October 2000, and then the discussion based costs on 1997 dollars. SCR technology and catalysts have changed, and costs have escalated dramatically since this manual was developed and published. It is not clear if Enviroplan properly escalated costs. But even it did, an escalation of costs from 1996 or earlier is inherently inaccurate.

Also, Enviroplan fails to consider unique costs associated with installation of SCR at Healy Unit No. 1. *See* 40 CFR 51 App. Y. IV.E.3.2 (requiring consideration of "unusual circumstances"). Healy's location at a remote location in the interior of Alaska and the need to operate in a harsh arctic climate, results in even higher capital and operating costs than have been considered in the Enviroplan cost analysis. Because of the extreme climate, additional cold weather considerations must be implemented. These include additional insulation, heat tracing, freeze protection provisions, and heated enclosures. Also, because of the severe and extended winter weather in Alaska, construction costs will be considerably higher in Healy. Increased cost impacts will include affects of lower accessibility to the construction site, as well as lower labor productivity. Moreover, due to the remote location of the Healy power plant, any deliveries of equipment, material, supplies, or reagents will result in higher transportation cost. The remote location will also require the maintenance of larger inventories of spare parts than a more accessible site.

Further, whatever outdated and generic cost information Enviroplan did use fails to appropriately scale costs to a 25 MW plant. Most coal-fired power plant SCR Systems have been installed on large units between 250 and 750 MW in size. There is no historical installed cost data for SCR units applied on power plants smaller than 90 to 100 MW. Estimated equipment costs can be scaled using scaling factors for power plant equipment. The American Association of Cost Engineers (AACE) publishes cost capacity factors for various types of industrial plants.[2] The majority of the equipment in a coal-fired power plant can be scaled using a cost capacity factor of approximately 0.8. This means that the size ratio is raised to the 0.8 power to determine comparative cost.

The cost for air pollution control equipment for coal-fired power plants under 100 MW increases rapidly on a $/kW basis due to the effect of the cost capacity factor of 0.8. This can be illustrated by the figure set out in Attachment No. 1 to this letter showing $/kW versus power plant output based on a theoretical SCR cost of $300/kW for a 500 MW power plant unit. As shown in the curve in Attachment No. 1 to this letter, the costs associated with controls for a 25 MW plant would be higher than the costs associated with a 100 MW plant on a $/kW basis. Enviroplan, however, used a $241/kw figure, significantly lower than any properly scaled cost, because it does not reflect the cost escalation for power plants less than 100 MW.

CH2M Hill, on the other hand, has used its background and experience on previous BART analyses and engineering design projects to develop a factored capital cost estimate and annual costs based on a methodology similar to EPA's Cue Cost program. The NPS and Enviroplan

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[2] English, Lloyd M. & Humphreys, Kenneth K. (1993). *Project and Cost Engineers' Handbook*, Marcell Dekker, Inc., New York. Although the Handbook was published in 1993, it is considered current because it does not specify costs, only methodology to determine costs.

both have struggled to understand the cost estimates developed by CH2M Hill. The NPS has stated their preference for the use of the OAQPS Control Cost approach partly to provide consistency in the BART determinations. CH2M Hill believes its previous BART experience and modified Cue Cost approach provides a more representative assessment of anticipated costs and is thus more accurate to the actual costs for installation of SCR at Healy Unit No. 1.

It is important to note that CH2M Hill's previous economic evaluations were based upon an "order of magnitude" cost estimate, which is defined with an accuracy of -30/+50 %. This is consistent with the BART process, since completion of a more detailed cost estimate, including site conditions and limitations, was not intended or justified when comparing multiple technologies and options for the BART screening analysis. However, now that SCR for NOx control at Healy Unit No. 1 is the preliminary conclusion from the Enviroplan analysis, a more detailed capital and operating cost estimate is warranted. At the request of GVEA, Fuel Tech visited the Healy Power Plant and provided a more detailed capital cost estimate for an SCR system for Healy Unit No. 1. In conjunction with the Fuel Tech information, GVEA was able to identify more detailed balance of plant impacts and O&M costs. *See* Attachment No. 2 to this letter. Bear in mind, we estimate an even more detailed engineering analysis for SCR above and beyond that submitted today, would cost thousands and require several months to complete.

CH2M Hill has taken Fuel Tech's and GVEA's more refined information and developed costs consistent with the methodologies used in its previous BART analyses. For consistency, the revised economic evaluation is based upon the same format and modified Cue Cost methodology utilized in previous BART analyses and revisions. However, due to the more detailed SCR cost estimate completed by Fuel Tech and GVEA, additional information and assumptions have been included in the economic analyses. The Economic Analyses Summary is included in this letter as Attachment No. 3.

With regard to additional equipment cost estimates for Healy Unit No. 1, Fuel Tech estimates that a 4.0 to 5.0 inch water column ("WC") additional pressure drop will result from the proposed SCR installation. That, in turn, will require replacement of the existing ID fan. The existing ID fan motor is 900 Hp, and a 1,500 Hp motor will be required to operate the replacement fan, resulting in an increase of 600 Hp plant load (an approximately 0.45 MW plant capacity decrease). Also, the installation of this new electrical equipment results in two categories of additional cost: energy and capacity. Energy is the additional power required to operate the equipment, and capacity is the additional generation necessary to be installed or available to serve this added electrical load for the lifetime of the equipment. Additional energy costs were calculated by utilizing the cost of replacing Healy energy (oil fired generation at $107/MW-hr), which totals approximately $414,131.00 for the first year.

Another difference from CH2M Hill's previous economic evaluation is a result of the equipment in service dates. Pursuant to the Appendix Y Guidelines, in calculating the costs, the unit's "remaining useful life" should be considered when that period is less than the time period for amortizing costs. 40 CFR 51 App. Y IV.D.k.1. The remaining useful life is defined as the difference between the date controls will be put in place and the date the facility permanently stops operation. 40 CFR 51 App. Y IV.D.k.2. With BART required to be installed within five

years after approval of a SIP that has not yet been submitted, a very conservative estimate is that the controls will not be required to be in place for at least seven years from the current year, 2009.[3] Both Enviroplan and GVEA used a fifteen year life expectancy for the installation of SCR. However, Enviroplan did not take into consideration the fact that that the estimated remaining useful life of Unit No. 1 is also 15 years.[4] Assuming the Regional Haze SIP is submitted in 2011 and immediately approved, GVEA would be required to install SCR on Unit No. 1 by 2016. Therefore, the amortization period for the SCRs is only eight (8) years, not 15 years[5] Economic evaluation with the updated cost information has now been completed under both the eight- and fifteen-year timing scenarios. For both the eight year and 15-year scenarios, estimated capital and operating costs were escalated at 3% from the 2009 baseline.

From the economic analysis summary, the cost per ton of NOx removed for the 15 year analysis is $12,397.00/ton, and $20,200.00/ton for the 8 year scenarios. From the visibility modeling results, the estimated dV improvement for the SCR installation was a 0.786 dV reduction. Therefore, the estimated cost of the SCR installation is $4.9 million/dV and $8.0 million/dV for the 15 year and 8 year analyses respectively.

As we noted in our March 2008 letter, these costs are huge for a small 25 MW plant, especially when they are spread over the very small number of members GVEA serves. The capital and O&M increases will result in greater than a 3.5% rate increase. We understand the NPS believes this is insignificant, but they are wrong. It is wrong that the residents of the Interior of Alaska should increase their electric bill by over 3.5% for a modeled, theoretical improvement that is imperceptible. This will be a hard sell especially in the summers in the Interior when our members endure many days filled with smoke from wildfires burning hundreds of miles away. As an example, the heavy smoke in Fairbanks on June 9, 2009 resulted from two wildfires inside of the DNPP.

The Enviroplan Final Findings Report states that the annual cost effectiveness of the SCR is $3,373/ton. This figure more than doubles the presumptive EGU level for BART ($1,500/ton). The report continues, however, to say that "the total capital cost ($/kw) is within the range common to other BART eligible units using SCR as reported by the NPS." This is misleading at best. First, we have discovered no other BART eligible units comparable to the 25 MW Healy Unit No. 1 in our extensive research. Second, for reasons discussed above, Enviroplan's cost number is too low. CH2M Hill's initial cost estimate of $4,748.00/ton of NOx removed will increase to $12,397.00/ton for 15 years and $20,200.00/ton for 8 years using GVEA's more refined cost estimate submitted today. Third, the NPS spreadsheet summary; *EGUs with BART NOx controls* (May 13, 2009), shows that of 42 units evaluated for BART, including some of the

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[3] The Regional Haze SIP must be submitted to EPA by January 15, 2011. EPA must then review and approve the submittal. The entire process could take more than two years from 2009.

[4] In its 2005 Integrated Reserve Plan, the useful life of Healy Unit No. 1 is 55 years. In fifteen (15) years from 2009, Healy Unit No. 1 will be 57 years old.

[5] GVEA, however, is not here committing to any definite shut down date. *See* 40 CFR 51 App. Y IV.D.k.3. ("recogniz[ing] that there may be situations where a source operator intends to shut down a source by a given date, but wishes to retain the flexibility to continue operating beyond that date" and directing states to "determine whether a reduced time period for the remaining useful life changes the level of controls that would have been required as BART").

biggest power plants in the country, only 4 units have proposed BART controls that include SCR.[6] *See* 64 FR 35714, 35740 (July 1, 1999) (recommending that States consider recent retrofits at existing sources in determining the best system to control emissions). BART limits for only one of those 4 units with SCR is as low as the 0.07 lb/MMbtu proposed for Healy Unit No. 1, and that unit is a 375 MW tangentially-fired boiler in Minnesota, which is 15 times larger than the wall fired Healy Unit No. 1.

One of the key summaries in the BART Findings Report states that "[i]t is Enviroplan's opinion, based on recent similar installations, literature estimates and the NPS studies discussed above, that the installed costs for retrofitting SCR on a plant the size of Healy Unit 1 ranges from $200/kW to $270/kW, exclusive of any extremely favorable or unfavorable site-specific conditions which have not been considered by GVEA in this study." Considering that there are no similar installations (25 MW) subject to BART, the lack of citation of any studies regarding SCR retrofit technology in the Arctic, and the NPS' own studies which show that 90% of the much larger power plants subject to BART are requiring installation of technologies currently in place on Healy Unit 1 but not SCR, this opinion seems to be without foundation.

Energy and Environmental Impacts

Another factor to consider is the energy and non-air quality environmental impacts of compliance. Application of an SCR system would consume power, reduce efficiency, and decrease energy available to Alaska residents. Also, SCR requires the use of some form of ammonia, the production of which itself is power intensive, generally requiring use of natural gas. As SCR lowers NOx emissions, it will increase ammonia emissions. This release of ammonia, known as ammonia slip, tends to increase as the catalyst becomes deactivated.

The ammonia required would need to be transported and stored, creating risk management requirements. Access to Healy would require transport of the ammonia through the DNPP. Further, the SCR will cause ammonia to accumulate in the ash, transforming a product with beneficial uses to one that must be disposed and thereby creating a solid waste disposal impact. *See* 40 CFR 51 App. Y IV.D.j.(2). The Final Findings Report identifies these impacts, but, having already decided that SCR is appropriate for Healy Unit No. 1, fails to give them any serious consideration, disregarding both the regulations and the Guidance.

Existing Pollution Control Technology

Another factor to consider is existing pollution control technology in use at the source. Here, Healy Unit No. 1, as the result of the agreement with the NPS, already has significant emissions reduction technology in place, technology that has been deemed BART for significantly larger sources.[7] Enviroplan's findings and ADEC's preliminary determination for BART at Healy

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[6] A fifth unit, PGE Boardman, makes the distinction between BART controls which do not include SCR and Reasonable Progress controls which does include the addition of SCR. The only other BART units with a rated output of less than 100 MW are 2 Colorado Springs Utilities units (55 and 85 MW) with a proposed BART limit of 0.39 lb/mmbtu, and 3 units at NV Energy's Tracy Generating Station (55, 83, and 83 MW) with proposed BART limits of 0.12, 0.15, and 0.19 lb/mmbtu.

[7] *EGUs with BART NOx controls* spreadsheet prepared by NPS (May 13, 2009).

Unit No. 1 disregard applicable regulations and violate the spirit of the Memorandum of Agreement among NPS, GVEA, the Alaska Industrial Development and Export Authority, and the U.S. Department of Energy.[8]

Remaining Useful Life

The remaining useful life of the plant is another factor to be considered. As discussed above, this factor is relevant to determining costs. Also, it is relevant when considering the underlying purpose of the Regional haze program and BART—namely, protecting visibility in Class I Federal areas so as to restore them to natural conditions by the year 2064. Healy Unit No. 1, which currently causes no perceptible impact on visibility, will be long retired by 2064. It serves no statutory purpose to require this unit to further reduce its emissions before it retires.

Degree of Visibility Improvement

Another factor for consideration is the degree of visibility improvement which may reasonably be anticipated from the use of BART. Here, the Enviroplan Final Findings Report again fails to consider the purpose of BART—namely, the protection and improvement of visibility by addressing sources which have an adverse impact on visibility in Class I Federal areas and to restore visibility to natural conditions by 2064. In fact, since visibility at DNPP is close to the natural conditions goal, the preliminary rate of progress for the period 2004-2018 would be 0.04 deciview per year or 0.57 deciview for the entire 14-year planning period.[9] Again, Healy Unit. No. 1, which has a useful life that expires long before 2064, causes no perceptible impact on visibility.

Also, in measuring whether there is an adverse impact on visibility, regulations contemplate the consideration of "time of visitor use of the Class I Federal area." 40 CFR § 51.301. DNPP is scarcely visited for eight months of the year. All commercial services are closed from mid-September to mid-May. In addition, the NPS has never offered real time concern or complaint regarding a Healy Power Plant actual or potential visibility impact.

Moreover, previous visibility monitoring, including modeling by ADEC and NPS, has consistently shown no impact on visibility. In the July 2008 and January 2009 BART Analysis for Healy Power Plant reports, we presented information from data collected by GVEA as a requirement of the Prevention of Deterioration (PSD) construction permit and Permit to Operate No. 9431-AA001 issued to GVEA when the Healy Power Plant permit was expanded to include HCCP. This information was dismissed by Enviroplan in the Final Findings Report. However, we would like to point out that a similar visibility monitoring study was conducted by Air Resource Specialists, Inc. (APS) for AIDEA, the NPS, and ADEC prior to issuance of the PSD permit. Jeff Anderson of ADEC prepared a report *RA BART Case Study Healy Clean Coal Project, Healy, Alaska*[10] for the WESTAR Council in 2001 which described this monitoring

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[8] Memorandum of Agreement, Healy Clean Coal Project, Healy, Alaska among the U.S. Department of Energy, U.S. Department of the Interior/National Parks Service, AIDEA, and GVEA, dated November 9, 1993.

[9] *See* Regional Haze in Alaska, ADEC (October 22, 2002).

[10] Located at http://www.wrapair.org/forums/amc/projects/ra_bart_case/index.html.

project. This report concludes: "The monitoring program produced no evidence of a discolored NO_2 plume or regional haze event associated with the operation of Healy Unit #1."

Similarly, the NPS has operated an IMPROVE monitoring station at the Park visitors center since 1989. The data from this monitoring station can be used to identify visibility impacts and trends over time since 1989. This monitoring would identify visibility impacts from all sources, not just the Healy Power Plant. However, the installation of NOx controls in 1996 and SO_2 controls in 1999, should be identifiable in the visibility monitoring data if Healy were a contributor to visibility degradation at DNPP. The figure set out in Attachment No. 4 to this letter is derived from data from the IMPROVE network. It shows visibility trends of the 20% worst days at the IMPROVE monitoring station at DNPP from 1989 to 2007. Aerosol extinction and total extinction are relatively flat with some large spikes in 1998, 2000, and 2005. Deciview values are flat over this time period. The installation of controls at Healy Unit No. 1, which reduced emissions by an average of over 50%, is not detectable in the data. This would indicate visibility impairment at DNPP is not attributable to Healy Unit No. 1. Therefore, additional emissions reductions will not be detectable.

Finally, and perhaps most significant, there are myriad other known factors that do affect visibility. The National Park Service in a Denali publication on air quality states, "[t]he annual pattern of most airborne contaminant concentrations in Denali shows a summertime low and a peak in late winter and early spring. These seasonal trends are consistent with known international contaminant transport directly across the Pacific Ocean, or up and over the Arctic Ocean in a phenomenon called arctic haze."[11] The publication also notes that "local and regional sources also contribute to the mix." This includes road dust from use of NPS roads in DNPP. Additionally, the publication also notes that "[i]n addition to human-caused emissions detected in the park each year, Denali's instruments also monitor naturally-occurring events. Smoke from wildland fires is usually the largest contributor to hazy conditions in the park (in Alaska, wildfires are typically caused by lightning strikes). Smoke has been measured from wildfires as far away as Russian and Indonesia." Ratcheting down emissions at Healy Unit No. 1 will do nothing to eliminate these other local and global sources and will add only minimal theoretical improvement to visibility. In addition, evaluating a single source under the BART regulations before ADEC has had the opportunity to evaluate and make a determination concerning the statewide reasonable further progress report, places an undue burden on the single source being evaluated.

To conclude, all factors weigh against a finding of SCR as BART for NOx emissions from Healy Unit No. 1. It makes no sense to require this additional control, and at absurd and prohibitive costs to GVEA and its customers, for no real benefit. *See Id.* at 40 CFR 51 App. Y IV.E.3.2. (requiring consideration of effects on prices).

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[11] NPS, U.S. Dept. of the Interior, Denali National Park and Preserve, Air Quality Monitoring available at www.nps.gov/dena/naturescience/upload/airquality2009.pdf; See also Air Quality Monitoring: An International Connection available at www.nps.gov/dena/naturescience/upload/Air-Quality.pdf. In adopting BART regulations, EPA noted that it did not expect States to restrict emissions from domestic sources to offset the impacts of international transport of pollution. 64 FR at 35736

SO_2

The Enviroplan Final Findings Report concludes that the existing dry sorbent injection system to control SO_2 emissions, the use of selective catalytic reduction (SCR) in addition to the existing low NOx burners and over-fire air (OFA) system, and use of the existing reverse gas baghouse system for particulate control, is considered BART for Healy Unit 1. No controls are required for the Auxiliary Boiler No. 1.

We agree that the existing dry sorbent SO_2 control system is BART and the installation of other technologies such as a new lime spray dryer result in higher costs and other environmental impacts. However, increased sorbent injection as the result of tighter permit emissions limits add unacceptable extra procedures and costs which do not provide a perceptible benefit to visibility. Since the current controls were considered BART, no additional actions or limits should be imposed.

PM10

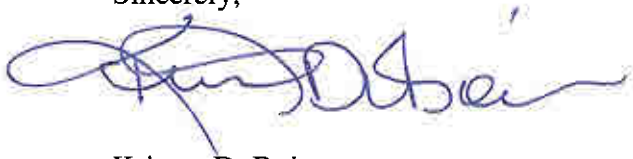
We agree the existing fabric filter represents BART for this source. However, the proposed BART permit emissions limits impose an additional operating restriction on the plant. Since the existing controls were considered BART, no additional actions or limits should be imposed.

Conclusion

For all of the reasons discussed herein and presented in GVEA submissions since July 2008, GVEA respectfully requests that ADEC's final BART determination for the Healy Power Plant is that the existing configurations for Auxiliary Boiler No. 1 and Unit No. 1 are best available retrofit technology and that no further controls and no changes in emission limits are required.

GVEA requests further that such determination be advanced into the Regional Haze State Implementation Plan for the State of Alaska. Thank you for consideration of our comments and requests.

Sincerely,



Kristen DuBois
Environmental Officer

Attachment No. 1
Attachment No. 2
Attachment No. 3
Attachment No. 4

cc Mr Tom Turner, ADEC
Mr. Brian Newton, GVEA
Ms. Kate Lamal, GVEA
Ms. Claudia K. Powers, Ater Wynne LLP