

From: [David Fish](#)
To: [Dec Air Comment](#)
Subject: Usibelli Coal Mine, Inc. Comments on Draft SIP
Date: Friday, July 26, 2019 2:37:43 PM
Attachments: [UCM Comments on Draft SIP 07262019.pdf](#)

To whom it may concern,

Attached are comments provided to the DEC from UCM on the draft State Implementation Plan for the Fairbanks North Star Borough Fine Particulate Nonattainment Area.

Sincerely,

David Fish
Environmental Manager

Aurora Energy, LLC
100 Cushman St., Suite 210 | Fairbanks, AK 99701-4674
Office 907-457-0230 | Fax 907-451-6543 | Cell 907-799-9464
dfish@usibelli.com



USIBELLI COAL MINE, INC.

Marketing ■ 100 Cushman Street, Suite 210 ■ Fairbanks, AK 99701
(907) 452-2625 ■ fax (907) 451-6543

July 26, 2019

c/o Cindy Heil
Division of Air Quality
ADEC
555 Cordova Street
Anchorage, AK 99501
dec.air.comment@alaska.gov

Subject: Usibelli Coal Mine, Inc.'s (UCM) Formal Comment to Proposed Regulation Changes Relating to Fine Particulate Matter (PM_{2.5}); Including New and Revised Air Quality Controls and State Implementation Plan (SIP).

The DEC released on May 14, 2019 for public review, the Serious Area State Implementation Plan (SIP) for the Fairbanks North Star Borough (FNSB) Fine Particulate (PM_{2.5}) Nonattainment Area (NAA). Public comments are due by 5:00 pm on July 26, 2019. Usibelli Coal Mine, Inc. (UCM) appreciates the opportunity to comment on the SIP and the collaborative effort with the Alaska Department of Environmental Conservation (ADEC) to provide a means to attain the PM_{2.5} 24-hour standard that is sensitive to the economics of industries and the communities affected.

Per the Clean Air Act (CAA), the Serious SIP was supposed to be submitted on December 31, 2017 to describe the Best Available Control Measures (BACM) bringing the area into attainment by December 31, 2019. The 2016 PM_{2.5} Implementation rule allows states to request a 5-year extension of the attainment date (i.e., December 31, 2024) as part of the Serious SIP if attainment is not anticipated by December 31, 2019. Within the 5-year attainment date extension request, the state could outline Most Stringent Measures (MSM) to be applied towards bringing the area into attainment by December 31, 2024. However, if a request is not accepted by the EPA and the area does not meet attainment by the Serious Area attainment date (December 31, 2019) then the Clean Air Act is prescriptive and requires a plan to reduce the concentration of PM_{2.5} by five percent annually. A plan is to be submitted one year after the attainment date (i.e., December 31, 2020) with details on how a 5% annual reduction will be achieved. What has been communicated through the Serious SIP draft is that the most expeditious attainment date for the area is 2029.

Device Requirements

Issue: DEC is adopting emission rates for solid fuel heating devices and requirements that do not give all devices equal consideration. Installation of coal-fired heating devices are not allowed unless they are a listed device (18 AAC50.079). There are no standards available in the regulations for the determination of a qualifying coal-fired heating device. Certain devices are not given options for installation within the regulation. Non-pellet fueled wood-fired hydronic heaters, although may have EPA certification under Subpart QQQQ, are not allowed to be installed within the nonattainment area per 18 AAC 50.077 (b) & (c).

Request:

- Develop standards to qualify the installation of coal-fired heating units. Suggested standard should be consistent with 18 g/h emission rate for existing units or 0.10 lbs/MMBtu [heat input basis] whichever is greater.
- Allow the installation of non-pellet fueled wood-fired hydronic heaters provided they are EPA certified.

Background:

The DEC is adopting several different emission rates for solid fuel heating devices which does not give all devices an equal consideration. There are EPA standards for wood stoves and hydronic heaters; also alternative standards for cordwood fired hydronic heaters.¹ These standards should be adopted without alteration. Both wood stoves and pellet fired hydronic heaters emission rates in the SIP are consistent with the 40 CFR Part 60, Subpart QQQQ standard for wood heating devices. The standards are set by the EPA and apply to manufacturers of the wood heating devices. Any such device that is approved by the EPA should be allowed in the nonattainment area, this includes outdoor hydronic heaters. Existing residential and smaller commercial coal-fired devices are required to be removed by December of 2024 and new coal-fired devices are prohibited from installation within the nonattainment area.² Coal-fired devices currently installed can be subject to an in-use source test to demonstrate the device meets the standard of 18 g/h of total particulate matter. This standard should also be the criteria for new residential and smaller commercial coal-fired devices. The 18 g/h standard is consistent with 0.10 lbs/MMBtu (heat input) emission rate for a unit that is rated at 400,000 Btu/hr. The Titan II auger-fed coal boilers are rated at 440,000 Btu/hr (heat output) and have undergone testing through OMNI Test Labs; the same lab that derived emission rates for the DEC which are being used in the nonattainment area SIPs. The OMNI test conducted in 2011 demonstrated that auger-fed coal fired hydronic heaters are extremely efficient. Ranking among the lowest emission rates for units tested. Emission rates of auger-fed coal-fired hydronic heaters (0.027g/MJ; **0.06 lbs/MMBtu[heat output basis]**) were consistent with EPA Certified Woodstoves (0.041 g/MJ; **0.10 lbs/MMBtu [heat output basis]**).³ The DEC is aware that more efficient heating is better for the nonattainment area situation regardless of heating device. Acceptable standards for the installation of coal-fired units should be included within the proposed regulations. There should not only be a standard for the existing units referenced in the regulations but also an achievable emission rate and standards for new coal-fired units. While there are provisions for the department's approval contingency, it does not provide a target emission rate for respective devices and fuels that are not EPA certified.

Best Available Control Technologies (BACT)

The proposed SIP considers BACT for the major sources; however, authorization of the BACT determination is not finalized through the EPA. With an impending date to install BACT four years from the date of reclassification (i.e., June 9, 2021), there doesn't seem to be time for any technological changes to the community of major sources. Although the state is trying to accommodate the deadline for BACT implementation through creative agreements (e.g., Fort Wainwright), the DEC alternatively could

¹ Federal Register, Vol. 80, No.50, Monday, March 16, 2015. Pg. 13672.

² Section 7.7.5.1.2 "Device Requirements – wood-fired and coal-fired standards", Draft Serious SIP.

³ OMNI-Test Laboratories, Inc. 2011. Measurement of Space-Heating Emissions. Prepared for FNSB. Retrieved from <https://cleanairfairbanks.files.wordpress.com/2012/02/omni-space-heating-study-fairbanks-draft-report-rev-4.pdf>

provide justification that the implementation of BACT is both technologically and economically infeasible at this time. This option is available to the state through 40 CFR 51.1010 (3). The economically infeasible consideration is relevant due to the cost of implementation of sulfur controls on the major sources for its potential gain in PM_{2.5} reduction (approx. \$10 million for 1 µg/m³ removed). A technologic infeasibility case could be considered on the basis that impending deadlines for BACT implementation is constrictive. The actual time it would take to design, build and implement sulfur controls for any facility cannot be accommodated in the time allotted. If either approach is accepted by the EPA, no further consideration would be necessary for BACT. UCM is also providing a justification for the use of a 0.25% coal-sulfur content as opposed to the 0.2% coal-sulfur content proposed by the DEC in the Serious SIP.

Technological Infeasibility

Issue: BACT determination for Fort Wainwright (FWA) Central Heat and Power Plant (CHPP) is not justifiable considering the DEC's options under the 2016 PM_{2.5} Implementation Rule.

Request: The option to determine BACT on FWA CHPP for SO₂ emissions is technologically infeasible due to time constraints is within DEC's authority. As such, a demonstration asserting that condition should be made.

Background:

BACT determination for the Fort Wainwright (FWA) Central Heat and Power Plant (CHPP) is arguably not justifiable per the requirements proposed in the draft Serious SIP. The Army installation was given two choices; either to retire the FWA CHPP or install and operate Dry Sorbent Injection (DSI) pollution control on the coal-fired boilers. As indicated, FWA is conducting a National Environmental Policy Act (NEPA) analysis to evaluate replacing the industrial coal-fired boilers which may take 2.5-3 years for a Record of Decision (ROD) [e.g., 2021 or 2022]. Since a determination captured in a ROD would come after the required installation date for BACT (i.e., June 9, 2021), the DEC is requesting an enforceable agreement to be made prior to the final submittal of the SIP (i.e., late 2019/early 2020). The agreement would be part of a Compliance Order by Consent (COBC) setting a date for either decommissioning the plant or installation of pollution controls. Realistically, whether the ROD determined the plant was to be decommissioned, alternative heating was proposed, or a do-nothing option was considered, the timeline for implementation of the agreement could be realized after DEC's expeditious attainment date of 2029.

Based on 40 CFR 51.1010 (3), the state may make a demonstration that any measure identified is "not technologically or economically feasible to implement in whole or in part by the end of the tenth calendar year following the effective date of the designation of the area, and may eliminate such whole or partial measure from further consideration under this paragraph." Since it is established that BACT implementation is not possible by June 9, 2021, it would seem reasonable to consider the option as technologically infeasible.

Sulfur Content of Coal

Issue: Proposed BACT for coal-sulfur content of 0.2% will cut off access to tens of millions of tons of coal for UCM as well as pose a potential threat of fuel supply interruption for the coal fired power plants.

Request:

- Adopt a new standard of 0.25% based on semi-annual weighted averages of coal-sulfur content in shipments of coal within semi-annual periods corresponding to Facility Operating Report reporting periods.
- Include provisions or circumstances within the SIP when the imposed coal-sulfur limit can be relaxed.

Background:

The ADEC has proposed that Best Available Control Technology (BACT) for coal burning facilities in the nonattainment area is a coal-sulfur limit of 0.2% sulfur by weight. Usibelli Coal Mine (UCM) is the only source of commercial coal available to the coal-fired facilities within the Fairbanks North Star Borough fine particulate nonattainment area. The mine has limited ability to affect the sulfur content in the coal. There isn't a coal washing or segregating facility associated with UCM which could ensure a consistent coal-sulfur concentration. Current practice for providing low-sulfur coal to customers is identifying sulfur content of the resource through drilling and sampling efforts. However, no matter how much sampling is done, the ability to characterize the sulfur content of the coal actually mined is limited.

Within the millions of tons of coal resources available to UCM, there is a significant amount of coal with higher sulfur content than 0.2%; in fact, any limit proposed to the coal sulfur content is effectively cutting off access to tens of millions of tons of coal resources. As such, UCM proposes that the coal-sulfur limit be lowered to 0.25% on an as received basis (wet) as opposed to 0.2% as proposed by ADEC. The increase in coal-sulfur content will help with coal accessibility and availability over the next decade and still provides ADEC with a 37.5% reduction in the potential to emit based from the current limit of 0.4%.

The state was silent on how the measure was to be reported or considered within a regulatory context. The ADEC's standard permit condition for coal fired boilers (Standard Condition XIII) requires that the permittee report sulfur content of each shipment of fuel with the semi-annual Facility Operating Reports. UCM currently provides semi-annual reports to all customers which includes sulfur content of each shipment of coal along with the weighted average coal-sulfur content for the six-month period coinciding with the operating reports' reporting period. UCM proposes that the standard operating permit condition remain the same and that facilities continue to provide the state with the sulfur content of each shipment of fuel; in addition, the weighted average coal-sulfur content of the shipments received by the facility during the reporting period would be referenced in the operating report.

UCM would like the DEC to include circumstances when any imposed reduced coal-sulfur limit can be relaxed. Situations when relaxing the coal-sulfur limit will not impede attainment of the PM_{2.5} standard should be considered when drafting the proposed regulations. As previously indicated, coal resources are effectively being cut off by the imposition of a reduced limit. An example when relaxing the coal-sulfur limit wouldn't impede attainment of the standard is if sulfur controls were acquired on a coal-fired facility. The state and the facility would, inevitably, work out an emission rate for the facility. The subsequent fuel-sulfur loading requirement would be established in order for the facility to meet their emission limit. If the fuel-sulfur loading requirement could be in excess of the coal-sulfur limit while still allowing the facility to meet the emission limit; that should qualify as a criteria to relax the limit. Another condition may be when the area comes into attainment with the PM_{2.5} standard. Perhaps one of the aspects of a maintenance state implementation plan could be to remove or relax the imposed coal-sulfur limit on the basis that the impact from coal-sulfur is negligible to the area problem.

Major Source Economic Infeasibility Justification

Issue: The DEC has the option to demonstrate the economic infeasibility of SO₂ BACT for major sources within the nonattainment area under 40 CFR 51.1010 (3) based on cost effectiveness. The most cost effective value for operating BACT controls on the community of major sources to remove 1 µg/m³ of PM_{2.5} is \$9,794,799 per year [See Table 7b].

Request:

- Define cost effectiveness as cost per 1 µg/m³ of PM_{2.5} for this exercise.
- Derive a cost per ton removed for each major source in the nonattainment area by adjusting operational load to represent actual SO₂ emissions in the spreadsheets for each facility provided within the appendices of the “Control Strategies” section of the draft serious SIP.
- Evaluate the cumulative annualized cost incurred by the community of major sources within the nonattainment area based on potential tons removed from implementing SO₂ BACT using actual emissions (instead of PTE).
- Correlate annualized cost of SO₂ BACT controls with results from the SO₂ Analysis section of the draft SIP (Section 7.8.12.5) to derive a cost/µg/m³ mitigated from applying SO₂ control technologies.

Background:

Major stationary sources are a subgroup of emission sources that are given special consideration under nonattainment area provisions. Point sources with emissions greater than 70 tons per year of PM_{2.5} or any individual precursor (NO_x, SO₂, NH₃, VOCs) are evaluated for appropriate control. NO_x and SO₂ were addressed on an emission unit specific basis in DEC’s Best Available Control Technologies (BACT) determinations. The DEC’s evaluation considered technical feasibility and estimates of emissions reductions to meet a defined emission limit. Operations at the facility’s potentials to emit is used for the purpose of identifying a cost effectiveness for each technology in cost per ton removed.

The BACT analyses evaluate pollution control independent of the nonattainment area problem; it is simply triggered as a condition of an area defined as being in serious nonattainment of a pollutant standard. As described in the 2016 PM_{2.5} Implementation Rule, the state can provide either a technologic or an economic infeasibility demonstration for control measures.⁴ The argument must illustrate it is not technologically or economically feasible to implement the control measure by the end of the tenth calendar year (i.e., December 31, 2019 for the FNSB NAA) following the effective date of the designation of the area. UCM believes that there is enough evidence to substantiate that SO₂ controls on the community of major sources is economically infeasible.

Economic Infeasibility Justification

The DEC has determined BACT is comprised of sulfur controls for major stationary sources. The DEC has also determined that sulfur controls are economically infeasible for one major source, silent on infeasibility for another, and partially economically infeasible for a couple of major sources within the NAA.⁵ Per regulation, DEC has the authority to demonstrate that any measure identified is economically infeasible.⁶ It is within the DEC’s authority to determine that BACT for sulfur control is economically

⁴ 40 CFR 51.1010 (3)

⁵ Section 7.7.8 of the draft Serious SIP

⁶ 40 CFR 51.1010 (3)

infeasible for the community of major sources in the NAA based on cost effectiveness.⁷ If cost effectiveness is defined as cost per $\mu\text{g}/\text{m}^3$ removed, there is a clear justification to eliminate sulfur control measures from the community of major sources. The most cost effective value for operating BACT controls on the community of major sources to remove $1 \mu\text{g}/\text{m}^3$ of $\text{PM}_{2.5}$ is \$9,794,799 per year [See Table 7b].

Annualized Cost of BACT Implementation

The DEC derived cost effectiveness value in cost per ton removed is established through the implementation of the BACT analysis. The DEC preferred BACT controls and cost effectiveness value are referenced in Section 7.7.8 of the SIP.⁸ Dry Sorbent Injection (DSI) is selected for the coal fired boilers with an 80% reduction in SO_2 and ULSD is suggested for GVEA's North Pole Plant and Zehnder Facility with a 99.7% removal rate for SO_2 . Based on the Potential to Emit (PTE) of each facility, the state derives a cost effectiveness value for the sources.

Annualized cost to implement BACT for the community of major sources are based on operating scenarios for both PTE and actual emissions (2013)⁹ from the facilities. The results are illustrated in Table 6a and 6b. The cost effectiveness value (cost/ton removed) is multiplied by the amount of pollution removed (tons) to derive an annual cost for BACT for each facility. The total annualized cost is the sum of the cumulative annual operating cost for the controls on all the major sources in the NAA. The annualized costs do not include the cost of fuel switching for smaller diesel engines, backup generators and boilers that are found on the campuses of certain facilities (e.g., UAF, FWA). The total annualized BACT implementation cost to operate at the PTEs is \$49,296,062; annualized cost considering actual emissions is \$20,843,332 (See Tables below).

Table 6a: BACT Annualized Costs Based on Potential To Emit

| Facility | BACT (SO_2 Control) | SO_2 Reduction | SO_2 Emissions PTE ³ | SO_2 Reduction ³ | Cost/ton removed ^{2,3} | Annualized Cost |
|-------------------|-------------------------------|-------------------------|--|--------------------------------------|---------------------------------|-----------------|
| Units | | (%) | (tpy) | (tpy) | (\$) | (\$) |
| Chena Power Plant | DSI | 80 | 1,004.0 | 803.0 | \$ 7,495 | \$ 6,018,485 |
| FWA | DSI | 80 | 1,168.5 | 934.8 | \$ 10,329 | \$ 9,655,331 |
| NPP-EU1 | ULSD | 99.7 | 1,486.4 | 1,482.0 | \$ 9,139 | \$ 13,543,998 |
| NPP-EU2 | ULSD | 99.7 | 1,356.1 | 1,352.0 | \$ 9,233 | \$ 12,483,016 |
| UAF | DSI | 80 | 242.5 | 194.0 | \$ 11,578 | \$ 2,246,132 |
| Zender | ULSD | 99.7 | 598.6 | 597.0 | \$ 8,960 | \$ 5,349,120 |
| Notes: See Below. | | | | | Total Annualized Cost | \$ 49,296,082 |

Table 6b: BACT Annualized Costs Based on Actual Emissions

| Facility | BACT (SO_2 Control) | SO_2 Reduction | SO_2 Emissions (Actual) ^{1,3} | SO_2 Reduction | Cost/ton removed ⁴ | Annualized Cost |
|--|-------------------------------|-------------------------|---|-------------------------|-------------------------------|-----------------|
| Units | | (%) | (tpy) | (tpy) | (\$) | (\$) |
| Chena Power Plant | DSI | 80 | 711.8 | 569.4 | \$ 8,960 | \$ 5,101,824 |
| FWA | DSI | 80 | 766.5 | 613.2 | \$ 11,235 | \$ 6,889,302 |
| NPP-EU1 | ULSD | 99.7 | 142.3 | 141.9 | \$ 12,169 | \$ 1,726,454 |
| NPP-EU2 | ULSD | 99.7 | 422.3 | 421.0 | \$ 9,453 | \$ 3,980,026 |
| UAF | DSI | 80 | 219.0 | 175.2 | \$ 11,578 | \$ 2,028,466 |
| Zender | ULSD | 99.7 | 73.0 | 72.8 | \$ 15,351 | \$ 1,117,261 |
| Notes: | | | | | Total Annualized Cost | \$ 20,843,332 |
| 1 - Table 7.6-9 "2013 SO_2 Episodic vs. Annual Average Point Source Emissions (tons/day)" | | | | | | |
| 2 - Section 7.7.8 of SIP | | | | | | |
| 3 - BACT Spreadsheets (May 2019) in SIP for Listed Facilities; adjusted AE emission factor of 0.472 lbs- SO_2 /MMBtu referenced in BACT Section of SIP. | | | | | | |
| 4 - Cost/ton removed after adjusting operational load in BACT Spreadsheets (May 2019) to reflect actual emissions; AE emission factor of 0.472 lbs- SO_2 /MMBtu | | | | | | |

⁷ 40 CFR 51.1010 (3)(ii)

⁸ Appendix III.D.7.07 Control Strategies: <https://dec.alaska.gov/air/anpms/communities/fbks-pm2-5-serious-sip/>

⁹ Table 7.6-9 "2013 SO_2 Episodic vs. Annual Average Point Source Emission (tons/day)" [Draft Serious SIP] ADEC

Major Source SO₂ Control Cost Effectiveness: Cost per µg/m³ PM_{2.5} Removed

The DEC provided an SO₂ analysis using the 2019 projected baseline inventory.¹⁰ The DEC determined that major stationary sources were found to contribute significantly to PM_{2.5} concentrations at the State Office Building (SOB) and the monitor adjacent to the Borough building (NCORE) in downtown Fairbanks. The impact at the monitors were 1.79 µg/m³ and 1.70 µg/m³ respectively.¹¹ The impact at the Hurst Road and North Pole Elementary (NPE) monitors were 0.04 µg/m³ and 0.10 µg/m³ respectively.

Assuming that an 80% removal of the point source emissions of SO₂ would translate to an 80% reduction to the impact from major sources of sulfur-based PM_{2.5} at the monitors, the amount of PM_{2.5} reduced at the SOB, NCORE, Hurst Road, and NPE monitors would be 1.43 µg/m³, 1.36 µg/m³, 0.03 µg/m³, and 0.08 µg/m³ respectively. Based on the total annualized cost for BACT controls using actual emissions (\$20,843,332) the cost effectiveness value in cost per µg/m³ of PM_{2.5} removed is at the best, \$14,555,400 per µg/m³ removed and at the worst \$651,354,137 per µg/m³ removed (Table 7a). If the alternative approach to the SO₂ design value contribution from major sources is considered then the cost effectiveness at best is \$9,794,799 per µg/m³ and at worst is \$19,299,382 per µg/m³ (Table 7b).

Ironically, the cost per µg/m³ removed is less at the SOB and NCORE sites where the projected design value is in compliance with the standard. The projected design value provided by the DEC for 2019 meet attainment at the SOB and NCORE sites which are of 29.72 µg/m³ and 29.01 µg/m³ respectively¹²; the attainment standard is 35 µg/m³. The 2019 design values at the Hurst Road and NPE monitors were 104.81 µg/m³ and 36.48 µg/m³, both clearly above the attainment standard of 35 µg/m³. The impact from the major sources is less significant at the sites where the 2019 projected design value violates the standard.

Table 7a: Cost Effectiveness Based on Design Value Contribution SO₂ from Major Stationary Sources

| Site | Design Value Base Year 2013 ¹ | Projected Design Value Year 2019 ¹ | Major Source Sulfur-Based Particulate Contribution ² | BACT Reduction (80% of Direct Emissions) | BACT Reduction / Design Value 2019 | Annualized BACT Cost per ug/m ³ removed |
|--------------------------------|--|---|---|--|------------------------------------|--|
| Units | (ug/m ³) | (ug/m ³) | (ug/m ³) | (ug/m ³) | (%) | (\$) |
| State Office Building (SOB) | 38.93 | 29.72 | 1.79 | 1.43 | 4.8% | \$ 14,555,400 |
| Fairbanks Borough Building (N) | 37.96 | 29.01 | 1.70 | 1.36 | 4.7% | \$ 15,325,980 |
| Hurst Road | 131.63 | 104.81 | 0.04 | 0.03 | 0.0% | \$ 651,354,137 |
| North Pole Elementary (NPE) | 45.3 | 36.48 | 0.10 | 0.08 | 0.2% | \$ 260,541,655 |

Notes:

1 - Table 7.8-29 of Draft Serious SIP

2 - Table 7.8-26 of Draft Serious SIP

Table 7b: Cost Effectiveness Based on Alternative Approach to Design Value Contribution SO₂ from Major Stationary Sources

| Site | Design Value Base Year 2013 ¹ | Projected Design Value Year 2019 ¹ | Major Source Sulfur-Based Particulate Contribution ² | BACT Reduction (80% of Direct Emissions) | BACT Reduction/Design Value 2019 x 100 | Annualized BACT Cost per ug/m ³ removed |
|--------------------------------|--|---|---|--|--|--|
| Units | (ug/m ³) | (ug/m ³) | (ug/m ³) | (ug/m ³) | (%) | (\$) |
| State Office Building (SOB) | 38.93 | 29.72 | 2.66 | 2.13 | 7.2% | \$ 9,794,799 |
| Fairbanks Borough Building (N) | 37.96 | 29.01 | 2.53 | 2.02 | 7.0% | \$ 10,298,089 |
| Hurst Road | 131.63 | 104.81 | 1.55 | 1.24 | 1.2% | \$ 16,809,139 |
| North Pole Elementary (NPE) | 45.3 | 36.48 | 1.35 | 1.08 | 3.0% | \$ 19,299,382 |

Notes:

1 - Table 7.8-29 of Draft Serious SIP

2 - Table 7.8-27 of Draft Serious SIP

¹⁰ Section 7.8.12.5 of the draft Serious SIP

¹¹ Table 7.8-26. "Design value contribution from major stationary source SO₂".Draft Serious SIP.

¹² Table 7.8-29. "2019 FDV for Projected Baseline and Control Scenario Calculated against a 2013 Base year".

Fairbanks exceeds the fine particulate matter standard during winter months.¹³ Control technology application on major stationary sources is permanent and transcends seasons. BACT for sulfur control on major sources is an annual solution to a wintertime problem. The application of SO₂ BACT is arguably an impractical effort. Where the pollutant concentration is either achieving or almost achieving the standard, the projected impact removed by application of BACT on the major sources is about 7% of the concentration. Since the standard is attained, removing 7% more of sulfur-based PM_{2.5} for costs upward of \$10 million dollars per µg/m³ seems impractical. There is a mechanism allotted within the 2016 PM_{2.5} Implementation Rule for the DEC to provide a detailed written justification for eliminating, from further consideration, potential control measures for SO₂ on the community of major stationary sources based on cost ineffectiveness.

As such, UCM supports an economic infeasibility determination for the application of BACT on all major stationary sources within the nonattainment area.

Conclusion

In summary, UCM is thankful to have the opportunity to comment on the Serious Area SIP and the proposed regulations. UCM's main concerns expressed within these comments are the application of a common standard for solid fuel burning devices, the application of a workable coal-sulfur limit as BACT for the coal-fired facilities, and an economic infeasibility justification for sulfur controls for the community of major sources in the NAA. Included below are summaries highlighting key points of UCM's comments:

- BACT requirement for coal facilities to meet coal-sulfur content of 0.2% is being contested. UCMs requests a modified BACT requirement to 0.25% coal-sulfur (as received) evaluated on a six-month weighted average using UCM analyses for each shipment.
- UCM is encouraging the DEC to include provisions or circumstances within the SIP when the imposed coal-sulfur limit can be relaxed without impact to the nonattainment area. As indicated, coal resources are effectively being cut off by the imposition of a reduced limit.
- A demonstration asserting that it is technologically infeasible to install BACT for SO₂ on the FWA CHPP due to time constraints is within the DEC's authority under the provisions of the 2016 PM_{2.5} Implementation Rule and should be considered.
- UCM supports an economic infeasibility determination for the community of major sources based on the cost ineffectiveness of sulfur control technology in removing 1 µg/m³ of sulfur-based PM_{2.5} from major source SO₂ contribution.
- Solid fuel burning devices are not treated equally within the Serious Area SIP. A proposition for a common emission standard for those units that do not have EPA certification or standard to meet is encouraged. Those units with EPA standards should be allowed to operate within the NAA. Also, inclusion of emission standards and criteria for coal-fired home heating devices within the regulation is encouraged

¹³ Section 7.8.6 of the Draft Serious SIP