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May 29, 2013

The Honorable Robert Perciasepe  
Acting Administrator  
U.S. Environmental Protection Agency  
USEPA Ariel Rios Building (AR)  
1200 Pennsylvania Avenue N.W.  
Washington, DC 20004

The Honorable Jared Blumenfeld  
Regional Administrator  
U.S. EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105

Re: Supplement to Petition for Administrative Reconsideration  
BART for Units 2 and 3, Apache Generating Station  
77 Fed. Reg. 72512 (Dec. 5, 2012)

Dear Messrs. Perciasepe and Blumenfeld:

On February 2, 2013, Arizona Electric Power Cooperative, Inc. (“AEPCO”) filed a petition for administrative reconsideration of the U.S. Environmental Protection Agency (“EPA”) final rule entitled “Approval, Disapproval and Promulgation of Air Quality Implementation Plans; Arizona; Regional Haze State and Federal Implementation Plans” in the *Federal Register* at volume 77, pages 72512 and following (the “Rule”). As part of the Rule, EPA promulgated a Federal Implementation Plan (“FIP”) establishing “best available retrofit technology” or “BART” for Apache Generating Station Steam Units 2 and 3 operated by AEPCO. In its petition, AEPCO provided information demonstrating that the FIP is unaffordable, requested clarification of the application of the BART limits to Apache Generating Station Steam Unit 1, and expressed concern about unintended consequences of averaging provisions adopted as part of the compliance provisions of the BART FIP. AEPCO also stated that it believed that EPA’s visibility objectives could be substantially met at less cost.

EPA graciously agreed to meet with AEPCO to discuss its petition on February 8, 2013, in Washington, DC, and then again in several subsequent conference calls. In these discussions, EPA and AEPCO have discussed, as AEPCO suggested on page 21 of its February 2, 2013 petition, alternatives to the BART determined in the FIP. EPA technical staff has indicated that they believe AEPCO’s tentative recommendation at the February 8, 2013 meeting—a conversion of one of AEPCO’s units from coal to pipeline natural gas and use of selective non-catalytic reduction (“SNCR”) technology at the other—has sufficient merit to warrant a formal proposal for the Agency’s consideration. Accordingly, consistent with EPA Region 9’s request, AEPCO submits this supplement to its February 2, 2013 petition for administrative reconsideration setting forth its proposed alternative in more detail.

### **AEPCO's Proposal for BART**

As discussed with EPA technical representatives, AEPCO is proposing that the following control technology be adopted as BART for Apache Generating Station Steam Units 2 ("ST2") and 3 ("ST3"). AEPCO believes that this proposal will achieve equivalent, or better, visibility results than that promulgated by EPA in the Final Rule.

#### **BART for ST2**

AEPCO proposes to permanently convert ST2 from coal to natural gas on December 5, 2017, with an exception for a limited emergency use in the event of disruption of the natural gas supply, which is discussed below. AEPCO proposes to establish BART as the following combination of technologies and pollutant limits:

Particulate Matter: Pipeline Natural Gas ("PNG"), 0.01 lb PM<sub>Total</sub>/MMBtu 30-day rolling average, dropping to 0.008 lb PM<sub>Total</sub>/MMBtu 30-day rolling average effective December 5, 2018.

Sulfur Dioxide: PNG, 0.00064 lb/MMBtu 30-day rolling average.

Nitrogen Oxides: PNG, 0.085 lb/MMBtu 30-day rolling average.

Emergency Provision: AEPCO will not operate ST2 on coal after the effective date of the BART determination except in the event of a supply disruption caused by natural gas supplier or transporter pipeline failure, freeze-up or pipeline compression failure that reduces gas volume or gas pressure below that necessary for Apache Generating Station gas generation. AEPCO must discontinue coal firing as expeditiously as possible after restoration of natural gas service at levels supporting continuous firing of ST2 and in no event more than 48 hours after restoration of such service.

Flexibility Provision: AEPCO may comply with the BART limits through any combination of process adjustments or add-on controls, provided that such combination achieves the BART numeric limit (on a 30-day rolling average basis) and complies with applicable regulations and permits and AEPCO obtains any necessary preconstruction or operating approvals.

#### **BART for ST3**

AEPCO proposes to retain coal as the principal fuel, with natural gas and co-firing of coal and natural gas as alternative operating scenarios, for ST3. AEPCO proposes to establish BART as the following combination of technologies and pollutant limits:

Particulate Matter: Electrostatic precipitators (ESPs), 0.03 lb PM<sub>Filterable</sub>/MMBtu 30-day rolling average.

Sulfur Dioxide: SO<sub>2</sub> scrubbers, 0.15 lb/MMBtu, 30-day rolling average.

Nitrogen Oxides: Low NO<sub>x</sub> Burners + Overfire Air + SNCR, 0.23 lb/MMBtu, 30-day rolling average.

Flexibility Provision: AEPCO may comply with the BART controls through any combination of fuels, process adjustments, or add-on controls, provided that such combination achieves the BART numeric limit (on a 30-day rolling average basis) and complies with applicable regulations and permits and AEPCO obtains any necessary preconstruction or operating approvals.

EPA inquired whether AEPCO's SNCR installation might achieve a lower NO<sub>x</sub> rate over a longer average for modeling purposes. Based on input from FuelTech, AEPCO believes that overall NO<sub>x</sub> reductions would likely be on the order of 0.225 lb/MMBtu, but this cannot be achieved on a 30-day rolling average in all cases and AEPCO is not proposing the 0.225 lb/MMBtu as a limit because of the uncertainty. AEPCO has also proposed to reduce the particulate matter limit for the natural gas unit from 0.01 lb PM<sub>Total</sub>/MMBtu to 0.008 lb PM<sub>Total</sub>/MMBtu. This reduction would become effective on December 5, 2018.

### BART Timing

AEPCO proposes to retain the current time line for implementation outlined in EPA's SIP approval (for PM and SO<sub>2</sub>) and FIP (for NO<sub>x</sub>), except that specific deadlines are adjusted to accommodate the ST2 conversion to natural gas, as follows:

ST1: Unchanged  
ST2: NO<sub>x</sub> effective December 5, 2017  
SO<sub>2</sub> 0.15 lb/MMBtu effective December 5, 2016  
SO<sub>2</sub> 0.00064 lb/MMBtu effective December 6, 2017  
PM<sub>10-Filterable</sub> 0.03 lb/MMBtu effective December 5, 2016  
PM<sub>10-Total</sub> 0.01 lb/MMBtu effective December 5, 2017  
PM<sub>10-Total</sub> 0.008 lb/MMBtu effective December 5, 2018  
ST3: NO<sub>x</sub> effective December 5, 2017  
SO<sub>2</sub> effective December 5, 2016  
PM<sub>10-Filterable</sub> effective December 5, 2016

Additionally, should final approval of this proposal be delayed by more than six months from the original SIP approval and FIP promulgation effective date, the implementation date would be tolled on a day-by-day basis to account for the delay. Final approval would be defined as the effective date of EPA's rule promulgating this proposal, unless stayed at the request of a third party, in which case final approval would be upon termination of the stay (assuming the

rule is upheld). If the proposal is invalidated, AEPCO must comply with the current BART FIP (and/or SIP, for non-NOx pollutants) within four and a half years.

**Justification**

AEPCO believes, based upon modeling, monitoring, and our general understanding of regional haze that the visibility benefits of its proposal will be better than those achieved by EPA’s existing FIP—e.g., that AEPCO’s proposal is “better than BART.” Better than BART results are achieved both by the emissions reductions resulting from AEPCO’s proposal and because the emissions results will better match Arizona’s “Uniform Rate of Progress” goals to achieve the ultimate congressional goal.

**Emissions Reductions Exceed Those Achieved Under EPA’s SCR BART FIP**

AEPCO has calculated the emissions reductions achieved from both EPA’s SCR BART FIP and AEPCO’s proposed alternative converting ST2 to pipeline natural gas and ST3 to SNCR using the same heat input rate as EPA did in the proposed and final rules and AEPCO’s 85% utilization factor for all cases. Using this approach, the AEPCO alternative achieves additional aggregate emissions reductions for SO<sub>2</sub> and particulate matter that outweigh the increase in NOx emissions. This can be seen in the following table:

Control Option	Pollutant	Unit	Emissions Factor, lb/MMBtu	Heat Rate MMBtu/hr	Annual Capacity Factor	Emissions lb/hr	Emissions tpy
Baseline	NOx	ST2	0.371	2316	0.85	859.24	3198.94
Baseline	SO2	ST2	0.15	2316	0.85	347.40	1293.37
Baseline	PM	ST2	0.03	2316	0.85	69.48	258.67
Baseline	NOx	ST3	0.438	2223	0.85	973.67	3624.99
Baseline	SO2	ST3	0.15	2223	0.85	333.45	1241.43
Baseline	PM	ST3	0.03	2223	0.85	66.69	248.29
Combined NOx						1832.91	6823.92
Combined SO2						680.85	2534.80
Combined PM						136.17	506.96
EPA SCR	NOx	ST2	0.07	2316	0.85	162.12	603.57
EPA SCR	SO2	ST2	0.15	2316	0.85	347.40	1293.37
EPA SCR	PM	ST2	0.03	2316	0.85	69.48	258.67
EPA SCR	NOx	ST3	0.07	2223	0.85	155.61	579.34
EPA SCR	SO2	ST3	0.15	2223	0.85	333.45	1241.43
EPA SCR	PM	ST3	0.03	2223	0.85	66.69	248.29
Combined NOx						317.73	1182.91

Control Option	Pollutant	Unit	Emissions Factor, lb/MMBtu	Heat Rate MMBtu/hr	Annual Capacity Factor	Emissions lb/hr	Emissions tpy
Combined SO2						680.85	2534.80
Combined PM						136.17	506.96
AEPCO Proposal	NOx	ST2	0.085	2316	0.85	196.86	732.91
AEPCO Proposal	SO2	ST2	0.00064	2316	0.85	1.48	5.52
AEPCO Proposal	PM	ST2	0.008	2316	0.85	18.53	68.98
AEPCO Proposal	NOx	ST3	0.225	2223	0.85	500.18	1862.15
AEPCO Proposal	SO2	ST3	0.15	2223	0.85	333.45	1241.43
AEPCO Proposal	PM	ST3	0.03	2223	0.85	66.69	248.29
Combined NOx						697.04	2595.06
Combined SO2						334.93	1246.95
Combined PM						85.22	317.27
Comparison	NOx TPY	SO2 TPY	PM TPY	Net Change			
EPA to Baseline	-5641.02	0.00	0.00	-5641.02			
AEPCO to Baseline	-4228.86	-1287.85	-189.69	-5706.41			
AEPCO to EPA	1412.15	-1287.85	-189.69	-65.39			

As can be seen from the calculations, AEPCO’s alternative will result in reducing an estimated 1288 tons of SO<sub>2</sub> and 190 tons of particulate matter compared to EPA’s BART FIP, while increasing NOx emissions by approximately 1412 tons/year, resulting in an aggregate emissions reduction of an additional 65 tons/year. AEPCO’s alternative thus achieves better than BART levels of reduction. As discussed below, AEPCO’s alternative also achieves superior visibility benefits.

CALPUFF Modeling Shows “Better than Bart” Results

Both EPA Region 9 and AEPCO’s consultant, ENVIRON (which assisted in the original Western Regional Air Partnership (WRAP) modeling effort), have conducted CALPUFF modeling of AEPCO’s emissions. Both EPA and ENVIRON used a common CALMET meteorological database and a common version of the CALPUFF model to minimize unintended differences. Additionally, ENVIRON ran EPA’s base case and SCR case and compared ENVIRON results to EPA, which showed good agreement, after adjusting a stack temperature correction from AEPCO. As noted in the ENVIRON report, AEPCO is using a direct comparison of the CALPUFF modeling results for both the average of the 98<sup>th</sup> percentile for the three years 2001-2003 or the 22<sup>nd</sup> high measurement over the 2001-2003 period for comparison with EPA’s SCR scenario modeled results to determine whether AEPCO’s proposed alternative results in better than BART results. Based on guidance provided by EPA, AEPCO is using NOx

Supplement to Petition for Administrative Reconsideration

Arizona Electric Power Cooperative, Inc.

May 29, 2013

Page 6

values of 0.225 lb/MMBtu for its proposed SNCR alternative on ST3 rather than the 0.23 lb/MMBtu 30-day rolling limit. While AEPCO’s vendor does not believe that AEPCO can achieve less than 0.23 lb/MMBtu during all 30-day periods, it does believe that, over time, AEPCO’s emissions are likely to be 0.225 lb/MMBtu or less. The details of the modeling are set forth in the attached ENVIRON report “CALPUFF Visibility Modeling of the AEPCO BART Scenarios” dated May 10, 2013.

In the ENVIRON report, the AEPCO proposal is Version 2 of AEPCO Alternative Control 9b. In Attachment E5, ENVIRON report sets forth the CALPUFF model results as follows:

<b>AEPCO CALPUFF Results</b>	<b>Impact in Deciviews: 1 ppb Ammonia</b>				
<b>EPA BART SCR</b>	<b>98<sup>th</sup> Percentile</b>			<b>Avg 98<sup>th</sup></b>	<b>22<sup>nd</sup> high</b>
<b>Class I Area</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2001 -2003</b>	<b>2001 -2003</b>
Chiricahua NM	1.790	2.147	1.996	1.978	1.996
Chiricahua Wild.	1.979	1.892	1.788	1.886	1.979
Galiuro Wild.	0.991	1.146	1.486	1.208	1.205
Gila Wild.	0.226	0.321	0.238	0.262	0.279
Mazatzal Wild.	0.167	0.172	0.130	0.156	0.147
Mount Baldy Wild.	0.102	0.132	0.092	0.109	0.114
Saguaro NP	1.308	1.460	1.495	1.421	1.463
Sierra Ancha Wild.	0.137	0.174	0.149	0.153	0.158
Superstition Wild.	0.317	0.307	0.314	0.313	0.315
Average	0.780	0.861	0.854	0.832	0.851
<b>AEPCO CALPUFF Results</b>	<b>Impact in Deciviews: 1 ppb Ammonia</b>				
<b>AEPCO Alt Cntl 9bv2</b>	<b>98<sup>th</sup> Percentile</b>			<b>Avg 98<sup>th</sup></b>	<b>22<sup>nd</sup> high</b>
<b>Class I Area</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2001 -2003</b>	<b>2001 -2003</b>
Chiricahua NM	1.898	1.740	2.007	1.882	1.909
Chiricahua Wild.	1.852	1.837	1.863	1.851	1.852
Galiuro Wild.	0.959	0.952	1.421	1.111	1.135
Gila Wild.	0.292	0.342	0.226	0.287	0.295
Mazatzal Wild.	0.136	0.131	0.112	0.126	0.124
Mount Baldy Wild.	0.116	0.121	0.100	0.112	0.116
Saguaro NP	1.213	1.525	1.301	1.346	1.317
Sierra Ancha Wild.	0.132	0.139	0.118	0.130	0.128
Superstition Wild.	0.283	0.330	0.212	0.275	0.283
Average	0.765	0.791	0.818	0.791	0.795

<b>Difference in dv between EPA BART SCR and AEPSCO Alternative Cntl 9b (Alt – SCR)</b>					
<b>AEPSCO CALPUFF Results</b>	<b>98<sup>th</sup> Percentile</b>			<b>Avg 98<sup>th</sup></b>	<b>22<sup>nd</sup> high</b>
<b>Class I Area</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2001 -2003</b>	<b>2001 -2003</b>
Chiricahua NM	0.108	-0.407	0.011	-0.096	-0.087
Chiricahua Wild.	-0.127	-0.055	0.075	-0.036	-0.127
Galiuro Wild.	-0.032	-0.194	-0.065	-0.097	-0.070
Gila Wild.	0.066	0.021	-0.012	0.025	0.016
Mazatzal Wild.	-0.031	-0.041	-0.018	-0.030	-0.023
Mount Baldy Wild.	0.014	-0.011	0.008	0.004	0.002
Saguaro NP	-0.095	0.065	-0.194	-0.075	-0.146
Sierra Ancha Wild.	-0.005	-0.035	-0.031	-0.024	-0.030
Superstition Wild.	-0.034	0.023	-0.102	-0.038	-0.032
Average	-0.015	-0.070	-0.036	-0.041	-0.055

In seven of the nine Class I Areas, AEPSCO’s proposal achieves additional visibility improvements beyond what EPA’s BART FIP achieves. These improvements range from a low of -0.024 dv to a high of -0.097 dv. Only two areas show a marginal increase (of +0.004 and +0.025 dv) and these impacts are imperceptible and occur in areas where the Apache Station’s total BART-eligible contribution to visibility impairment is less than 0.3 dv. Critically, using EPA’s cumulative BART metric, AEPSCO’s proposal would achieve a -0.367 dv (on Average 98<sup>th</sup> percentile basis) or a -0.497 dv (on a 22<sup>nd</sup> high basis) improvement in visibility versus EPA’s current BART FIP. AEPSCO’s proposal thus achieves “better than BART” results on even the most conservative basis.

As stated in the ENVIRON report, however, the use of the regulatory 1.0 ppb default ammonia concentration is not necessarily representative of visibility conditions in Arizona. Measured ammonia background values are available, as noted in the attached ENVIRON report and in prior comments by APS and SRP. If the variable, measured ammonia concentrations are used, improvements in visibility resulting from AEPSCO’s proposed alternative are greater, as set forth in the ENVIRON report in Attachment D2. This shows improvements ranging from a low of -0.015 to a high of -0.25 dv (average 98<sup>th</sup> percentile basis), or -0.005 to -0.275 dv (22<sup>nd</sup> high basis) in all nine areas and the cumulative impact is -1.059 dv (average 98<sup>th</sup> percentile basis) or -- 1.064 dv (22<sup>nd</sup> high basis). Using the more realistic, variable ammonia background suggests that visibility improvements will be considerably higher – approaching a full deciview, which is likely to be a perceptible improvement. AEPSCO believes that a fully perceptible improvement is clearly better than BART.

Finally, as ENVIRON notes in its two attached reports, the natural gas particulate speciation data used in the existing Federal Land Manager (FLM) protocol substantially overstates the elemental carbon and organic carbon contributions from natural gas. As can be seen in Table 2b, the FLM protocol results in natural gas having higher carbon emissions than coal. EPA itself has changed these assumptions in the National Emissions Inventory (NEI)

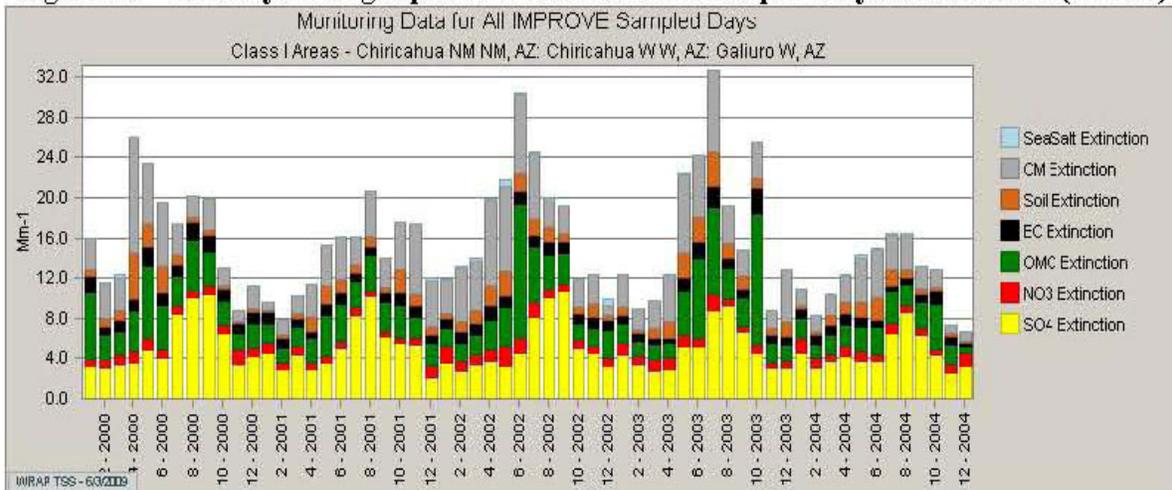
program. Using the NEI protocol results in far greater improvements, as seen in Attachment C of the ENVIRON report. While AEPCO cannot commit to the NEI values (because of testing and compliance demonstration issues with the Methods), use of the NEI values strongly suggests that actual visibility improvements will be greater than the conservative results shown in Attachments E5 and D2. Based on this extensive modeling work, and the sensitivity analysis inherent in the review of alternatives, AEPCO believes that the weight of the evidence demonstrates that its proposal will achieve better visibility improvements than EPA's current BART FIP. A discussion of the technical basis for the NEI is found in the attached ENVIRON memorandum entitled "Updated PM<sub>2.5</sub> Emissions Factors for Natural Gas-Fired Boilers," dated May 8, 2013. The modeling results are set forth in the aforementioned "CALPUFF Visibility Modeling of the AEPCO BART Scenarios" memorandum dated May 10, 2013.

As requested by EPA Region 9 staff, CALPUFF modeling results are submitted for AEPCO Control 9b version 2 only in the enclosed CD.

#### AEPCO's Alternative Better Meets Uniform Rate of Progress Needs

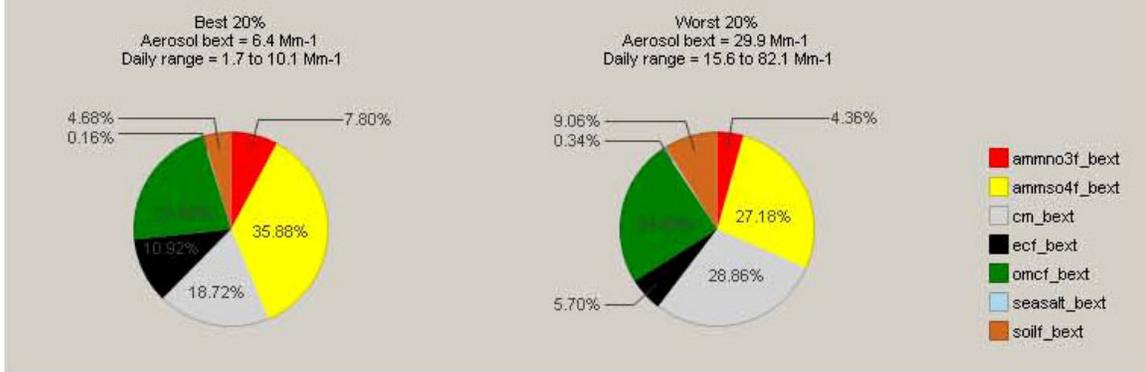
Visibility monitoring data at the Chiricahua monitor shows that both sulfate (derived in part from SO<sub>2</sub> emissions) and particulate (derived in part from direct PM<sub>2.5</sub> emissions) are, historically, more significant contributors to regional haze in the Chiricahua National Monument and Wilderness Area than is nitrate (derived in part from NO<sub>x</sub> emissions). The following chart, taken from Arizona's Regional Haze SIP, shows the relative contributions over time:

**Figure 7.6 – Monthly Average Species Variation for All Sampled Days over Baseline (CHIR1)**



As can be seen, both the yellow "SO<sub>4</sub> Extinction" and gray "CM (for coarse matter) Extinction" are generally much more significant than the red "NO<sub>3</sub> Extinction" factor, based on the IMPROVE dataset. Breaking this down into the regulatory division of the 20 percent "best" and "worst" days clearly shows the impact of SO<sub>4</sub> and CM versus NO<sub>3</sub>:

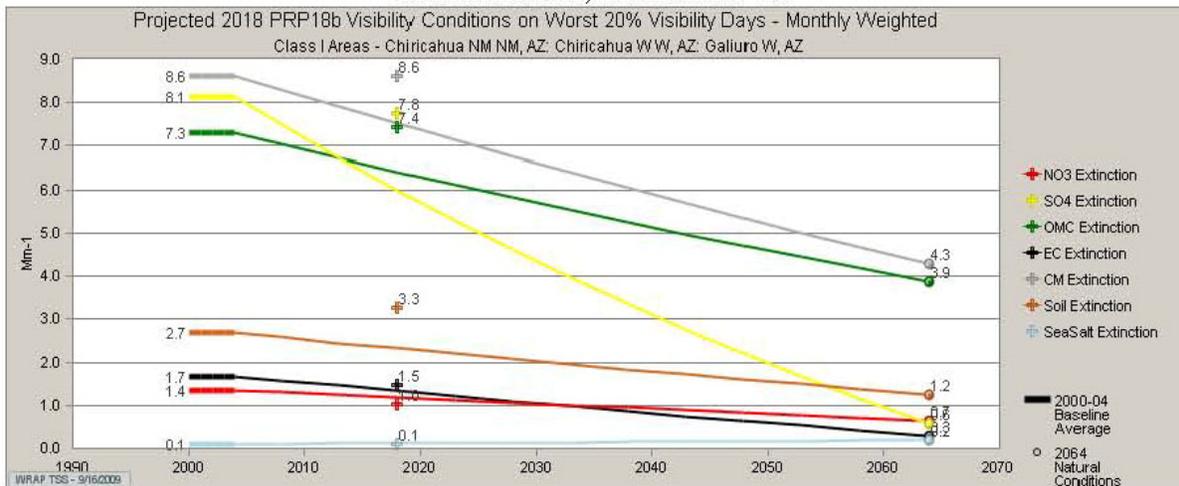
**Figure 7.5 – Average Species Contribution to 20% Best and Worst Days Baseline (CHIR1)**  
**CHIR1 2000-2004**



Sulfate contributes 35.9% in best days and 27.2% in worst days, versus only 7.8 and 4.4% respectively for nitrate (nearly 5x and 6x the impact). CM contributes 18.7% in best days and 28.9% in worst days, or nearly 2x and 6x the impact of nitrate. Reductions in sulfate and coarse material thus should be anticipated to improve visibility by as much, or more than, equivalent reductions in nitrate.

Third, the Arizona Regional Haze SIP found, and EPA agreed, that the Uniform Rate of Progress (URP) demands significantly greater emissions reductions in sulfate and coarse material than nitrate, as seen in the following chart from the Arizona Regional Haze SIP:

**Figure 9.1 – URP by Pollutant on 20% Worst Days for Chiricahua NM, Chiricahua WA, and Galiuro WA**



The AEPCO proposal significantly advances progress toward the SO<sub>4</sub> Extinction and CM Extinction goals compared to the existing EPA FIP.

Based on the EPA and ENVIRON modeling, the monitoring data and general direction of emissions reduction needed to achieve the natural condition goal, and the general understanding of atmospheric chemistry and the limitations of the existing modeling tools, AEPCO believes that the weight of the evidence demonstrates that its proposal, which substantially reduces emissions of SO<sub>2</sub> and PM while increasing NO<sub>x</sub> emissions more modestly, will achieve “better than BART” visibility improvement.

AEPCO therefore formally requests that EPA reconsider its existing BART FIP limits and replace them with its proposal set forth in this letter for the reasons stated above.

### **Status of ST1/GT1**

In its petition for administrative reconsideration, AEPCO noted that EPA’s question and answer document for the Arizona BART program implied that Apache Generating Station gas turbine #1 (GT1) is subject to the ST1 BART limits. GT1 is a simple cycle turbine that can exhaust to the ST1 windbox; can be used to warm and dry the ST1 boiler, or can run in stand-alone mode. AEPCO believes that GT1, when operating in stand-alone mode or for boiler warming and drying, is a simple cycle unit not subject to BART. AEPCO, EPA and ADEQ held a conference call on February 22, 2013 to discuss the status of units ST1 and GT1. ADEQ has noticed a SIP revision addressing this issue.

ADEQ has proposed to clarify the ST1 BART determination as follows:

After reviewing the company's BART analysis, and based upon the information above ADEQ has determined that, for Unit 1, BART for NO<sub>x</sub> is the installation of LNB with FGR (which will also burn No. 2 fuel oil with minor equipment change out) with a NO<sub>x</sub> emissions limit of 0.056 lb/MMBtu when burning PNG, and 0.06 lb/MMBtu when burning No. 2 fuel oil. It should be noted that the proposed BART limit for ST1 will apply when ST1 operates alone or if ST1 and GT1 are operated as a combined cycle operation. The proposed BART limit does not apply to (a) GT1 in stand-alone simple cycle operation or (b) ST1/GT1 when ST1 burners are shut off and ST1 is not producing electricity.

Arizona Regional Haze SIP, submitted to EPA on April 29, 2013, page 110 of 174. EPA’s consent to ADEQ’s proposed SIP revision (for which ADEQ has requested parallel processing) would resolve AEPCO’s request for administrative reconsideration on this issue.

AEPCO appreciates EPA’s statement in a recent proposal that it agrees with this proposed clarification. AEPCO requests that EPA repeat this consent to the ST1/GT1 clarification in the final rule so that AEPCO’s compliance obligations with respect to ST1 and GT1 are clear.

### **Limit Achievability and Averaging**

In its petition for administrative reconsideration, AEPCO expressed concern about the averaging limit and the potential impact on cycling units and the inequity of being held in violation of a limit when AEPCO has shutdown the unit causing the “average” limit to be

exceeded. As AEPCO noted, because the cross-unit average can only be brought back into compliance by restarting the unit not able to achieve the 0.07 lb/MMBtu limit, it creates tremendous pressure to shorten maintenance to bring the problem unit back up to restore compliance. Placing this pressure on unit maintenance is likely to cause increased problems, including trips, upon restart, potentially prolonging the period of noncompliance.

To resolve this problem, AEPCO proposes to revise the NO<sub>x</sub> determination along the following conceptual lines:

- (1) The following NO<sub>x</sub> BART limits are established:
  - a. ST2: 0.085 lb NO<sub>x</sub>/MMBtu, 30-BOD rolling average (BODRA)
  - b. ST3: 0.23 lb NO<sub>x</sub>/MMBtu, 30-BOD rolling average
  - c. ST2/ST3: Limit =  $((\text{ST2 MMBtu, 30BODRA} * 0.085 \text{ lb/MMBtu}) + (\text{ST3 MMBtu, 30 BODRA} * 0.23 \text{ lb/MMBtu})) / (\text{ST2 MMBtu, 30 BODRA} + \text{ST3 MMBtu, 30BODRA})$ , where BODRA = 30 Boiler Operating Day rolling average for that unit
- (2) Compliance during periods when both units are operating is demonstrated when either of the following conditions are met:
  - a. The combined NO<sub>x</sub> emissions of both units meet the combined limit; or
  - b. Each unit meets its individual NO<sub>x</sub> limit.
- (3) Compliance during periods when only one unit is operating is met when the operating unit meets its individual NO<sub>x</sub> limits.

Proposed revisions to the existing FIP compliance language are attached for EPA's consideration for the Apache Generating Station. AEPCO does not know whether this approach is acceptable to the other utilities. AEPCO believes that averaging is valuable to provide operating flexibility when a unit is brought back on-line and that the proposed methodology may lessen the number of times that AEPCO might need to rely upon the malfunction provisions, which makes the averaging proposal set forth herein preferable.

AEPCO requests that EPA substitute the proposed compliance methodology for that set forth in the existing BART FIP.

AEPCO hopes that this proposal meets with EPA's approval. As can be seen, AEPCO believes that its proposal should achieve equivalent, and in fact likely superior, visibility gains to those that EPA would obtain under the NO<sub>x</sub> BART FIP. AEPCO can achieve these gains at considerably lower cost, lowering the burden on its members and rural Arizonans.

We look forward to EPA's consideration of this proposal. Please contact Michelle Freeark, AEPCO's Director of Environmental Services, at (520) 586-5122, or Eric Hiser, AEPCO's air counsel, at (480) 505-3927, if you have any further questions or concerns about this proposal. We look forward to EPA's consideration and continued discussion to see if EPA

Supplement to Petition for Administrative Reconsideration

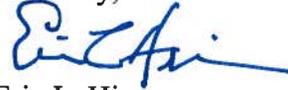
Arizona Electric Power Cooperative, Inc.

May 29, 2013

Page 12

and AEPCO, working together, can achieve “better than BART” results at an affordable cost to AEPCO, its cooperative members, and their ratepayers.

Sincerely,



Eric L. Hiser

Counsel for AEPCO

Attachments

- ENVIRON, “CALPUFF Visibility Modeling of the AEPCO BART Scenarios” (May 10, 2013)
- ENVIRON, “Updated PM<sub>2.5</sub> Emissions Factors for Natural Gas-Fired Boilers” (May 8, 2013)