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DEPARTMENT OF NATURAL RESOURCES
AND ENVIRONMENTAL CONTROL

OFFICE OF THE
SECRETARY

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December 10, 2008

Mr. Stephen L. Johnson, Administrator
United States Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W
Mail Code: 1101A
Washington, DC 20460

Dear Administrator Johnson:

In June 2007 Delaware submitted to the Environmental Protection Agency (EPA) a state implementation plan (SIP) revision that demonstrates attainment of the 0.08 ppm 8-hour ozone National Ambient Air Quality Standard (NAAQS) in 2009 (Reference 1). In April 2008, Delaware submitted a SIP that demonstrates attainment of the 1997 fine particulate matter (PM_{2.5}) NAAQS in 2010 (Reference 2). For achieving attainment of these NAAQSs, Delaware has adopted numerous emission control measures that affect all emission source sectors. Among these controls, we have adopted stringent "multi-pollutant" regulations that require the control of nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions from Delaware's coal and residual oil fired electric generating units (EGUs). By promulgating those SIPs and the associated regulations, Delaware has continued an extraordinary level of effort within its boundary to clean up air quality in order to attain and maintain the NAAQSs. However, Delaware's actual ability to attain and maintain the NAAQSs is severely impacted, and negatively interfered with, by sources outside of Delaware's boundaries.

Clean Air Act (CAA) 110(a)(2)(D)(i) prohibits any source or other type of emissions activity within a State,

"from emitting any air pollutant in amounts which will contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to any such national primary or secondary ambient air quality standard."

In adopting the above mentioned SIPs and associated regulations Delaware has complied with the requirements of CAA Section 110(a)(2)(D)(i) by controlling effectively emission sources within its boundary so that those sources do not contribute significantly to downwind states' non-attainment or interfere with downwind states' maintenance of NAAQSs. However, Delaware's ability to improve its own air quality to attain and maintain the NAAQSs is

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significantly impacted by emissions from EGUs in upwind states that have not undertaken adequate measures to control their emissions of air pollutants as required by CAA Section 110(a)(2)(D)(i) ¹.

In light of this significant impact from upwind states on Delaware's air quality, and the failure of upwind states to address adequately these impacts as required by CAA Section 110(a)(2)(D)(i), we hereby seek relief. Section 126(b) of the CAA provides that,

“[a]ny State or political subdivision may petition the Administrator for a finding that any major source or group of stationary sources emits or would emit any air pollutant in violation of the prohibition of Section 110(a)(2)(D)(ii) or this section.”

By this letter, Delaware is hereby petitioning the Administrator of EPA under Section 126(b) of the CAA to find that EGUs in Maryland, Michigan, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Virginia, and West Virginia are emitting air pollutants in violation of the provisions of Section 110(a)(2)(D)(i) of the CAA.

Delaware believes, that as a first step, a substantial portion of this impact can be mitigated by regulating NO_x and SO₂ emissions from EGUs in the upwind states that are now substantially contributing air pollution sufficient to impair Delaware's ability to attain and maintain the NAAQS, and are violating CAA 110(a)(2)(D)(i). For Delaware, reductions of NO_x and SO₂ emissions from upwind EGUs are crucial to the attainment and maintenance of the current ozone and PM_{2.5} NAAQSs, and to the attainment of the new ozone and new 24-hour PM_{2.5} NAAQSs. Mitigation of impacts under CAA Sections 126 and 110(a)(2)(D) must be obtained as soon as practicable, but not later than 2013. This is necessary for Delaware to take advantage of these CAA mandated upwind source reductions in the development of future required ozone and PM_{2.5} maintenance and attainment demonstration SIPs. In addition, at least a partial mitigation of the impact of NO_x emissions from upwind EGUs is needed by 2009 to ensure attainment of the current ozone and PM_{2.5} NAAQSs.

Delaware has submitted to EPA SIP revisions that demonstrate that Delaware will attain compliance with the current ozone and PM_{2.5} NAAQSs in 2009 and 2010, respectively. In addition to reliance on an extraordinary effort to control sources within Delaware, these SIPs rely in part on some mitigation of upwind NO_x emissions in 2009, and it is critical that EPA fulfill its nondiscretionary duty to require upwind states to at least partially comply with CAA 110(a)(2)(D)(i) in 2009. Delaware believes that EPA can accomplish this by requiring controls equivalent to the requirements specified in Phase I of the Clean Air Interstate Rule (CAIR) under the authority of Section 126(b) of CAA. The consequence of EPA's failure to require this partial mitigation to occur in 2009 will be that Delaware's air quality may not meet the health based ozone and annual PM_{2.5} NAAQS's by the 2009 and 2010 attainment dates, respectively, and,

¹ EPA promulgated the clean air interstate rule (CAIR), and indicated that compliance with CAIR satisfied states obligations under CAA 110(a)(2)(D)(i). The court vacated CAIR because it, alone, is not sufficient to satisfy CAA 110(a)(2)(D)(i). The vacatur of CAIR does not relieve the States who relied upon CAIR for compliance with CAA 110(a)(2)(D)(i) from their obligations to cease emissions that significantly impact the attainment or maintenance of any NAAQS in any other state.

therefore, the health of Delaware citizens may be compromised by unnecessary exposure to unhealthy air and air pollution in violation of CAA.

Additional background on Delaware's air quality, actions taken to date to address transport under CAA 110(a)(2)(D), and details on a proposed two-phase EPA action under this 126 petition are provided below.

1. Delaware's Air Quality

Delaware's air quality is designated by EPA as being in non-attainment for two health based NAAQSs: ground level ozone and PM_{2.5}.

1.1 Ozone

In 2004, EPA designated the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE a moderate non-attainment area with respect to the current 8-hour ozone NAAQS of 0.08 ppm (69 *FR* 23858). All three counties in Delaware were included in this non-attainment area. The designation indicates that people in this area often breathe air with unhealthy levels of ozone. Comprehensive studies, including those conducted by EPA (References 3 and 4), have demonstrated that unhealthy levels of ozone will cause:

- decreased lung function in children and seniors when outdoors
- increased respiratory symptoms (particularly in highly sensitive individuals)
- increased hospital admissions and emergency room visits for respiratory problems
- inflammation of the lung, and possible long term, life threatening damage to the lungs.

These health impacts on Delaware citizens cannot be tolerated.

Ozone is not emitted directly into the atmosphere but is formed by the reactions of two major precursor chemicals known as volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). These precursor chemicals are released directly into the atmosphere from a wide variety of anthropogenic sources, including power plants, industrial facilities, motor vehicles, trains and planes, equipment with combustion engines, uses of solvents and paints with VOC contents, etc. Thus, in order to lower ambient ozone levels to meet the NAAQS, reductions of emissions of these precursor chemicals must be obtained. Further, peer-reviewed scientific studies supported by empirical evidence has shown that ozone and its precursors are transported over long distances, up to hundreds (or even thousands) of miles, along with winds (References 5 and 6). This long-range transport means that emission sources in one area can contribute to ozone problems in a downwind area hundreds or thousands of miles away. Therefore, for a downwind state to attain the ozone NAAQS, transport of ozone and its precursors from upwind areas must be attenuated so that it will not add significant loads of ozone and precursors to the ambient air of the downwind states. Because there is no way to attenuate natural winds, it becomes critical to control upwind sources to reduce their VOC and NO_x emissions. Located at the eastern edge of a continent where westerly winds prevail, Delaware is particularly vulnerable to the effects of upwind sources of air pollution.

1.2 Fine Particulate Matter (PM_{2.5})

In April 2005, EPA designated the Philadelphia-Wilmington, PA-NJ-DE a non-attainment area with respect to the 1997 PM_{2.5} NAAQS (62 *FR* 38652).² New Castle County, in Delaware, is included in this non-attainment area, along with five counties in southeastern Pennsylvania, and three counties in New Jersey. This designation indicates that people in this area are breathing air with unhealthy particulate matter levels. Particle pollution, especially fine particles, contains microscopic solids or liquid droplets that are so small that they can penetrate deeply into the lungs and cause serious health problems. Numerous scientific studies have linked particle pollution exposure to a variety of problems including:

- increased respiratory symptoms such as irritation of the airways, coughing or difficulty breathing
- decreased lung function
- aggravated asthma
- development of chronic bronchitis
- irregular heartbeat
- non-fatal heart attacks
- premature death in people with heart or lung disease.

There are two forms of particles: primary and secondary. Primary fine particles, or PM_{2.5}, include soot from diesel engines, a wide variety of organic compounds condensed from incomplete combustion, and compounds such as arsenic, selenium, and zinc that condense from vapor formed during combustion or smelting. The PM_{2.5} that is formed by chemical reactions of gases in the atmosphere is referred to as "secondary" PM_{2.5}. These reactions form condensable vapors that either generate new particles or condense onto other particles in the air. Most of the sulfate, nitrate, and a portion of the organic compounds in the atmosphere, are formed by such chemical reactions. As such, these compounds are known as "PM_{2.5} precursors." Like ozone, for a downwind state to attain the fine particulate matter NAAQS, transport of fine particulate and these precursors from upwind areas must be attenuated so that it will not add significant loads of fine particulate matter and precursors to the ambient air of the downwind state. Because there is no way to attenuate natural winds, it becomes critical to control upwind sources to reduce their NO_x and SO₂ emissions.

2. Federal and Regional Actions to Address Transport Have Been Helpful and Inadequate

2.1 Ozone Transport Assessment Group (OTAG)

In 1994, several states, including Delaware, requested that EPA take action pursuant to Section 110(a)(2)(D) of the Clean Air Act to address the overwhelming transport of ozone and ozone precursors across state boundaries. To respond to these requests EPA, in cooperation with the National Governors Association and the Environmental Council of States, created the Ozone Transport Assessment Group (OTAG), which conducted a two-year comprehensive study on ozone and precursor transport.

² In addition, EPA has announced its intention to designate New Castle County as non-attainment for the 2006 24-hr PM_{2.5} NAAQS (71 *FR* 2710) in December 2008.

Delaware actively participated in the OTAG process. In July 1997, OTAG recommended to EPA that a number of specific controls be implemented in the eastern part of the country to reduce NO_x emissions and long-range transport (Reference 5). Through extensive modeling, OTAG concluded that regional NO_x emission reductions would be effective in producing ozone benefits to the downwind states.

2.2 OTC NO_x Budget Program

In September 1994, the states of the Ozone Transport Commission (OTC) signed a Memorandum of Understanding, which initiated the first regional NO_x cap-and-trade control program in the northeast to address interstate transport and impacts of NO_x. The NO_x control program targeted EGUs that generated equal to or greater than 15 MWe, and industrial boilers and indirect heat exchangers with heat inputs equal to or greater than 250 mmBTU/hour. The OTC states developed and implemented a seasonal NO_x cap-and-trade program, which began in 1998, and was based on an emission rate of 0.15 lb/mmBTU. This program was replaced by the EPA NO_x SIP Call in 1999 (see Section 2.3 below).

2.3 NO_x SIP Call

In October 1998, EPA promulgated the NO_x SIP Call (63 *FR* 57356). This federal rule established seasonal NO_x emission caps in 23 jurisdictions in the eastern half of the country to address NO_x and ozone transport across boundaries of those jurisdictions. The NO_x SIP Call proved to be a good start of regional control strategy for attenuating NO_x and ozone transport, helping many counties in the northeastern states successfully attain the previous 1-hour ozone NAAQS (0.12 ppm) in 2005, and contributing significantly to the early efforts of many eastern states toward attaining the current ozone NAAQS (0.08 ppm) in 2009. This program was slated for replacement by EPA's Clean Air Interstate Rule (CAIR) beginning in 2009³.

2.4 Clean Air Interstate Rule (CAIR).

In an attempt to further address regional transport of ozone, PM_{2.5} and their precursors, EPA promulgated CAIR in May 2005 (70 *FR* 25162). This federal rule covered power-generating plants in 28 eastern states and the District of Columbia, and would reduce NO_x and SO₂ emissions that contributed to unhealthy levels of ozone and PM_{2.5} in downwind states. The rule implemented a phased-in cap-and-trade approach, with Phase I caps effective in 2009 and 2010 for NO_x and SO₂, respectively, and Phase II caps effective in 2015 for both NO_x and SO₂. The EPA projected that the phased-in approach would lead to an overall 61% NO_x emission reduction and 73% SO₂ emission reduction by 2020.

While CAIR did provide for emission reductions beyond the NO_x SIP Call, particularly in the non-ozone season months, undisputed evidence found in peer-reviewed scientific studies demonstrates that CAIR was not designed to mitigate fully the impacts of ozone and PM_{2.5}, and precursor emissions, relative to both the quantity and timing. In particular, CAIR is too little and too late to fully mitigate the impacts of upwind states on Delaware. As such, CAIR would not

³ CAIR was vacated by the D.C. Circuit Court in July 2008, and at this time (December 2008) the status of the NO_x SIP Call is not clear. Also, see footnote 1.

fully mitigate transport, and would not satisfy the provisions of CAA Section 110(a)(2)(D). Delaware and a few other states realized this early on and developed state-specific rules that are more stringent than CAIR. Many states did not, however, including upwind states that emit air pollutants in amounts that contribute significantly to nonattainment in, and interfere with maintenance by, Delaware with respect to ozone and PM_{2.5} NAAQSs. As such, sources in these upwind states continue to emit air pollutants in violation of CAA 110(a)(2)(D)(i)⁴. EPA is duty bound to cease these violations and mitigate these emissions.

3. Compliance of EGUs with CAA Section 110(a)(2)(D)

Among the largest sources of ozone and PM_{2.5} precursors are dozens of Electric Generating Units, (EGUs) in Delaware and in upwind states. As mentioned above, Delaware has developed and submitted to EPA attainment demonstration SIPs which have included controls over all source sectors, and which have demonstrated that necessary NO_x and SO₂ emission reductions have been, and will be made, to attain these NAAQS's (Reference 1 and 2). These SIPs relied upon emission reductions from Delaware EGUs, and emission reductions from upwind EGUs that in part comply with CAA 110(a)(2)(D). Among the consequences of upwind EGUs not complying with CAA 110(a)(2)(D), aside from people in Delaware suffering the ill-health effects of upwind air pollution sources, is that Delaware residents and businesses, and those dependent on power from the EGU's, pay a higher financial cost to pay for these controls and are put at an economic disadvantage compared to upwind states who have failed to pay for controls.

3.1 Delaware Electric Generating Units (EGUs).

All of Delaware's EGUs are well controlled as summarized below:

- Control for generators powered by internal combustion engines is provided under Delaware Regulation 1144, "Control of Stationary Generator Emissions" (Reference 7). This regulation significantly reduces NO_x emissions from small EGUs that have low annual emissions, but high peak day emissions. The NO_x rate is limited to between 4.0 and 0.6 lb/MWh, depending on installation date.
- Control for oil and coal fired units is provided under Regulation 1146 "Electric Generating Unit (EGU) Multi-Pollutant Regulation" (Reference 8). This regulation significantly reduces NO_x, SO₂ and mercury emissions from Delaware's coal and residual oil fired EGUs. Emission rate of NO_x is limited to 0.125 lb/mmBTU, SO₂ to 0.26 lb/mmBTU, and mercury to 90% reduction or 0.6 lb/tBTU. Delaware Regulation 1146 sets up more stringent emission rate limits over those CAIR affected EGUs, plus an earlier effective schedule than that of CAIR Phase I and Phase II requirements.

⁴ Also, see footnote 1.

- Control for peaking units is provided under Regulation 1148, “Control of Stationary Combustion Turbine Electric Generating Unit Emissions” (Reference 9). This regulation significantly reduces NO_x emissions from Delaware EGUs that have high peak day NO_x emissions, yet remained substantially uncontrolled after RACT (i.e., Delaware Regulation No. 1112) due to low annual emissions. Emission of NO_x from gas units is limited to 42 ppm and from oil units is limited to 88 ppm.

Delaware’s EGU regulations are state regulations that are in effect before the ozone season of 2009. These regulations are among the control requirements adapted by Delaware as necessary to comply fully with CAA Section 110(a)(2)(D).

3.2 EGUs in Upwind States

As mentioned above, ozone and PM_{2.5} air pollutant concentrations in Delaware and, thus, Delaware’s ability to attain and maintain the NAAQS are significantly influenced by air pollution from upwind emission sources. More specific discussion on the impacts of upwind emissions on Delaware is included in Delaware’s ozone and PM_{2.5} SIPs (References 1 and 2, respectively) and below.

The EPA conducted comprehensive studies on upwind contributions to downwind ozone and PM_{2.5} problems when promulgating CAIR in 2005. The EPA concluded, based on these studies, that emissions from the following states contribute significantly to Delaware’s ozone and/or PM non-attainment problems (see in Tables VI-8 and VI-9 of 70 *FR* 25162):

Maryland (ozone and PM_{2.5})
Michigan (ozone and PM_{2.5})
New York (PM_{2.5} only)
North Carolina (ozone only)
Ohio (ozone and PM_{2.5})
Pennsylvania (ozone and PM_{2.5})
Virginia (ozone and PM_{2.5})
West Virginia (ozone and PM_{2.5})

In addition, the CAIR analysis indicated that emissions from two states, New Jersey and New York, contribute significantly to ozone non-attainment problems of other counties, outside of Delaware, in the PA-NJ-MD-DE non-attainment area (see Tables VI-8 and VI-9 of 70 *FR* 25162). Because Delaware’s attainment status for the current 8-hour ozone standard depends on attainment of the entire PA-NJ-MD-DE non-attainment area, these two states should be also regarded as emitting air pollutants at levels that significantly impact Delaware’s ability to attain and maintain NAAQSs because they are contributing upwind states to the non-attainment area of which Delaware is a part.

Our confidence in these conclusions about upwind contributions is based on EPA analysis. Regional NO_x and SO₂ emissions were studied thoroughly by EPA through in-depth modeling analyses in its CAIR rulemaking process (Reference 6). For example, using the source

apportionment total contribution metric, EPA estimated that the percent contribution of upwind states to the 2010 base case 8-hour ozone nonattainment in New Castle County, Delaware, was 37% (Table VI-2, Reference 6). Based on those analyses, EPA defined the above upwind states as significant linkages to ozone and/or PM_{2.5} non-attainment problems in Delaware and the entire PA-NJ-MD-DE non-attainment area. Therefore, emissions of NO_x and SO₂ from EGUs as a group of significant sources in those upwind states must be controlled, under CAA Section 110(a)(2)(D)(i), to mitigate their contributions to downwind non-attainment problems.

Further, the EGU emissions of NO_x and SO₂ represent significant portions of upwind states' total emissions of air pollutants, as indicated in Table 1 below.

Table 1. Relative Contribution of EGU Emissions to Total State Emissions in 2001*.

Significant Upwind State	NO_x	SO₂
Maryland	24.2%	74.2%
Michigan	21.4%	71.8%
New Jersey	10.8%	42.9%
New York	12.6%	49.8%
North Carolina	25.7%	79.7%
Ohio	34.6%	84.0%
Pennsylvania	26.7%	80.4%
Virginia	17.7%	67.4%
West Virginia	54.0%	85.4%

*Note: Data compiled from EPA's CAIR emission file "Annual emissions of VOC, CO, SO₂, NO_x, NH₃, PM₁₀ and PM_{2.5} model species for the 2001 Base Year, 2010 Base Case, and 2015 Base Case", at http://www.epa.gov/cair/pdfs/Emissions_summary_state_sector_speciation.xls.

Delaware's ozone SIP has demonstrated that its attainment of the current 8-hour ozone standard in 2009 depends partially on EGU NO_x reductions from the upwind states (Reference 1). This partial dependence is also indicated by EPA's CAIR modeling analysis (e.g., Table VI-12, 70 FR 25162). For the current annual PM_{2.5} standard, effects of EGU reductions under CAIR on Delaware's efforts for the 2010 attainment are also projected to be critical, as indicated in Table VI-10 of the final CAIR rule (70 FR 25162). Based on all this evidence Delaware believes that:

(1) NO_x reductions from EGUs in the nine states, (MD, MI, NJ, NY, NC, OH, PA, VA, and WV) at CAIR Phase I levels, at a minimum, are needed in 2009 for the 2009/2010 attainment in DE and Philadelphia ozone and PM_{2.5} non-attainment area(s), and

(2) further NO_x and SO₂ reductions from those EGUs are needed beyond 2009 for maintaining the current NAAQSs and attaining the new ozone and PM NAAQSs that were promulgated by EPA.

Therefore, emissions of NO_x and SO₂ from those EGUs must be subject to timely control requirements pursuant to CAA Section 110(a)(2)(D)(i), so that they will cease emitting air pollutants in amounts that contribute significantly to nonattainment and interfere with maintenance in Delaware with respect to ozone and PM_{2.5} NAAQSs.

4. Delaware Petition under CAA Section 126

As demonstrated above, air pollutant emissions from upwind states that are in excess of those allowed under CAA Section 110(a)(2)(D) are adversely impacting Delaware, and the entire PA-NJ-MD-DE non-attainment area. The EGUs in the states identified in 3.2 above are emitting air pollutants in violation of the prohibition of Section 110(a)(2)(D) of the CAA, and EPA must fulfill its nondiscretionary statutory obligation under CAA Section 126(b) to require this violation to cease. Ours is exactly the situation envisioned in the CAA for which Section 126 was intended. The extent of the upwind air pollution transport is significantly affecting Delaware's ability to comply with federal health based air quality standards, despite Delaware's best efforts. The air coming into Delaware and the PA-NJ-MD-DE non-attainment area does not meet the standard. Accordingly, timely EPA action is necessary to comply with the CAA. Failure to act would render meaningless this part of the CAA.

Full mitigation of upwind NO_x and SO₂ emissions is crucial to the attainment and maintenance of the ozone and new PM_{2.5} NAAQSs. This full mitigation pursuant to CAA Section 110(a)(2)(D) must be obtained as soon as practicable, but no later than 2013. As discussed previously, Delaware has "clean hands" in that it has implemented all controls within its boundary to meet the requirements of CAA Section 110(a)(2)(D). The most recent control requirements include:

1. Architectural and Industrial Maintenance (AIM) Coatings: reduced VOC content of numerous coatings beyond federal requirements.
2. Mobile Equipment: established coating equipment standards to reduce VOC emissions.
3. Gas Cans: required that gas cans meet certain performance and permeability standards to reduce VOC emissions.
4. Degreasing: reduced degreaser vapor pressure and put in place equipment standards and work practices to reduce VOC emissions.
5. Control of NO_x Emissions from Large Boilers: reduced NO_x emissions from boilers larger than 100 mmbtu/hr that weren't well controlled through other programs.
6. Anti-Idling: reduced VOC, NO_x, SO_x, and DPM emissions from heavy duty vehicles by reducing allowable idling time.
7. Open Burning: put in place strict open burning ban during the ozone season.
8. Minor NSR: reduced criteria pollutant and air toxic emissions by subjecting new minor stationary sources to top-down BACT requirements.
9. OTC NO_x Budget Program: participated in a regional NO_x Cap and Trade program to reduce NO_x emissions from power plants (program later replaced by the NO_x SIP Call).
10. Adopted several regulations to reinforce EPA-adopted heavy-duty diesel rules.

11. Peaking Units: reduced peak ozone day NO_x emissions from combustion turbines used as electrical peaking units.
12. Refinery Boilers: reduced NO_x emissions from large refinery boilers.
13. Non-Refinery Boilers: reduced NO_x emissions from large non-refinery boilers.
14. Utilities Multi-P: reduced NO_x, SO_x, and Hg emissions from Delaware's coal and residual oil fired electric utilities.
15. Lightering: reduced VOC emissions from crude oil lightering operations in the Delaware Bay.

Therefore, the adverse impact from upwind states on the health and welfare of Delaware citizens must be mitigated as soon as practicable. Further, mitigation by 2013 is necessary to ensure that Delaware can take advantage of these CAA mandated upwind reductions under CAA Section 110(a)(2)(D) as it develops future required maintenance and attainment demonstration SIPs.

Delaware's current ozone and PM_{2.5} SIPs (Reference 1 and 2) rely upon the partial mitigation under 110(a)(2)(D) of upwind NO_x emissions in 2009 (i.e., CAIR level reductions). CAIR was recently vacated by the courts, however, as, inter alia, not sufficient to satisfy CAA (110)(a)(2)(D). Among our concerns now is that some of the upwind states have relied upon CAIR to satisfy their obligations under CAA 110(a)(2)(D). The CAIR vacatur removed the CAIR-mandated obligations from upwind EGUs. Delaware is extremely concerned about the CAIR vacatur and its adverse impacts on Delaware's 2009 attainment for the current 8-hour ozone NAAQS and 2010 attainment for the 1997 annual PM_{2.5} NAAQS, as well attaining the 24-hr NAAQS in the future.

With the above concerns, Delaware is hereby petitioning EPA under Section 126(b) of the CAA to find that EGUs in the identified upwind states are emitting air pollutants in violation of the prohibition of Section 110(a)(2)(D)(i) of the CAA.

Delaware believes, as a first step, much of this impact can be mitigated by regulating NO_x and SO₂ emissions from EGUs in the upwind states. After EPA makes the findings that EGUs in upwind states are emitting air pollutants in violation of the prohibition of Section 110(a)(2)(D)(i) of the CAA, Delaware recommend EPA to take the following actions:

- Make the required finding under section 110 of the CAA and then pursue additional courses of action to reduce air pollution, including:
- Phase One. Require partial mitigation of NO_x emissions from upwind EGUs by 2009. The need for timely EPA action on this petition is critical. Delaware has submitted to the EPA SIPs that demonstrate that Delaware will attain compliance with ozone and PM_{2.5} NAAQSs in 2009 and 2010, respectively. However, these SIPs rely in part on some mitigation of upwind NO_x emissions in 2009, and it is critical that the EPA take reasonable action to require upwind states to at least partially comply with CAA 110(a)(2)(D)(i) in 2009. This partial compliance can be done by requiring controls on those upwind EGUs equivalent to CAIR Phase I levels.

- Phase Two. Require full mitigation of NO_x and SO₂ emissions from upwind EGUs. This is crucial to the maintenance of the current ozone and PM_{2.5} NAAQSs, and to the attainment of the new ozone and new 24-hour PM_{2.5} NAAQS's. This full mitigation under CAA Sections 126 and 110(a)(2)(D) must be obtained as soon as practicable, but not later than 2013. The full mitigation of NO_x and SO₂ emissions from a subject upwind state is determined when emissions from its EGUs, together with emissions from other source sectors in the subject state, will no longer contribute significantly to Delaware's ozone and PM_{2.5} non-attainment problems, or will not interfere with Delaware's maintenance of its attainment status, as shown by adequate modeling results.

Delaware believes that EPA can accomplish the Phase One recommendation of this petition by requiring controls equivalent to the first phase of its CAIR, or reinstating CAIR under the authority of Section 126(b) of the CAA. This would require those upwind EGUs to control their NO_x emissions to the levels equivalent to CAIR Phase I requirements under the authority of Section 126 of the CAA. The consequence of EPA's failure to require those reductions to occur in 2009 will be that Delaware's air quality may not meet the associated ozone and 1997 PM_{2.5} NAAQS's by the 2009 and 2010 attainment dates, respectively, and Delaware citizens will be exposed to unhealthy air.

Given the failure of prior attempts to fully mitigate transport under the cap-and-trade approach (i.e., NO_x SIP Call and CAIR), Delaware believes that sole reliance on a cap-and-trade program to mitigate transport is not an acceptable remedy. Prior experience has demonstrated that cap-and-trade schemes have proven to be ineffective as a sole remedy to the long-standing problem that Northeastern states, including Delaware, have suffered with because of the transport of air pollution from other states into their jurisdictions. Further, Delaware has demonstrated, through the promulgation its own multi-pollutant rule controlling EGUs (Regulation 1146), that even highly cost effective emission controls will not be installed on smaller EGUs under a cap-and-trade approach alone (Reference 8). Delaware believes that the EPA must set performance standards on each EGU in the states that impact Delaware in order to accomplish the Phase Two recommendation of this petition. The specific EGUs that would be subject to this performance standard are coal and residual-oil fired EGUs greater than 25 MWe.

Each unit coal or oil fired EGU that serves a generator of 25 MWe or greater must comply with a minimum level of control. Delaware believes the level should be equivalent to the level it has required its own in state coal and oil fired EGUs to meet under Delaware Regulation No. 1146 (Reference 8).

Delaware's Regulation 1146 includes rate-based NO_x and SO₂ emissions limits for Delaware's large coal-fired and residual oil-fired electric generating units (EGUs). All subject EGUs are required to have a NO_x emission rate no greater than 0.15 lb/MMBTU beginning in 2009, and a NO_x emission rate no greater than 0.125 lb/MMBTU beginning in 2012. Coal-fired EGUs are required to have a SO₂ emission rate no greater than 0.37 lb/MMBTU beginning in 2009, and a SO₂ emission rate no greater than 0.26 lb/MMBTU beginning in 2012. Residual oil-fired EGUs are required by the regulation to accept only fuel oil with a sulfur content maximum of 0.5% by weight beginning in 2009.

Delaware adopted Regulation 1146's NO_x and SO₂ emissions rate limits as a result of review and analysis of available EGU NO_x and SO₂ emission control information. Sources of this information included EPA publications, Clean Air Markets Division (CAMD) data, Energy Information Administration (EIA) data, industry reports, and control equipment vendor publications. The information was reviewed for the purpose of identifying NO_x and SO₂ emission rates that were technologically feasible for virtually any large (> 25 MWe) coal-fired EGU, were cost-effective for virtually any large coal-fired EGU, and were commercially available for retrofit to virtually any large coal-fired EGU. Delaware further determined that imposing emission rate limits in the regulation potentially provided a more cost-effective methodology than specifying a given control technology requirement by allowing subject sources the flexibility to choose a reduction technology or suite of technologies that best fit the needs of the particular source. The emission rate limits determined for Delaware's Regulation 1146 also closely correspond to regional average emission rates that can be estimated from the EPA's CAIR cap-and-trade program allowance allocations.

The NO_x emissions rate limits identified in Delaware's Regulation 1146 are similar in magnitude to the highly cost-effective region-wide average emission rates associated with the development of the EPA's CAIR cap-and-trade program budgets. The EPA's Technical Support Document for CAIR, Notice of Final Rulemaking, "Regional and State SO₂ and NO_x Emissions Budget", dated March 2005, discussed the development of the regional NO_x budgets associated with the CAIR program. EPA indicates in the document that region-wide NO_x emissions mass caps were determined by multiplying the base region-wide heat input by 0.15 lb/mmBTU and 0.125 lb/MMBTU for 2009 and 2015, respectively. Referring to this methodology, the document states "The EPA determined, through IPM analysis, that the resulting region-wide emissions caps (if all states choose to obtain reductions from EGUs) are highly cost-effective levels."

The aforementioned EPA CAIR technical support document also addressed the development of CAIR cap-and-trade program budget for SO₂ emissions. In the document, EPA discussed the designing of Acid Rain SO₂ allowance retirement ratios to achieve a 50% SO₂ reduction beginning in 2010 and achieving a 65% reduction beginning in 2015. These retirement ratios effectively established region-wide SO₂ mass emissions caps for 2010 and 2015. If these effective 2010 and 2015 SO₂ mass emissions caps are divided by the baseline heat input used by the EPA's technical support document in the determination of the NO_x annual budget mass caps, the resulting region-wide average SO₂ emission rates are 0.37 lb/MMBTU in 2010 and 0.26 lb/MMBTU in 2015. Regarding the 50% SO₂ reduction in 2010 and 65% SO₂ reduction in 2015, EPA stated that "EPA determined, through IPM analysis, that the resulting region-wide emissions caps (if all states choose to obtain reductions from EGUs) are highly cost-effective levels." The SO₂ emissions rate limits identified in Delaware's Regulation 1146 are similar in magnitude to those highly cost-effective SO₂ region-wide emissions limitations associated with the EPA's CAIR technical support document. The EPA provided further discussion and justification of the above "highly cost-effective" NO_x and SO₂ emissions budgets in the final CAIR rule (70 FR 25162).

Delaware believes that once all coal and oil fired units of 25 MWe or greater are controlled, that it would then be appropriate to overlay a cap-and-trade program to bring in gas

and other units, with a cap significantly tighter than CAIR. Delaware believes that under this approach (i.e., performance standards plus cap-and-trade program) the emissions from the EGU sector would comport with CAA 110(a)(2)(D).

CAA Section 126(b) requires that within 60 days after receipt of any petition and after public hearing, the Administrator shall make such a finding or deny the petition. Once a finding is made, CAA Section 126(c) does not allow any major existing source to operate more than 3 months after such finding has been made with respect to it, except that the Administrator may permit the continued operation of a source beyond the expiration of such three-month period if such source complies with such emission limitations and compliance schedules (containing increments of progress) as may be provided by the Administrator to bring about compliance with the requirements contained in CAA Section 110(a)(2)(D)(ii) as expeditiously as practicable, but in no case later than three years after the date of such finding. As explained above, Delaware believes that compliance with the CAIR Phase I levels would satisfy the immediate timing for 2009, and that final mitigation must be achieved within 3 years thereafter.

We look forward to working with you and your staff during this critical period in which you make your finding relative to this petition, and take the required actions. If you have any questions or desire to meet and discuss this petition, please do not hesitate to contact me or Ali Mirzakhali, Administrator, Air Quality Management Section.

Sincerely,



John A. Hughes
Secretary

CC: Governor Ruth Ann Minner,
State of Delaware

Administrator Donald S. Welsh
US EPA Region III Office

Shari T. Wilson, Secretary
George Abum, Air Director
Maryland Department of the Environment

Steven E. Chester, Director
G. Vinson Hellwig, Air Division Chief
Michigan Department of Environmental Quality

Mark N. Mauriello, Commissioner
William O'Sullivan, Air Director
New Jersey Department of Environmental Protection

Pete Grannis, Commissioner
Jared Snyder, Assistant Commissioner for Air Resources
New York Department of Environmental Conservation

William G. Ross Jr., Secretary
Keith Overcash, Air Director
North Carolina Department of Environment and Natural Resources

Chris Korleski, Director
Robert Hodanbosi, Air Division Chief
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John Hanger, Acting Secretary
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David K. Paylor, Director
Mike Dowd, Air Director
Virginia Department of Environmental Quality

Randy C. Huffman, Secretary
John A. Benedict, Air Director
West Virginia Department of Environmental Protection

David Small, Deputy Secretary,
Department of Natural Resources and Environmental Control

James D. Werner, Director
Delaware Division of Air and Waste Management

Ali Mirzakhali, Administrator
Delaware Air Quality Management Section

Judy Cherry, Director
Delaware Economic Development Office

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