



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

OFFICE OF THE COMMISSIONER

P.O. Box 402

TRENTON, NEW JERSEY 08625-0402

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

April 8, 2013

The Honorable Judith A. Enck
Regional Administrator
United States Environmental Protection Agency – Region 2
290 Broadway – 26th Floor
New York, New York 10007-1866

Dear Administrator Enck:

This is in response to your February 6, 2013 letter to Governor Chris Christie stating the United States Environmental Protection Agency (USEPA) does not have enough data to propose the designation of any part of New Jersey as nonattainment for the 1-hour sulfur dioxide standard. The New Jersey Department of Environmental Protection (NJDEP) specifically recommended a nonattainment designation in a June 23, 2011 letter to you for Warren County and its surrounding area due to the impacts from the Portland Power Plant. NJDEP requests the USEPA reconsider its decision to not move forward with a nonattainment designation of Warren County and its vicinity.

The USEPA is without authority under the Clean Air Act to delay this nonattainment designation, which is in accordance with the evidence. Data from the Columbia Lake Wildlife Management Area (Columbia Lake) monitor, as well as modeling performed by NJDEP and the USEPA, demonstrates that the NRG/GenOn Portland Power Plant significantly contributes to and causes nonattainment of the 1-hour sulfur dioxide National Ambient Air Quality Standard (NAAQS) in New Jersey. The monitor continues to measure exceedances of the health standard when the coal units operate and the wind blows from the Portland stacks toward the monitor.

Included in Attachment 1 to this letter are the specific details and evidence supporting New Jersey's request to create a nonattainment area in the vicinity of Warren County, New Jersey. Among these reasons are the following:

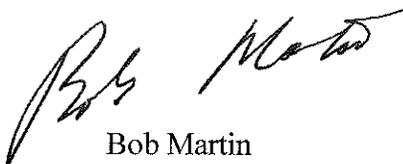
- The USEPA sulfur dioxide health standards were created to protect public health. New Jersey citizens continue to be adversely affected by high ambient air sulfur dioxide levels. A delay in a nonattainment designation may unnecessarily prolong this public health impact.

- Air monitoring conducted in the area by NJDEP, from 2010 to 2012 supports a nonattainment designation if data substitution is allowed for 2010 data. Table 1 attached to this letter shows the monitored fourth highest values recorded at the Columbia Lake monitor between the years of 2010 to 2012. The certified data shows that the average of the 4th highest values over the past three, consecutive calendar years violate the hourly sulfur dioxide health standard of 75 parts per billion.
- Federal regulations allow for data substitution for the partial year of 2010 data that showed exceedances of the sulfur dioxide health standard. The use of data substitution to protect public health is consistent with the USEPA decision to create a nonattainment area in Muscatine, Iowa.
- The USEPA has already determined at 76 FR 69052 (November 7, 2011) that the Portland Plant's sulfur dioxide emissions significantly contribute to nonattainment in New Jersey.
- The USEPA's delay in designating this area as not meeting the sulfur dioxide health standard also delays the State Implementation Plan (SIP) process and does not provide an adequate legal backstop should the area have continued exceedances of the health standard beyond the 126 petition final limits.
- New Jersey continues to measure sulfur dioxide exceedances at the Columbia Lake, New Jersey monitor after the Portland Plant made interim reductions per the 126 petition final rule. Based on the recent exceedance of the standard on January 25, 2013, New Jersey can expect to have exceedances of the health standard even if the Portland Power Plant meets USEPA's final emission limits for sulfur dioxide in 2015. The SIP process provides a regulatory method to define control measures to ensure the area meets attainment in an expeditious manner.
- The USEPA lacks adequate technical support for this decision as it has not reviewed the latest available data or made available for review any supporting information on the decision making process in this regard.

While NRG/GenOn has indicated it intends to shut down these coal units, in response to USEPA's Section 126 limits, NRG/GenOn continues to appeal the USEPA limits. Hence, the SIP process should proceed expeditiously. If NRG/GenOn confirms that the shutdown will in fact occur, in a legally binding way, New Jersey will reconsider the need for a nonattainment designation.

Thank you for your consideration of this request to designate the area around the NRG/GenOn Portland Power Plant as nonattainment for the sulfur dioxide health standard. If you have any questions regarding the technical aspects of this letter, please contact William O'Sullivan, Director of the Division of Air Quality, at (609) 984-6721.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Bob Martin". The signature is written in a cursive style with a large initial "B" and "M".

Bob Martin
Commissioner

Attachments

CC: Richard Ruvo, United States Environmental Protection Agency Region 2
John Renella, Esq., New Jersey Deputy Attorney's General

Attachment 1 – Specific Reasons Why the USEPA Should Designate a Sulfur Dioxide Nonattainment Area in the Vicinity of Warren County, New Jersey.

USEPA Must Protect Public Health from Sulfur Dioxide Impacts

The sulfur dioxide (SO₂) health standard (See 75 Fed. Reg. 35520 (June 22, 2010)) is set to protect the public from the short-term, human health impacts from sulfur dioxide exposure. These health impacts include adverse respiratory effects, such as constriction of airways and increased asthma symptoms. Sensitive populations like asthmatics are at greater risks when exercising or playing on days when this pollutant is elevated. New Jersey citizens are experiencing these negative health impacts now, as documented by their testimony during the USEPA's April 2011 public hearing for the proposed 126 petition. These citizens look to government to do their job and protect their health. A delay in a nonattainment designation may continue to put the residents of Warren County and the surrounding area, most particularly sensitive populations, at risk.

Air Monitoring Supports a Non-Attainment Designation

The NJDEP has sulfur dioxide monitoring data, from 2010 through 2012 that demonstrates this area violates the 1-hour sulfur dioxide standard, and supports a nonattainment designation. The USEPA states that three complete years of monitoring data, from 2009 to 2011, are needed to determine nonattainment with the 1-hour sulfur dioxide standard. (75 FR 35520, June 22, 2010). The USEPA incorrectly discounts the 2010 data since this monitor only began operation in September 2010. However, the partial year of monitoring for 2010 clearly shows the 4th highest levels being well above the standard. More monitoring would not change this regardless of additional monitoring data from 2010. The substitution of zero (0) as a monitored sulfur dioxide level for all the rest of 2010 (most favorable to the Portland Power Plant) *still* indicates a violation of the sulfur dioxide standard in 2010. In other words, a complete year of data for 2010 is irrelevant as it would not change the fact that the 4th highest value New Jersey currently has from the 2010 data is a violation of the sulfur dioxide standard. Federal regulations allow for data substitution in these instances as discussed further below.

The USEPA also failed to account for New Jersey's latest data from the complete calendar year of 2012. NJDEP has certified its data for quality assurance and it is readily available on USEPA's Air Quality System (AQS) database. NJDEP provided USEPA with this data in a November 19, 2012 letter with the intention that this data be used in USEPA's designation assessment. The USEPA has not responded to that letter or considered that data when making the decision to delay a nonattainment designation. We ask that the USEPA include the 2012 and 2010 air monitoring data in this determination of nonattainment.

Federal Regulations Allow For Data Substitution

Federal regulations allow for data substitution as mentioned above. In accordance with 40 CFR Parts 50-Appendix T, "Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Sulfur (sulfur dioxide)-Section 3(d):"

“A 1-hour primary standard design value based on data that do not meet the completeness criteria... may also be considered valid with the approval of, or at the initiative of, the Administrator, who may consider factors such as monitoring site closures/moves, monitoring diligence, the consistency and levels of the valid concentration measurements that are available, and nearby concentrations in determining whether to use such data.”

In fact, the USEPA is currently applying this rule to other sites in the United States with less than 75% data capture in a year, notably the monitor in Muscatine, Iowa, where the missing data was substituted with zero values to declare the county as not attaining the health standard. (http://www.epa.gov/so2designations/eparesp/R7_IA_tsd.pdf) USEPA must be consistent in its decision making and also apply the same approach to New Jersey's Columbia Lake monitor for the protection of the public health.

Table 1 attached to this letter shows the monitored fourth highest values recorded at the Columbia Lake monitor between the years of 2010 to 2012. The certified data shows that the average of the 4th highest values over the past three, consecutive calendar years violate the hourly sulfur dioxide health standard of 75 parts per billion.

The USEPA Effectively Determined the Area to be in Non-Attainment

In finding that the Pennsylvania Portland Plant's SO₂ emissions were in violation of Section 126 of the Act in response to New Jersey's 126 petition, USEPA effectively found the area of impact in New Jersey (Warren County and surrounding area) in nonattainment of the 1-hour SO₂ NAAQS. See 76 FR 69052 (November 7, 2011) (USEPA finding that “emissions of sulfur dioxide from Portland significantly contribute to nonattainment and interfere with maintenance of the 1-hour SO₂ national ambient air quality standard (NAAQS) in New Jersey.”). Therefore, in evaluating New Jersey's recommendation that this same area be formally designated nonattainment, the USEPA must consider this final rule. Further, NJDEP's petition was supported by modeling only, and USEPA's grant of this petition was based upon this modeling and USEPA's own modeling. See 76 FR 69052 (EPA noted in the final rule that it is basing its finding on “NJDEP's air quality modeling, the EPA's independent assessment of the AERMOD2 dispersion modeling, and other technical analyses.”). Thus, the USEPA relied solely at that time on modeling results to determine the impact on Sulfur Dioxide. In addition, in promulgating the new 1-hour Sulfur Dioxide NAAQS, USEPA indicated that states could use modeling evidence in addition to monitoring data to make recommended attainment designations. (75 FR 35550-35554, June 22, 2010) Moreover, USEPA now has New Jersey's monitoring data to support and verify the results of the 126 petition modeling performed: that 1-hour Sulfur Dioxide nonattainment is occurring in Warren County and its vicinity.

The USEPA's Delay Will Delay the Legal SIP Process

The USEPA's failure to appropriately designate this area also delays the State Implementation Plan (SIP) process and requires extra work by all involved parties. The designation method outlined by the USEPA (75 FR 35550-35554, June 22, 2010) in its “Primary National Ambient Air Quality Standard for Sulfur Dioxide” final rule (75 FR 35550 (June 22, 2010)), allows for the use

of modeling to determine when nonattainment exists. Delaying designation in this instance to allow for additional modeling is unneeded and superfluous as the USEPA has already determined that the Portland Plant significantly contributed to nonattainment in New Jersey (76 FR 69052 (November 7, 2011)). The USEPA's decision to delay designation of this area is directly contrary to the purpose of setting a primary standard and the SIP process: to protect human health and welfare, and ensure attainment as expeditiously as practicable. See, e.g., 42 U.S.C. § 7409(b) (NAAQS are standards "requisite" to protect the public health); § 7514a (SIPs must provide for attainment "as expeditiously as practicable").

New Jersey Continues to Measure Sulfur Dioxide Exceedances at the Columbia Lake Monitor

An exceedance of the 1-hour sulfur dioxide standard was measured as recently as January 25, 2013. This was recorded after the Portland Power Plant was required to reduce sulfur dioxide emissions by approximately 60% on January 6, 2013, meeting an interim hourly emission rate per the 126 petition final rule. The exceedance occurred on a day when the Portland Power Plant coal units were operating and the wind direction was blowing directly from the facility towards New Jersey's Columbia Lake monitoring site (see Figure 1). This 60% reduction requirement is the interim standard and does not ensure compliance with the 1-hour sulfur dioxide standard. Thus New Jersey can expect exceedances to continue to occur when the Portland Power Plant is operating at least until additional reductions occur in the sulfur dioxide emission rate at the Portland plant.

Please note that New Jersey's Section 126 petition recommended that Reasonably Available Control Technology, equivalent to 95% control for sulfur dioxide, be required of the Portland Power Plant. The USEPA determined that an equivalent 81% control level would be sufficient to eliminate Portland Power Plant's impact on New Jersey's ability to attain the health standard. Based upon the data collected from the January 25, 2013 violation, an 81% reduction of sulfur dioxide emissions at the Portland Power Plant would not have been sufficient to avoid the exceedance of the health standard. NJDEP calculates that if sulfur dioxide emissions from Portland Power Plant during that hour were at the final emission rate required by the 126 Petition Final Rule (2,796 lb/hr), the monitor would have measured 82 ppm (9% over the NAAQS) (See attached Table 2). If SO₂ emissions from Portland during that hour were at the current interim emission rate (6,253 lb/hr), the monitor would have measured 183 ppm (144% above the NAAQS). Therefore, the State SIP process needs to be a viable and immediate option to ensure that attainment of the sulfur dioxide standard is met should violations continue to occur after the final limits of the 126 petition are effective in January 2015. Delaying action under the SIP process does not provide an adequate back-stop should violations of the health standard continue to occur.

The USEPA Lacks Transparency

The USEPA is also not making transparent the decision making process used by the USEPA to reach this conclusion. Specifically, the USEPA website has a table comparing state recommendations and the USEPA's responses (<http://www.epa.gov/airquality/sulfurdioxide/designations/pdfs/20130205counties.pdf>). This table does not show New Jersey's recommendation for a nonattainment area and the USEPA's response

and decision to delay action on New Jersey's recommendation. As of March 8, 2013, the USEPA website (<http://www.epa.gov/so2designations/maps/Region2r.jpg>) also does not provide the link to the USEPA's February 6, 2013 response letter to New Jersey, but rather links to the response letter of the Virgin Islands. This webpage, the prime repository for information on the sulfur dioxide designation process used by the USEPA, also does not contain any links to a Technical Support Document commonly prepared by the USEPA to support its technical decisions. Other States besides New Jersey are being afforded the technical basis for the USEPA's decision making and it appears that the USEPA has not evaluated any of the monitoring or modeling results provided by NJDEP in deciding to delay action for New Jersey's June 21, 2011 recommendations. The November 19, 2012 letter from the NJDEP to the USEPA is also not included on this website as additional data supplied by the State for consideration in this designation process.

Table 1: Monitored 4th Highest 1-Hour Sulfur Dioxide (SO₂) levels in parts per billion (ppb) recorded at the Columbia Lake Wildlife Management Area (Columbia) in Columbia, N.J.

	2010^{1,2}	2011	2012	3-yr. Avg.	2013 max.³
4 th Highest 1-hr.	83	125	66	91	114

SO₂ Health Standard equals 75 ppb.

¹ Monitor began operation on September 23, 2010 and collected three months of data. Data substitution with a conservative zero ppb for the missing hours would not result in a lower reported value and, a higher value would have most likely have been collected than is reported here, if data had been collected for an entire year.

² According to USEPA regulation this data may be used by the USEPA, specifically: “(d) A 1-hour primary standard design value based on data that do not meet the completeness criteria ... may also be considered valid with the approval of, or at the initiative of, the Administrator, who may consider factors such as monitoring site closures/moves, monitoring diligence, the consistency and levels of the valid concentration measurements that are available, and nearby concentrations in determining whether to use such data.”

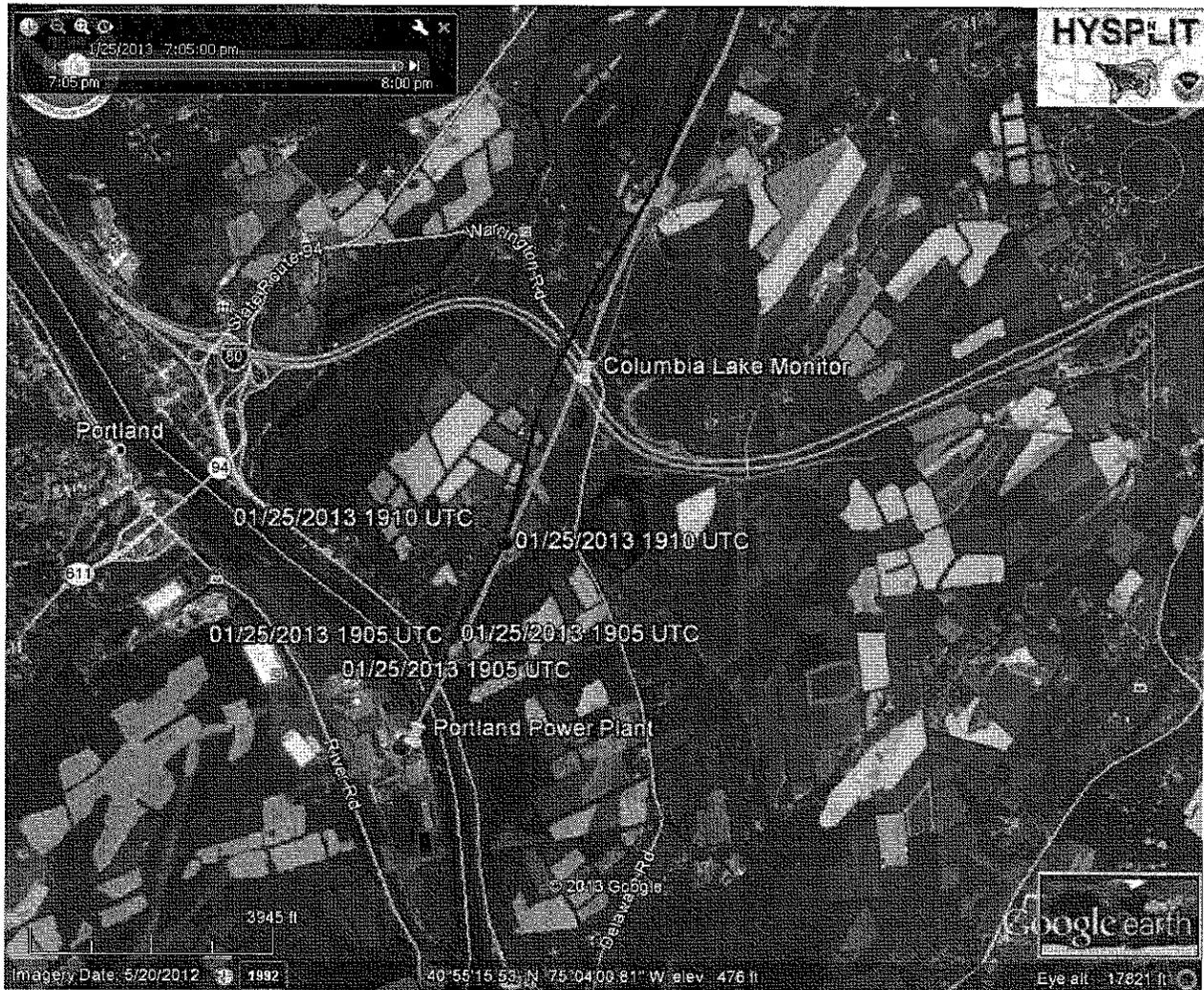
³ This value represents the maximum 1-hr. value recorded in January 2013 and is not the 4th highest maximum hourly value. This indicates that whenever the 2 coal units at the Portland Plant operate at high capacity, there are exceedances of the health standard somewhere in the surrounding area, even with the 60% reduction of sulfur dioxide allowable emissions required by the USEPA’s order in response to New Jersey’s Section 126 petition.

Table 2: Calculated Sulfur Dioxide (SO₂) Concentrations at the Columbia Lake Wildlife Management Area from the January 25, 2013 episode based upon monitored sulfur dioxide levels and actual and projected emission rates from the Portland Power Plant.

Hour	Actual Monitored Value (ppb)	Actual Portland SO ₂ Emissions (lb/hr)	Projected Monitored Value- Interim Emission Limit ^a (ppb)	Projected Monitored Value- Final Emission Limit ^b (ppb)
noon	1	3,576	--	--
1 pm	114	3,900	183	82
2 pm	45	3,996	70.4	31.5
3 pm	10	3,585	--	--
4 pm	31	3,508	55.3	24.7

- a. A Maximum Allowable Interim Emission Rate for Sulfur Dioxide of 6,253 pounds per hour is used to determine what the monitored value would be if sulfur dioxide emissions occurred at this allowable rate and under the same conditions.
- b. The final allowable sulfur dioxide emission rate under the Section 126 petition of 2,796 pounds per hour is used to determine what the monitored value would be if sulfur dioxide emissions occurred at this final allowable rate and under the same conditions. Ambient levels of sulfur dioxide closer to the power plant would be even higher. The New Jersey monitor recording these results is over 1 mile from the coal stacks.

Figure 1: Wind Trajectory on January 25, 2013, 1 pm Showing the Wind Blowing from the Portland Power Plant to the Columbia Lake Wildlife Management Area in New Jersey using NOAA's HYSPLIT model



Note that the green line corresponds to winds 10 meters above ground, the blue line is 100 meters above ground, and the red line is 221 meters above ground.

Bcc: Wolf Skacel
William O'Sullivan
Chris Salmi
Sharon Davis
Ray Papalski
Alan Dresser
Joel Leon
Stella Oluwaseun-Apo

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William O'Sullivan
Chris Salmi
Sharon Davis
Ray Papalski
Alan Dresser
Joel Leon
Stella Oluwaseun-Apo