



# STATE OF CONNECTICUT

## DEPARTMENT OF ENVIRONMENTAL PROTECTION



February 8, 2011

Mr. David Conroy, Chief of Air Programs Branch  
U.S. Environmental Protection Agency, Region 1  
5 Post Office Square  
Mail Code: OEP05-2  
Boston, MA 02109-3912

Re: Clean Data Determination for the 2006 24-hr PM<sub>2.5</sub> National Ambient Air Quality Standard

Dear Mr. Conroy:

The Connecticut Department of Environmental Protection (DEP) hereby requests the United States Environmental Protection Agency (EPA) make a determination that the New York-Northern New Jersey-Long Island (NY-NJ-CT) nonattainment area has attained the 24-hour fine particulate (PM<sub>2.5</sub>) National Ambient Air Quality Standard (NAAQS) established by EPA in 2006. This request is based on recent air quality data from monitors located throughout the NY-NJ-CT nonattainment area, including Fairfield and New Haven Counties in Connecticut, all of which measure compliance with the NAAQS.

DEP works diligently and in partnership with EPA, and the states of New York and New Jersey to assure clean air for our citizens. The air quality monitors throughout the area tell a compelling story – our air is cleaner and we are protecting public health. As demonstrated in the attachment to this correspondence, all air quality monitors in the Connecticut portion of the NY-NJ-CT area achieved attainment of the 24-hour PM<sub>2.5</sub> standard for the 2008-2010 period, the most recent period with fully quality assured, quality controlled and Connecticut certified monitoring data. Connecticut's maximum 2010 design value<sup>1</sup> of 29µg/m<sup>3</sup>, measured at Criscuolo Park and State Street in New Haven, is well below the 35µg/m<sup>3</sup> level of the 2006 PM<sub>2.5</sub> NAAQS.

Air quality monitors in the New York and New Jersey portions of the NY-NJ-CT nonattainment area also reached attainment of the 2006 PM<sub>2.5</sub> NAAQS for the most recent design value period ending in 2009, with maximum design values of 33µg/m<sup>3</sup> in both states. Therefore, it is appropriate at this time to request a clean data determination for the 2006 24-hr PM<sub>2.5</sub> NAAQS for the entire NY-NJ-CT nonattainment area. Notably and due to our ongoing partnership, attainment levels have been achieved well in advance of the December 2014 statutory deadline.

It is our understanding that an EPA clean data determination for the 2006 24-hr PM<sub>2.5</sub> NAAQS suspends the requirement for DEP to submit an attainment demonstration and associated

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<sup>1</sup> Design Values are developed in accordance to 40 CRF 50 Appendix N

reasonably available control measures, reasonable further progress plans, contingency measures, and other planning items related to attainment of the PM<sub>2.5</sub>NAAQS, in accordance with 40 CFR 51.1004. The DEP also understands that the suspension of these planning requirements can be rescinded if EPA subsequently issues a finding that the area is no longer attaining the NAAQS.

As described in the attachment, the measured improvements in PM<sub>2.5</sub> air quality are due to a variety of state and federal control programs implemented to reduce emissions of PM<sub>2.5</sub> and its precursor pollutants. Connecticut was one of the first states to adopt annual limits for both nitrogen oxides and sulfur dioxide emissions from power plants and other large industrial sources. Connecticut has also adopted motor vehicle emission standards for new light and medium duty vehicles that are more stringent than the federal standards and continues to sponsor retrofit programs to reduce PM<sub>2.5</sub> emissions from the existing vehicle fleet.

Our efforts notwithstanding, DEP recognizes and values our partnership with EPA; many federal programs have also furthered our clean air goals such as low sulfur fuel standards for gasoline and diesel fuel, and heavy duty diesel engine standards. As sound science provides an ever better understanding of the impact of fine particles on public health, our cooperative efforts must continue to provide the additional reductions in locally generated emissions and interstate air pollution transport needed to assure clean air for all of Connecticut's citizens.

If the DEP can be of assistance in processing this request, please contact me at 860-424-3026. Thank you for your consideration of this matter.

Yours truly,



Anne Gobin, Chief  
Bureau of Air Management

Enclosure

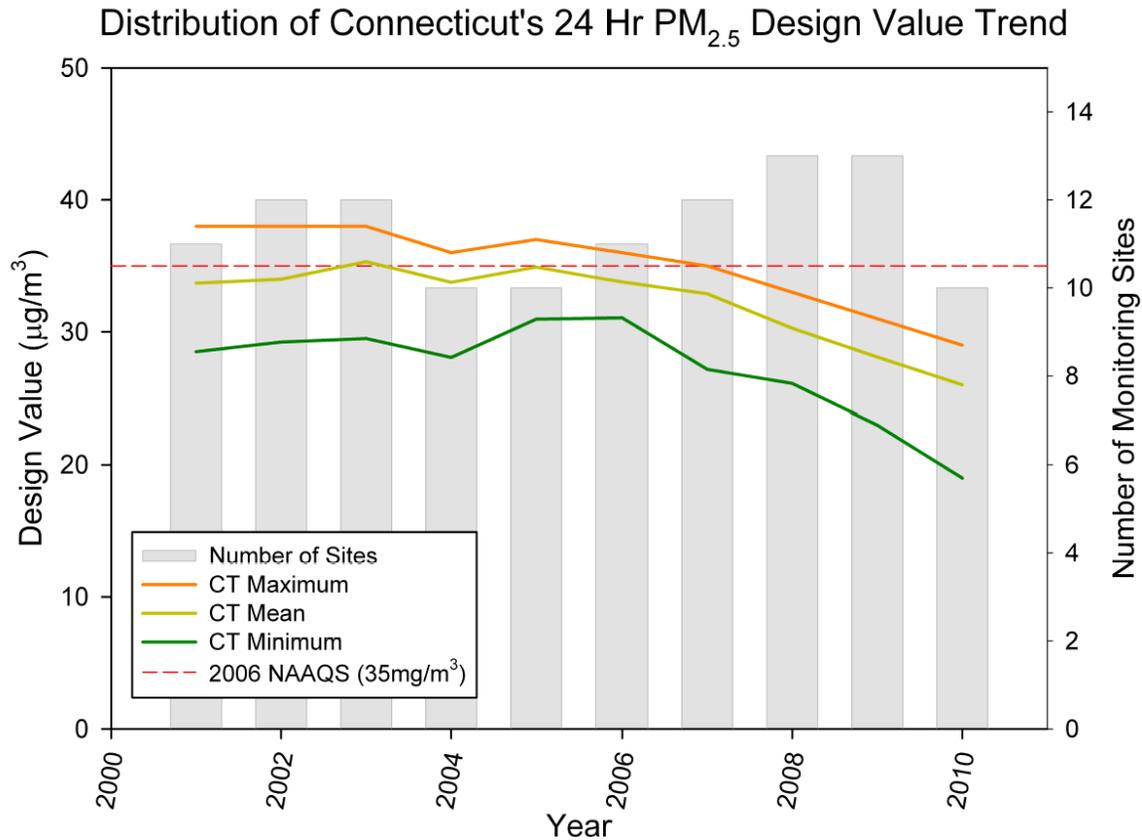
**ATTACHMENT**  
**Connecticut's 24-Hour PM<sub>2.5</sub> Ambient Data Summary**  
**(February 2011)**

EPA's revision to the 24-hour PM<sub>2.5</sub> NAAQS went into effect on December 18, 2006, reducing the standard to 35µg/m<sup>3</sup> from 65µg/m<sup>3</sup>. On December 14, 2007, in accordance with Section 107(d)(1) of the Clean Air Act (CAA), Connecticut recommended that EPA include Fairfield and New Haven Counties as part of a multi-state nonattainment area with northern New Jersey and southern New York counties, based on 2006 design values that violated the NAAQS. On November 13, 2009 the EPA finalized designations for the standard, concurring with Connecticut's recommendations.

**Summary of PM<sub>2.5</sub> Ambient Monitoring Data**

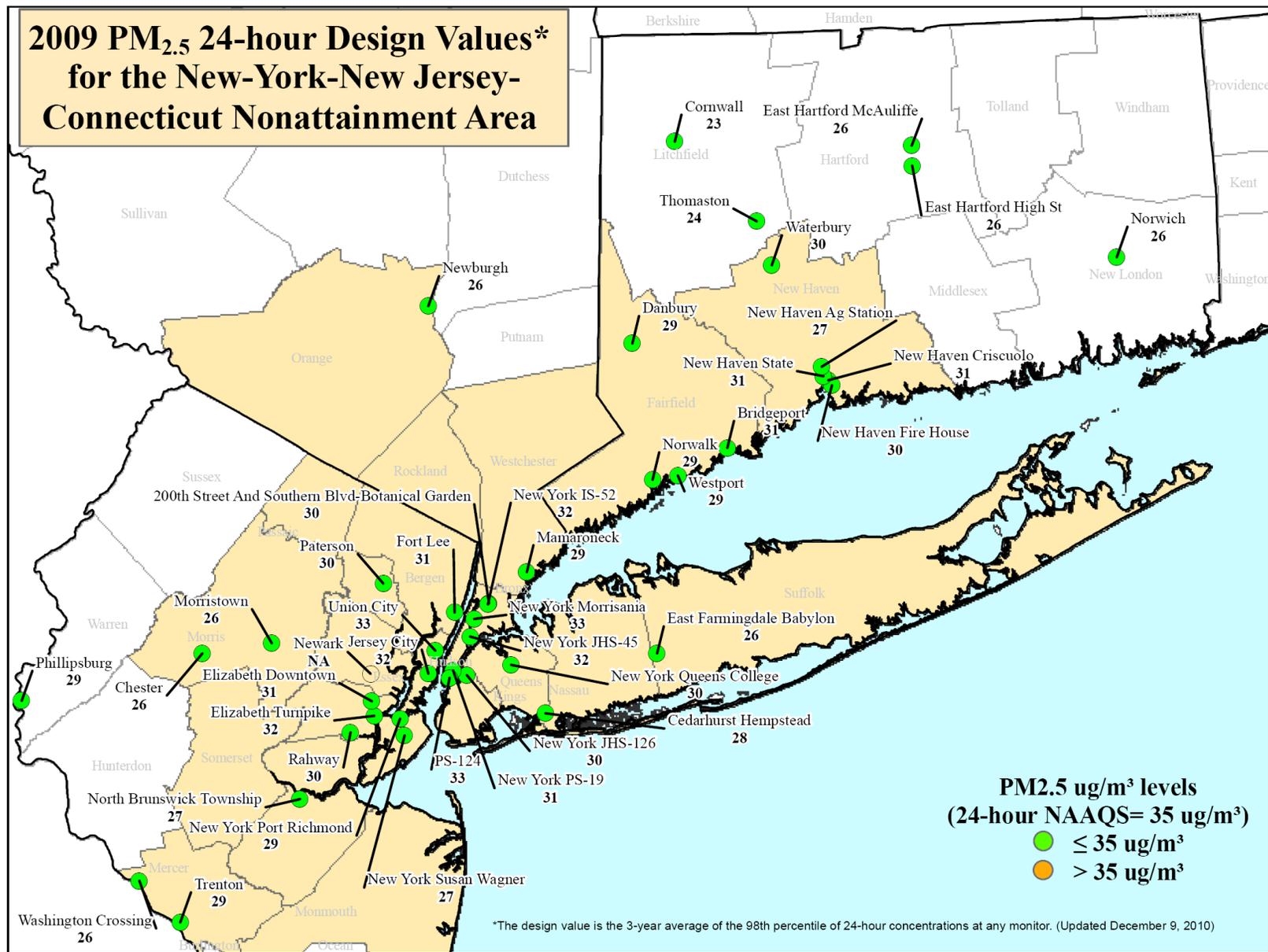
Connecticut's December 2007 letter to EPA cited several ongoing state and federal control efforts that were expected to result in improved PM<sub>2.5</sub> air quality, including programs targeting power plants, mobile source fuels, new on-road and non-road engine standards, and retrofit controls for portions of the existing heavy-duty mobile source fleet. As anticipated, the implementation of these programs has resulted in improved air quality. Recent ambient monitoring data for 2008, 2009 and 2010 (see Figure 1) demonstrate that 24-hour PM<sub>2.5</sub> design values in Connecticut comply with the NAAQS.

**Figure 1. Connecticut's Maximum, Mean and Minimum PM<sub>2.5</sub> Design Value Trend.**



Improved ambient PM<sub>2.5</sub> levels have occurred not only in Connecticut, but throughout the remainder of the nonattainment area as well. Figure 2 displays 2009 design values for Connecticut and the rest of the NY-NJ-CT nonattainment area. The highest design values in 2009 (33µg/m<sup>3</sup>) occurred at the Union City, NJ and the New York City Morrisania and PS-124 monitors. These levels represent attainment because they are less than the 35µg/m<sup>3</sup> PM<sub>2.5</sub> NAAQS. The maximum Connecticut design value in 2009 was 31µg/m<sup>3</sup>, measured at both the New Haven Criscuolo Park and State Street monitors. Table 1 provides more detail, including the 98<sup>th</sup> percentile values from 2007 through 2009 which are used to calculate the design value at each monitoring location. Data are also provided for 2010 for the CT sites where quality assured data recently became available.

**Figure 2. 2009 Design Values in Connecticut and the NY-NJ-CT Nonattainment Area**



**Table 1. 24 Hr PM2.5 Design Values and Associated 98th Percentiles for 2009 and 2010.<sup>2</sup>**

Current 98th Percentiles and Design Values for the New York-N. New Jersey-Long Island, NY-NJ-CT Non-Attainment Area							
State	Site	2007 98th Percentile	2008 98th Percentile	2009 98th Percentile	2010 98th Percentile	2009 Design Value	2010 Design Value
Connecticut	Bridgeport	30.2	30.3	29.3	23.3	31	28
	Danbury	30.4	27.5	27.6	25.7	29	27
	Norwalk	31.9	26.3	29.3	23.0 <sup>1</sup>	29	26 <sup>1</sup>
	Westport	29.0	30.7	26.4	24.2	29	27
	New Haven Firehouse	29.8	30.9	28.5	SSD	30	SSD
	New Haven Criscuolo	30.5	31.5	32.3	25.5	31	29
	New Haven State St	30.6	32.1	30.8	23.9	31	29
	New Haven Ag Station	28.5	25.4	27.3	SSD	27	SSD
	Waterbury	32.7	28.4	28.1	25.7	30	27
New Jersey	Fort Lee	34.5	32.2	27.1	NA	31	NA
	Jersey City	34.9	32.0	29.2	NA	32	NA
	Newark	34.9	28.7	*	NA	NA	NA
	Union City	39.1	33.4	26.6	NA	33	NA
	Trenton	32.5	31.0	23.0	NA	29	NA
	Washington Crossing	27.2	28.0	22.2	NA	26	NA
	North Brunswick Township	30.4	28.9	20.7	NA	27	NA
	Morristown	32.4	23.8	21.9	NA	26	NA
	Chester	31.4	24.3	20.9	NA	26	NA
	Paterson	36.6	28.6	26.1	NA	30	NA
	Elizabeth Turnpike	35.0	33.8	27.7	NA	32	NA
	Elizabeth Downtown	35.9	31.1	25.6	NA	31	NA
	Rahway	34.4	29.9	25.2	NA	30	NA
New York	New York Morrisania	36.2	31.3	30.0	NA	33	NA
	200th Street And Southern Blvd-Botanical Garden	32.5	29.8	27.4	NA	30	NA
	New York IS-52	33.9	29.9	30.6	NA	32	NA
	New York JHS-126	33.6	29.4	26.9	NA	30	NA
	Cedarhurst Hempstead	28.5	29.2	25.8	NA	28	NA
	New York JHS-45	34.3	32.3	28.8	NA	32	NA
	New York PS-19	37.8	25.7	29.0	NA	31	NA
	PS-124	37.1	31.8	29.0	NA	33	NA
	Newburgh	30.4	26.0	20.6	NA	26	NA
	New York Queens College	31.8	30.3	26.7	NA	30	NA
	New York Port Richmond	32.8	28.7	24.6	NA	29	NA
	New York Susan Wagner	28.8	27.7	23.0	NA	27	NA
	East Farmingdale Babylon	28.8	26.8	21.6	NA	26	NA
Mamaroneck	30.6	30.4	27.0	NA	29	NA	

\*Site shut down in 2009, new Newark site opened on 6/30/09

SSD= Site Shut down in 2010

<sup>1</sup> Value not valid, year is incomplete due to site construction

NA=QA'd data from NJ and NY will be available early 2011

<sup>2</sup> Values were calculated and derived from each states representative agency using their certified data.

## Control Strategies

As listed in Table 2 below, numerous Federal and Connecticut control programs implemented since 2002 have resulted in decreased emissions of PM<sub>2.5</sub> and its precursors. These programs are responsible for the significant improvements in ambient PM<sub>2.5</sub> levels, which now comply with the 24-hour PM<sub>2.5</sub> NAAQS.

**Table 2. Post-2002 Control Strategies**

Control Strategy	Pollutant Controlled			
	PM	NO <sub>x</sub>	SO <sub>2</sub>	VOC
Federal Tier 2 Motor Vehicle Controls/Low Sulfur Gasoline	X	X	X	X
Federal On-board Refueling Vapor Recovery				X
Federal Heavy-Duty Diesel Vehicle Controls and Fuels	X	X	X	X
Federal 2007 Highway Rule	X	X	X	X
Federal Highway Motorcycle Exhaust Emission Standards	X	X		X
Federal Non-Road Control Programs (See Table 4-2 for details of each strategy)	X	X	X	X
Federal CAIR Requirements for SO <sub>2</sub> Sources*			X	
Outdoor Wood Burning Furnace Restrictions Section 22a-174k of the Connecticut General Statutes	X			
General Permit to Construct and/or Operate a New or Existing Distributed Generation Resource	X	X		
Permit to Construct and Operate Stationary Sources RCSA Section 22a-174-3a	X	X	X	X
Improvements in the Control of Particulate Matter and Visible Emissions RCSA Section 22a-174-18	X	X		
Control of Sulfur Dioxide and Nitrogen Oxide Emissions from Power Plants and Other Large Stationary Sources RCSA Sections 22a-174-19a and 22a-174-22(e)(3)		X	X	
Restrictions on Asphalt Paving Operations RCSA Section 22a-174-20(k)				X
Reduced Vapor Pressure Limitation for Solvent Cleaning RCSA Section 22a-174-20(l)				X
The Post-2002 Nitrogen Oxides (NO <sub>x</sub> ) Budget Program RCSA Section 22a-174-22b		X		

CAIR NO <sub>x</sub> Ozone Season Trading Program RCSA Section 22a-174-22c		X		
CT On-Board Diagnostic Inspection & Maintenance Program RCSA 22a-174-27	X	X		X
Pressure-Vacuum Gas Station Vent Valves and Increased Testing for Stage II Controls RCSA Section 22a-174-30				X
Heavy Duty Diesel Engines RCSA Section 22a-174-36a	X	X	X	
CT's California Low Emission Vehicle Phase 2 (CALEV2) RCSA Section 22a-174-36b	X	X		X
Standards for Municipal Waste Combustion (Phase 2) RCSA Section 22a-174-38		X		
VOC Content Limits for Consumer Products RCSA Section 22a-174-40				X
VOC Content Limits for Architectural and Industrial Maintenance (AIM) Coatings RCSA Section 22a-174-41				X
Design Improvements for Portable Fuel Containers RCSA Section 22a-174-43				X
Restrictions on the Manufacture and Use of Adhesives and Sealants RCSA Section 22a-174-44				X

Additionally, EPA has proposed the Transport Rule<sup>3</sup> to replace the court remanded CAIR rule. The upwind reductions required in this rule are critical to future emission reductions and the prevention of backsliding of the current accomplishments.

### **Conclusion**

As demonstrated above, all of the air quality monitoring sites within the NY-NJ-CT 24-hour PM<sub>2.5</sub> nonattainment area recorded design values below the standard for 2009. Connecticut has maintained attainment levels since 2008. Therefore, DEP believes a clean data determination for Connecticut's New Haven and Fairfield counties is both reasonable and justified at this time. Connecticut recognizes that the clean data determination suspends the requirement to submit all SIP revisions concerning reasonable further progress, attainment demonstrations and contingency measures related to this NAAQS unless DEP submits and EPA approves a redesignation request or future nonattainment levels are monitored. DEP will continue to operate its monitoring network to track continued attainment.

<sup>3</sup> Federal Register Vol. 75, No. 147