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**1434 Elbridge St**  
**Philadelphia PA 19149**  
**215-743-4884**

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Air Management Services  
321 University Avenue, 2nd Floor,  
Philadelphia, PA 19104

Attn: Debra Williams

I am writing in opposition to an Air Management Service permit for SEPTA to install two natural gas-fired Combined Heat and Power (CHP) Generator Units rated at 6,113 horsepower (hp) at their Roberts Complex, located at 4301 Wissahickon Ave, Philadelphia PA 19140.

### **Global Warming and Philadelphia's Commitment to Clean Energy**

On June 21st Mayor Kenney, joined by sustainability officials and advocates, pledged his support for the goal of transitioning Philadelphia to 100% clean, renewable energy. He became the 100th mayor to sign onto Mayors for 100% Clean Energy, such as solar and wind. Mayor Kenney said, "The hotter, wetter, more extreme weather brought by climate change disproportionately harms our city's most vulnerable residents. Transitioning to a just energy system that is clean and affordable for all will slow these changes and make Philadelphia a better place for current residents and future generations." [1] It would be counter productive to construct fossil fuel burning generators now, and have them operating for 20 to 30 years, when the goal is to move away from activities contributing to climate change. It is also unreasonable to expect natural gas prices to remain affordable over the lifetime of this project, considering that gas production is peaking and the days of cheap gas prices due to fracking will be over soon, as wind and solar are already beginning to financially undercut fossil fuels. [2] Gas is not clean nor will it remain affordable.

### **Civil Rights and Environmental Justice**

The Civil Rights Act of 1964 prohibits any recipient of federal funds from taking actions that have a discriminatory effect by race, color or national origin. This legal obligation covers the City of Philadelphia, and requires the City to study and ensure in environmental permitting decisions that any impacts (to health or otherwise) will not have a discriminatory effect. According to federal court decisions and the U.S. Department of Justice, mere compliance with permit limits is not sufficient to meet this obligation. [3] Additionally, even if compliance with permit limits satisfied civil rights law, it is unreasonable to assume that a facility will never violate permit limits over its lifetime.

There is no evidence that the city performed its duty to ensure no discriminatory impact through this permitting action. This is despite the neighborhood being 92.6% African-American within ½ mile of the proposed power plant, and 91.0% African-American within one mile, according to the 2010 census. [4]

This qualifies the community as an "environmental justice" community according to the Pennsylvania Department of Environmental Protection, and should this proposed power plant be properly deemed a major source of air pollution, additional public participation requirements would have kicked in -- requirements that are optional for minor sources, and which the city apparently chose not to apply. [5]

### **Weak Regulation**

The emissions limits are enforced largely through 12-month rolling averages. Especially if the facility isn't being run all the time, this averaging over such a long time period smooths out any spikes and makes it next to impossible that the facility could ever be found in violation of its limits. There could very well be emissions violations over shorter time periods, but these will be lost in the averaging. Especially in hot summer months, when ground-level ozone levels are highest, and aggravated by NOx and VOC emissions, triggering asthma attacks, it's important to ensure that the facility is staying within limits. Averaging should be no more than 24-hours, and should be based on real testing.

## **Lack of Continuous Emissions Monitoring (CEMs)**

It's typical at any power plant (and most other air polluters) for continuous emissions monitors (CEMs) to be used to monitor Nitrogen Oxides (NOx), Carbon Monoxide (CO), Sulfur Dioxides (SO2), opacity, oxygen, and temperature at a minimum. This itself tends to be insufficient, as it vastly underestimates emissions, particularly those emitted during startup, shutdown and malfunction times.

A power plant, especially in a residential neighborhood, should have continuous monitoring of emissions (CEMs), based on real data, not average monthly calculations, in order to prevent dangerous spikes that sicken people, pets and wildlife.

The draft Plan Approval fails to require continuous monitoring for any pollutants at all. There is no plan to monitor toxic emissions, particulate matter, NOx, CO, SO2, or even oxygen levels in the stack which would indicate efficient combustion. Emissions of greenhouse gases and other air pollutants are apparently to be estimated, based on calculating the amount of gas burned per month by emissions factors. The draft Plan Approval sets exact limits for NOx, VOCs, CO, PM, ammonia, formaldehyde, other non-methane, non-ethane hydrocarbons, yet there is no requirement to continuously monitor these emissions. Initial stack tests can be done as late as 180 days after start up, then just once every 8,760 hours or 3 years.[6] This means that a problem could occur, and potentially exist for 2.999 years without detection. This is inadequate, and it's inappropriate to pretend to know the actual emissions without any monitoring. Continuous monitoring of dioxins, for example, has shown that the typical annual stack tests used in the U.S. underestimate actual emissions by 30-50 times.[7]

SEPTA, instead of an outside environmental agency, is to be trusted to monitor its own project, and to keep monthly records.

Annual (or, in this case tri-annual) stack testing is like having a speed limit, but allowing drivers to drive with no odometer, and just setting a speed trap once a year, while setting up signs warning 'speed trap ahead' to warn drivers to slow down... and having the driver's brother run the speed trap (the companies do their own testing). In reality, smokestack facilities are 'speeding' many other days of the year, with excessive emissions during startup, shutdown and malfunction times, when testing is not done.

The technology exists to monitor all of the regulated pollutants, and more, on a continuous basis, and ought to be required for all pollutants for which there are regulatory limits.[8]

## **SEPTA Plan Approval Application is Sloppy and Incomplete**

1. It lists the major source threshold for CO as 25 tons/year, leading the reader to think that the proposed emission limit would make it a major polluter, when in fact, the threshold is much higher than that.
2. Attachment B "Compliance Review Form" comes before Attachment A.
3. Three graphs in Attachment D "Emissions Estimates," on pages 34, 35 are completely unreadable because entire portions are missing.[9]

## **Will SEPTA's Roberts Complex carbon monoxide (CO) emissions push Philadelphia from Maintenance Status back to its former Non-Attainment Status, or dangerously close?**

There are six principal pollutants, carbon monoxide (CO), nitrogen oxides (NOx), lead, ground level ozone, particulate matter (PM), and sulfur dioxide (SO2), that act as indicators of air quality in the United States. The National Ambient Air Quality Standards are the concentrations of these principal pollutants, above which, adverse effects on human health may occur.

Areas of Pennsylvania where air pollution levels consistently stay below these standards are designated "attainment." Areas where air pollution levels persistently exceed these standards are designated "nonattainment". If an area was in nonattainment, but now attains the standard and has an EPA approved plan to maintain the standard, it is designated a "maintenance" area. Parts of Philadelphia are currently a carbon monoxide maintenance area.

Philadelphia is in non-attainment for ground-level ozone, and is recovering from non-attainment status and in "maintenance" for fine particulate matter (PM 2.5) and carbon monoxide (CO).[10] Does permitting this power plant risk throwing Philadelphia back into non-attainment for any of these pollutants? How close does it bring us to that threshold?

Sincerely,



Mike Ewall, Esq.  
Founder & Director  
Energy Justice Network  
215-436-9511

Lynn Robinson, MEd.  
Philadelphia Public School Teacher  
215-888-1894

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<http://content.sierraclub.org/press-releases/2017/06/mayor-kenney-becomes-100th-mayor-pledge-support-100-clean-energy>
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“This case presents the novel question of whether a recipient of EPA funding has an obligation under Title VI to consider racially discriminatory disparate impacts when determining whether to issue a permit, in addition to compliance with applicable environmental standards. For the reasons set forth below, I conclude that on the facts of this case, the NJDEP had such an obligation and failed to discharge it.”
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