

CITY OF PHILADELPHIA
DEPARTMENT OF PUBLIC HEALTH
ENVIRONMENTAL HEALTH SERVICES
AIR MANAGEMENT SERVICES

June 21, 2012

MEMORANDUM

TO: Air Pollution Control Board Members
FROM: Thomas Huynh, AMS Director *JH*
RE: Air Program Update

Air Quality

- From January 1 to May 31, 2012, there were 54 Good Days (36%), 98 Moderate Days (64%), and 0 Unhealthy Days (0%).
- Philadelphia has been classified by EPA as a nonattainment area for the 2008 8-hour Ozone standard (standard = 0.075 ppm), and for the 2006 24-hour PM_{2.5} standard (standard = 35 ug/m³).

Air Monitoring

AMS is working on siting instruments and purchasing equipment for three new air monitoring sites expected in 2013:

- a Near Road Monitor at the Torresdale Train Station.
- a Continuous Open Path Air Toxics Monitors (currently in negotiations with the PHA Building on Penrose Ferry Road); AMS has taken steps to purchase the needed equipment.
- a Port Monitor (near Walmart and Pier 74).

AMS is transitioning from our current data acquisition system ATX to the AirVision system to accommodate the EPA's data uploading requirement.

Regulatory Services Activities

From February 1, 2012 to May 31, 2012, AMS reviewed 122 air permits, 64 operating licenses, and 439 asbestos permits and licenses. AMS serviced a total of 444 citizen complaints – 281 involving air pollution, 43 involving asbestos, and 120 involving noise. AMS also performed 365 air and noise inspections and 968 asbestos inspections. In addition, AMS observed 407 vehicles at 24 locations and issued 5 citations for violations of the City's anti-idling rules. AMS issued a total of 145 violations, resolved 126 Notices of Violation, and collected \$211,682 in fines and penalties.

State Implementation Plan

- On March 26, 2012, EPA made two determinations regarding the Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE 8-hour ozone moderate nonattainment area (the Philadelphia

Area). First, EPA determined that the Philadelphia Area has attained the 1997 8-hour ozone National Ambient Air Quality Standard (NAAQS). Second, EPA is determining that the Philadelphia Area has attained the 1997 8-hour ozone NAAQS by its attainment date of June 15, 2011.

- On March 29, 2012, EPA proposed to approve a State Implementation Plan (SIP) revision submitted by the Pennsylvania Department of Environmental Protection (PADEP). The revisions pertaining to Pennsylvania incorporate PM_{2.5} into the Pennsylvania SIP.
- On April 12, 2012, EPA proposed to grant limited approval to a SIP revision submitted by PADEP on April 14, 2009. The revision pertains to PADEP's plan approval requirements for the construction, modification, and operation of sources, and is primarily intended to streamline the process for minor permitting actions by authorizing a temporary shakedown period, modifying completeness determinations and modifying public notice requirements for minor plan approvals.
- On May 14, 2012, EPA approved a SIP revision submitted by PADEP on August 9, 2007. This revision pertains to the preconstruction permitting requirements of Pennsylvania's nonattainment New Source Review (NSR) program. The revision is intended to update Pennsylvania's nonattainment NSR regulations to meet EPA's 2002 NSR Reform regulations (NSR Reform), and to satisfy the requirements related to anti-backsliding. Additionally, the proposed revision makes clarifying changes to regulations that are not related to NSR Reform.
- On May 16, 2012, EPA made two determinations regarding the Philadelphia-Wilmington, PA-NJ-DE fine particulate (PM_{2.5}) nonattainment area (the Philadelphia Area). First, EPA made a determination that the Philadelphia Area has attained the 1997 annual PM_{2.5} national ambient air quality standard (NAAQS) by its attainment date of April 5, 2010. Second, EPA is making a clean data determination, finding that the Philadelphia Area has attained the 1997 PM_{2.5} NAAQS, based on quality assured and certified ambient air monitoring data for the 2007-2009 and 2008-2010 monitoring periods.

National Ambient Air Quality Standards

- On February 17, 2012, EPA established a rule for air quality designations for all areas in the United States for the 2010 Primary NO₂ NAAQS (100 ppb hourly and 53 ppb annually). All areas of the country will be designated "unclassifiable/attainment" for the 2010 NO₂ NAAQS based on air quality monitoring data. The effective date is February 29, 2012.
- On April 3, 2012, EPA issued a final rule retaining the current nitrogen dioxide (NO₂) and sulfur dioxide (SO₂) secondary standards to address the direct effects on vegetation of exposure to gaseous oxides of nitrogen (0.053 ppm 3-hour concentration) and sulfur (0.50 ppm annual arithmetic mean).
- On May 21, 2012, EPA established the air quality thresholds that define the classifications assigned to all nonattainment areas for the 2008 ozone national ambient air quality standards (NAAQS) (the "2008 ozone NAAQS") which were promulgated on March 12, 2008. This rule also established December 31 of each relevant calendar year as the attainment date for all nonattainment area classification categories. Finally, this rule provides for the revocation of the 1997 ozone NAAQS for transportation conformity purposes to occur one year after the effective date of designations for the 2008 ozone NAAQS.

- On May 21, 2012, EPA established initial air quality designations for most areas in the United States for the 2008 primary and secondary national ambient air quality standards (NAAQS) for ozone. Philadelphia is classified as being in marginal non attainment.
- On June 15, EPA proposed to revise the current annual, primary NAAQS for PM_{2.5} to a level within the range of 12 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 13 $\mu\text{g}/\text{m}^3$. The proposal would retain the existing 24-hour PM_{2.5} standard at 35 $\mu\text{g}/\text{m}^3$ and set a new PM_{2.5} standard for visibility at either 30 deciviews or 28 deciviews. EPA is proposing to retain the current 24-hour standard for coarse particulate matter (PM₁₀) of 150 $\mu\text{g}/\text{m}^3$, as well as the existing secondary standards for both PM_{2.5} and PM₁₀. The proposal also contains updates to the PM_{2.5} monitoring network. Near-roadway monitoring will be required. We anticipate that Philadelphia will meet the new proposed standard.

Regulation X - Complex Source Review

On May 30, the Ad Hoc Committee had a conference call and recommended the draft Regulation X – Complex Source Review for the Board consideration.

Regulation XIV - Control of Perchloroethylene from Dry Cleaning Facilities

Since regulation XIV went into effect on Dec 13, 2010, AMS has been working with the stakeholders to implement the regulation. There are a total of 124 dry cleaning facilities in Philadelphia, and 52 facilities have applied for the conversion to hydrocarbon machines for the total of 59 Hydrocarbon facilities in Philadelphia. There were 7 existing hydrocarbon facilities before the effective date. 18 Perc facilities have requested and were granted extensions to install non-Perc machines by the end of the year. 37 including 6 stand alone facilities have applied for permits for continue to use Perc. There are 10 facilities that failed to apply for permits for using Perc or ask for extension to install non-Perc machines. NOVs were issued to these facilities. One of them informed AMS that they converted to a drop-off facility and another one stated that they are planning to convert to hydrocarbon. Processing of these NOVs is ongoing. There are 7 facilities that shut down and converted to drop-off (4). AMS inspectors have inspected 29 facilities and done testing at 4 adjacent properties.

Strategic Plan

AMS has begun to implement the Strategic Plan by creating three task forces to address technology, training, and outreach. All three Task Forces have been meeting on a regular basis since April:

- The IT Task Force has been focused on finding ways to allow permit and license applicants to submit forms and pay fees on-line. AMS hopes that by the end of next fiscal year it will be able to provide electronic submission and payment for its simpler application and notification forms.
- The Training Task Force has been focused on investigating ways to improve training at AMS, including establishing a training database, required training courses for each job position.
- The Outreach Task Force has been exploring ways to connect more closely to the public,

including revising our printed materials and possibly translating them into other languages besides English; reaching out to schools to inquire about guest speaking, Lab tours, special projects or curricula; and improving the public's familiarity with our work and our services.

AMS participated in the annual Philadelphia Science Festival on the Parkway and provided outreach at the Lucien Blackwell Library. Several officials from the Shanghai Environmental Protection Bureau, a local air pollution agency in Shanghai China, visited AMS Laboratory. They were interested in PM2.5 monitoring, air toxics and carbonyls analysis, as well as our QA/QC processes. AMS is also assisting the Clean Air Council and University of Pennsylvania with community-based research in the Port Richmond section of the City by providing lab services for particulate weighing.

Other

On April 27, AMS received an award from the Air Quality Partnership at the Earth Fest 2012 at the Temple University Ambler campus, for "going above and beyond" its efforts to increase awareness about air pollution or taking steps to decrease air pollution.

The National Weather Service in Mount Holly and Sterling made the unilateral decision to only post Code Red Air Quality forecasts (when the air Quality Index is unhealthy) and not Code Orange Air Quality forecasts (when the air is unhealthy for sensitive population only). These offices are concerned that the Air Quality Advisories for Code Orange were too frequent and also "covered over" other National Weather Services' products like Heat Advisories. AMS is asking them to reconsider their decision.

EPA Updates

- On February 8, 2012, EPA proposed amendments to the National Emission Standards for Hazardous Air Pollutant (NESHAP) Emissions for Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks; and Steel Pickling-HCl Process Facilities and Hydrochloric Acid Regeneration Plants. The amendments proposed to remove an alternative compliance method for Steel Pickling hydrochloric acid regeneration plants and proposed to incorporate electronic reporting requirements into both NESHAP. There are three chrome plating facilities in Philadelphia but none would be subject to the proposed amendments.
- On February 14, 2012, EPA proposed amendments to the NESHAPs for Secondary Aluminum Production to address the results of the residual risk and technology review that EPA is required to conduct by the Clean Air Act. In addition, EPA proposed amendments to correct and clarify rule requirements and provisions. These proposed amendments would: require emission sources to comply with the emission limits at all times including periods of startup and shutdown; add a definition of affirmative defense; add a requirement to report performance testing through the Electronic Reporting Tool (ERT); add rule provisions allowing owners and operators to change furnace classifications; add rule requirements regarding testing of uncontrolled furnaces; add compliance provisions for hydrogen fluoride (HF) for uncontrolled group 1 furnaces; add operating requirements such as monitoring of

lime injection rates; and make technical corrections and clarifications to the applicability, definitions, operating, monitoring, and performance testing requirements. There are no facilities in Philadelphia that would be subject to these amendments.

- On February 16, 2012, EPA established NESHAPs that will require coal- and oil-fired EGUs to meet hazardous air pollutant (HAP) standards reflecting the application of maximum achievable control technology (MACT). This rule protects air quality and promotes public health by reducing emissions of the HAP listed in CAA section 112(b)(1).
- On March 16, 2012, EPA proposed to revise the definition “regulated NSR pollutant” contained in two sets of Prevention of Significant Deterioration (PSD) regulations and in the EPA’s Emission Offset Interpretative Ruling. This revision would correct an inadvertent error made in 2008 when the EPA issued its final rule to implement the new source review (NSR) program for fine particles with an aerodynamic diameter of less than or equal to 2.5 micrometers (PM_{2.5}). Effectively, this revision would reestablish the interpretation that for measurement of “particulate matter emissions” in the context of the PSD and NSR regulations there is no explicit requirement to include measurement of condensable PM. However, the condensable portion would continue to be required for emissions of particles with an aerodynamic diameter of less than or equal to 10 micrometers (PM₁₀) and PM_{2.5}.
- On March 19, 2012, to inform regulated facilities and the public of AMS’s updated delegation of authority to implement and enforce NESHAPs, EPA made available a copy of EPA’s letter to AMS through the Federal Register notice.
- On March 26, 2012, EPA proposed National Uniform Emission Standards for Storage Vessels and Transfer Operations, Equipment Leaks and Control Devices. EPA also proposed supplemental revisions to the National Uniform Emission Standards General Provisions, which were proposed with the National Uniform Emission Standards for Heat Exchange Systems, signed by the EPA Administrator on November 30, 2011.
- On March 27 EPA proposed a New Source Performance Standard (NSPS) covering greenhouse gas (GHG) emissions from new fossil fuel-fired electric generating units (EGUs). EPA is recommending that new fossil fuel fired power plants meet an output based standard of 1,000 pounds of carbon dioxide per megawatt hour (lb CO₂/MWh gross). The proposal covers fossil fuel fired boilers, integrated gasification combined cycle (IGCC) units and stationary combined cycle turbine units that generate electricity for sale and are larger than 25 megawatts (MW). The proposal would not cover existing units, including units that need permits for modifications, nor would it cover new power plant units that have permits and start construction within 12 months of this proposal or units looking to renew permits that are part of a Department of Energy demonstration project, provided that these units start construction within 12 months of this proposal. EPA is also proposing that plants may opt to meet a 30-year average of CO₂ emissions to meet the standard, under which the plants would meet an 1800 lb CO₂/MWh gross emissions standard for the first 10 years and then ratchet down to a 600 lb CO₂/MWh gross emissions standard over the next 20 years. According to EPA, this would allow carbon capture and sequestration (CCS) to be transitioned in over 10 years in order to meet the lower standard.
- On April 17, 2012, EPA promulgated NESHAPs for Polyvinyl Chloride and Copolymers Production. The final rules established emission standards that apply at all times, including periods of startup, shutdown and malfunction, for hazardous air pollutants from polyvinyl chloride and copolymers production located at major and area sources. The final rules

included requirements to demonstrate initial and continuous compliance with the emission standards, including monitoring provisions and recordkeeping and reporting requirements.

- On May 16, 2012, EPA determined that onboard refueling vapor recovery (ORVR) technology is in widespread use throughout the motor vehicle fleet for purposes of controlling motor vehicle refueling emissions, and, therefore, by this action, EPA waived the requirement for states to implement Stage II gasoline vapor recovery systems at gasoline dispensing facilities in nonattainment areas classified as Serious and above for the ozone national ambient air quality standards (NAAQS). After May 16, states previously required to implement a Stage II program may take appropriate action to remove the program from State Implementation Plans (SIP). Phasing out the use of Stage II systems may lead to long-term cost savings for gas station owners and operators while air quality protections are maintained.