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

June 24, 2010

MEMORANDUM

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

Air Quality

- From January – May 2010, there have been 90 Good Days, 60 Moderate Days, and 1 Unhealthy Day on May 1 for ozone (AQI value = 109, concentration = 79 ppb).
- Philadelphia has been classified as a nonattainment area for ozone (standard=75 ppb), and for particulate matter of less than 2.5 microns for the 24-hour concentration (standard = 35 $\mu g/m^3$) and the annual arithmetic mean (standard = 15 $\mu g/m^3$).

Air Monitoring

- The Baxter NCore site has electrical service and air monitors ($PM_{2.5}$ FRM, PM_{10} FRM, TSP lead, $PM_{2.5}$ FEM, $PM_{2.5}$ speciation for organic compounds, $PM_{2.5}$ speciation for black carbon, CO, SO2, O3 and NOy) are being installed. We anticipate that the site will begin producing data in July of this year.
- A location for the new air monitoring station to be located in the vicinity of the river ports has tentatively been identified at Pier 53 South.

Regulatory Services Activities

From Feb 1, 2010 to May 31, 2010, AMS reviewed 74 air permits, 16 licenses and 97 asbestos permits and licenses. We serviced 557 citizen complaints for air pollution (369), asbestos (45), and noise (143). We performed 482 air and noise inspections and 310 asbestos inspections. In addition, AMS observed 276 vehicles at 31 locations and issued 58 citations for violations of the City's anti-idling rules. For this period, AMS issued 234 violations, resolved 67 Notices of Violation and collected $38,713 in fines and penalties.

State Implementation Plans (SIP)

$PM_{2.5}$: The Pennsylvania Department of Environmental Protection (PADEP) submitted the Philadelphia $PM_{2.5}$ SIP revision to the Environmental Protection Agency (EPA) on April 12, 2010. The attainment plan and supporting documents can be found on the PADEP website:
http://www.dep.state.pa.us/dep/deputate/airwaste/aq/plans/Clean_air_plans.htm#pm25.

Regulation V Control of Emissions of Organic Substances from Stationary Sources

The amended Regulation V was posted in the Public Notices section of three newspapers. No public comment was received and it became effective on April 26, 2010.

Regulation X- Complex Source Review

AMS staff has been working with staff members from Licenses and Inspections, Commerce, City Planning, Streets, and the Law Department to develop guidelines for industry as directed by the Special Master of the Pennsylvania State Supreme Court in order to implement Regulation X in Philadelphia. The Law Department has advised AMS to redraft the regulation which is expected to be ready by the next Board meeting.

Regulation XIV Control of Perchloroethylene from Dry Cleaning Facilities

AMS has revised proposed Air Management Regulation XIV- Control of Perchloroethylene from Dry Cleaning Facilities as per the Board's recommendations. The Ad-hoc Working Group met on June 16, 2010, through telephone conference and recommended that the draft regulation be presented to the Board. The draft regulation requires a continuous quarterly self-monitoring program for co-commercial facilities that wish to continue using Perc after December 31, 2013. These facilities have to be able to demonstrate that they can keep the Perc concentration at the co-located area below 40 ppb during their operation. The regulation also prohibits the use of n-Propyl Bromide for dry cleaning. AMS requests that the Board take action on proposed Regulation XIV.

EPA Update

- On March 3, 2010, EPA promulgated the National Emission Standards for Hazardous Air Pollutants (NESHAP) for existing stationary compression ignition reciprocating internal combustion engines that either are located at area sources of hazardous air pollutant (HAP) emissions or that have a site rating of less than or equal to 500 brake horsepower and are located at major sources of HAP emissions. In addition, EPA promulgated the NESHAP for existing non-emergency stationary compression ignition engines greater than 500 brake horsepower that are located at major sources of HAP emissions. Finally, EPA revised the provisions related to startup, shutdown, and malfunction for the engines that were regulated previously by this NESHAP.

- On March 22, 2010, EPA proposed to add new industry sources to the mandatory greenhouse gas (GHG) reporting program, which currently includes 31 industry sectors. The proposal would require the collection of GHG emissions data from the oil and gas sector, industries emitting fluorinated gases, and facilities that inject and store carbon dioxide underground. New sources under the proposal would begin collecting data on January 1, 2011, and submit their first annual reports to EPA on March 31, 2012.

- On March 26, 2010, EPA issued the Final Rule for National Renewable Fuel Standards (RFS). This rulemaking incorporates changes to the existing RFS program as required by the Energy

Independence and Security Act of 2007 (EISA). This rule implements the revised statutory definitions and criteria, most notably the new greenhouse gas emission thresholds for renewable fuels and new limits on renewable biomass feed stocks. This rulemaking marks the first time that greenhouse gas emission performance is being applied in a regulatory context for a nationwide program. This rule is effective July 1, 2010.

- On April 1, 2010, EPA and the Department of Transportation (DOT) issued the first jointly established federal rules that set greenhouse gas (GHG) emissions standards and improved Corporate Average Fuel Economy (CAFE) standards for light-duty vehicles. Starting with 2012 model year vehicles, the rules together require automakers to improve fleet-wide fuel economy and reduce fleet-wide GHG emissions by approximately five percent every year. EPA requires that by the 2016 model year, manufacturers must achieve a combined average vehicle emission level of 250 grams of carbon dioxide per mile or 35.5 mpg. According to EPA, the joint standards will reduce carbon dioxide emissions by about 960 million metric tons over the lifetime of the vehicles regulated, equivalent to taking 50 million cars and light trucks off the road in 2030.

- On April 5, 2010, EPA finalized its general conformity regulations (the requirements that federal actions conform to SIP requirements). The revisions are designed to update the general conformity regulations – in particular, to reflect the implementation rules EPA issued in 2004 and 2007 for the new ozone and fine particulate matter standards, respectively. The revisions will be effective July 6, 2010.

- On April 30, 2010, EPA published in the Federal Register its final rule establishing more rigorous engine and fuel standards for new marine compression-ignition vessels (i.e., ocean-going vessels, or OGVs). The near-term tier will apply to new engines beginning in 2011. This tier will require more efficient use of current engine technologies such as engine cooling, engine timing and advanced computer controls and is expected to result in a 15 to 25 percent reduction in NO_x levels below current standards. The long-term tier of standards will apply beginning in 2016 and will require the use of high-efficiency emissions control technology, including selective catalytic reduction, to reduce NO_x from current levels by 80 percent. Further, the new fuel requirements generally prohibit the production and sale of marine fuel oil with greater than 1,000 ppm sulfur for use in U.S. waters unless the vessel uses alternative devices, procedures or compliance methods to achieve equivalent emissions reductions.

- On April 30, 2010, EPA proposed Area and Major Source Air Toxics Standards for Industrial Boilers. The proposed rule for major sources applies to 11 subcategories of boilers and process heaters and includes specific requirements for each. EPA is proposing emission limits for mercury, dioxin, particulate matter (as a surrogate for nonmercury metals), hydrogen chloride (as a surrogate for acid gases) and carbon monoxide (as a surrogate for non-dioxin organic air toxics) for existing units that burn oil, coal, biomass or gases other than natural or refinery gas and with a heat input capacity greater than 10 million BTUs/hour. For smaller units and those using natural or refinery gas, EPA is proposing work-practice standards instead of emission limits. The area source proposal addresses units that burn coal, oil, biomass or non-waste materials, but does not address natural or refinery gas-fired units. Smaller units (under 10 million BTUs/hour) would be required to meet work practice standards, while larger units would be subject to emission limits for PM, CO and/or mercury, depending on whether they are new or existing or coal-fired or not.

- On May 13, 2010, EPA issued the final Tailoring Rule, raising the threshold and phasing in

deadlines for permitting GHG emissions from stationary sources. The final rule requires permitting for facilities that are already subject to the Prevention of Signification Deterioration (PSD) program for other pollutants beginning January 2, 2011, if those facilities increase GHG emissions, expressed in carbon dioxide equivalents (CO2e), by 75,000 tons per year (tpy) or more. Similar requirements apply to the Title V program, with only those sources that already have operating permits for other pollutants, or are first applying for Title V permits for other pollutants, subject to GHG requirements beginning January 2, 2011. Beginning July 1, 2011, other new facilities expected to emit at least 100,000 tpy of CO2e will require permits under the PSD program, while existing facilities will require permits for modifications that result in an additional 75,000 tpy or more. Similarly, on July 1, 2011, sources emitting 100,000 tpy or more of CO2e will be subject to Title V. Sources must begin addressing GHGs when they apply for, renew, or revise permits. We estimate that five facilities in Philadelphia will be subject to the rule.

- On June 3, 2010, EPA finalized a new 1-hour SO_2 NAAQS at 75 parts per billion (ppb), based on the 3-year average of the annual 99th percentile (or 4th highest) of 1-hour daily maximum concentrations. The EPA is revoking the existing primary standards for SO_2, which are currently 140 ppb evaluated over 24 hours and 30 ppb evaluated over a year. The final rule also includes revisions to the SO_2 monitoring network. Compliance with the revised standards will be assessed using combined air quality modeling and monitoring. Based on the monitoring data for the last three years at 36 ppb, we expect Philadelphia will be in attainment with the new standard.

Philadelphia Airport

- On May 27, 2010, AMS received comments from the EPA to the Federal Aviation Administration regarding the Draft General Conformity Demonstration for the Philadelphia International Airport expansion. It requires the City of Philadelphia to obtain additional emission reduction credits to offset the emission increase due to the airport expansion.

- On June 23, 2010, the Greater Philadelphia Clean Cities Coalition held a conference at 321 University Avenue to educate participants about the current state of the Electric Vehicles market, the technologies available now and in the future, and the capacity of the grid to accommodate this new market. These vehicles range from small campus transport vehicle similar to golf carts, to large delivery trucks and non road equipment. Approximately 70 participants attended the event, which culminated in a demonstration with 6 different types of light-duty electric vehicles. PECO presented the air quality benefits of electric vehicles, particularly when deployed with smart metering and V2G technologies, which enable the vehicle's owners to both program the vehicle to charge during off-peak hours to optimize use of the grid (reducing cost and emissions) and to sell power back to the grid during periods of nonuse to actually generate revenue from the vehicle as a source of power.

Diesel Emission Reduction Act

- The City is not able to proceed with the construction of the CNG fueling facility and may have to return the $750,000 grant back to the EPA.