



***Commonwealth of Pennsylvania
Department of Environmental Protection
Bureau of Air Quality***

***Ambient Air Monitoring
Network Plan– 2012***

Comment/Response Document

June 30, 2011

**Thomas Corbett, Governor
Commonwealth of Pennsylvania**

**Michael L. Krancer, Secretary
Department of Environmental Protection**

www.depweb.state.pa.us

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PA Department of Environmental Protection
Bureau of Air Quality**

**Comment and Response Document concerning
Pennsylvania's 2012 Annual Air Monitoring Network Plan**

On May 14, 2011, the Pennsylvania Department of Environmental Protection (Department or PA DEP) published a notice in the *Pennsylvania Bulletin* concerning public inspection of Pennsylvania's 2012 Annual Air Monitoring Network Plan. (41 *Pa.B.* 2493). This plan describes ongoing activities to continue conversion of manual PM_{2.5} fine particulate samplers to continuous equivalent methods, locate new PM_{2.5} fine particulate matter sites, install source-oriented ambient lead particulate samplers, and add additional Volatile Organic Compound (VOC) air toxic samplers. The public comment period on the 2012 Annual Air Monitoring Network Plan closed on June 14, 2011. This document summarizes the written comments received during the 30-day public comment period and the Department's response to the comments.

Listing of Commentators for the 2012 Annual Air Monitoring Network Plan
1. Sheila Lunger, Lycoming County
2. Judy Wood, Allegheny County
3. Judy Luther, Montgomery County
4. Ron Keeney, Warren County
5. Brandon Schoonover, Eldred
6. Ellen and Darte Asbell, Berks County
7. Liz Boyles, Blair County
8. Eileen Downward, Lackawanna County
9. John Furlong, Trevoise, PA
10. David S. Kissam, Berks County
11. Jesse Krempasky, Lackawanna County
12. Michelle Roemer-Schoen, Bucks County
13. Alan G. Croasdale, Montgomery County
14. Harry Hochheiser, Allegheny County
15. Valerie Martin, Selinsgrove, PA
16. Myron Arnowitz, PA State Director, Clean Water Action, Pittsburgh, PA
17. Theodore Robinson, Counsel for Citizen Power
18. Kurt J. Weist, Senior Attorney for Penn Future
19. Emily Krafjack, Community, Municipal & Environmental Liaison, Wyoming County
20. Thomas Au, Clean Air Board of Central PA
21. Gavin Biebuyck, Liberty Environmental, Reading

Comments Concerning Natural Gas Drilling and its impact on Air Quality:

Comment: The Department has insufficient information to determine whether national ambient air quality standards (NAAQS) are being violated as a result of gas-drilling activities. Additional air monitors should be sited in communities where gas development activities are ongoing in the Marcellus Shale region. (1-15)

Response: Since 1971, the Department has aggressively monitored air quality across the Commonwealth in order to comply with Federal and State laws and regulations concerning criteria pollutant monitoring, to gauge the effectiveness of the air quality program in meeting health-based NAAQS including ozone, particulate matter, carbon monoxide, lead, nitrogen dioxide, and sulfur dioxide. Most importantly, the monitoring program is designed to ensure the health and safety of Pennsylvania citizens and the environment. The Department has made significant progress in attaining and maintaining the health-based standards. All monitored areas of the Commonwealth currently show attainment of the 1997 8-hour national ambient air quality standards for ozone. Except for the Liberty/Clairton Area in Allegheny County, the 24-hour and annual fine particulate matter (PM_{2.5}) standards are being met across the Commonwealth. The Commonwealth is also continuing to monitor attainment of the carbon monoxide and nitrogen dioxide NAAQS including the recently adopted 1-hour NO₂ standard. Although several partial county nonattainment designations for the 2008 lead NAAQS were recently issued by EPA for Berks and Beaver counties, we are anticipating that those areas will attain the standards by the statutorily prescribed attainment dates. EPA is expected to finalize nonattainment designations for the 2010 1-hour sulfur dioxide health based standard in February 2012—at a minimum all or portions of Allegheny, Beaver, Indiana, and Warren counties will be designated nonattainment based on current monitoring data. The Commonwealth's expansive monitoring network is consistent with EPA's criteria for demonstrating that areas are attaining and maintaining the standards. If additional monitoring stations must be sited to demonstrate that the NAAQS are being met, the network will be expanded, as appropriate and necessary.

The Department acknowledges and understands the concerns of many residents regarding the potential air quality impacts from natural gas exploration and production activities in the Marcellus Shale region of the Commonwealth. In response to an increase in the number of Marcellus well sites in 2009 and 2010, and the corresponding increase in the number of complaints to the Department's regional offices, PA DEP completed three short-term, screening-level air quality sampling initiatives in 2010. The goals of the initiatives included the short-term screening of ambient air concentrations of target pollutants near certain Marcellus Shale gas drilling operations, assessing preliminary air quality impacts, and determining if there were any immediate health risks from ambient pollutant concentrations to nearby residents or communities. Each regional sampling initiative included four to five "sampling weeks" utilizing the PA DEP Bureau of Laboratories Mobile Analytical Unit to measure the concentrations of a target list of pollutants associated with Marcellus Shale Gas operations. The sampling weeks focused on ambient air pollution levels near various permanent and temporary Marcellus operations. Short-term sampling did detect concentrations of certain natural gas constituents including methane, ethane and propane, and associated compounds, in the air near Marcellus operations. However, results of air sampling did not identify concentrations of any pollutant at excessive levels that would likely trigger short-term health issues associated with Marcellus Shale activities. Reports for the three regional short-term sampling initiatives have been

published and are available at www.depweb.state.pa.us. A long-term special-purpose monitoring study proposal will be developed to continue to assess air quality impacts and any potential chronic risk from natural gas operations.

At this time, PA DEP will rely on the existing network of criteria pollutant monitoring sites to gauge whether the cumulative emissions of gas-associated pollutants from the Marcellus industry on a whole, will contribute to a violation of the health and welfare-based federal standards for criteria pollutants. Further adjustments to the network, including additional monitoring sites, could be made based on EPA's revised ozone NAAQS final rule concerning the "Reconsideration of the 2008 Ozone Primary and Secondary National Ambient Air Quality Standards". The final rule is expected in August 2011. In addition to the final 2011 ozone standards, EPA will also propose the "Implementation of the 2011 National Ambient Air Quality Standard for Ozone and Anti-Backsliding Requirements for the Section 185 Fee Program for Purposes of the 1-hour Ozone NAAQS" (hereinafter "Ozone Implementation Rule") in August 2011. EPA's Ozone Implementation Rule is expected to be issued as a final rule in December 2011. Additionally, EPA's final rule entitled "Ambient Ozone Monitoring Regulations: Revisions to Network Design Requirements" (hereinafter "Ambient Ozone Monitoring Rule") should be promulgated by December 2011. This rulemaking will finalize monitoring criteria for the 2011 ozone NAAQS and may also extend the ozone monitoring season for certain states including Pennsylvania. Therefore, PA DEP will reconsider the ozone monitoring network requirements after EPA promulgates the 2011 ozone standards and monitoring requirements for the revised standard and will update the network consistent with federally prescribed monitoring criteria for the ozone standards. Nonetheless, PA DEP Regional Air Quality personnel will continue to aggressively respond to individual air quality complaints regarding Marcellus Shale operations.

The Department does not have primary responsibility for monitoring air quality in Allegheny and Philadelphia counties. The Health Departments in Philadelphia and Allegheny Counties are responsible for ambient air monitoring in their jurisdictions:

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Comments from Myron Arnowitt, PA State Director, Clean Water Action

Comment: The Clean Water Action organization is concerned about the effects of gas drilling not only on water quality, but on air quality as well. The commentator also believes the present monitoring network is inadequate to address pollution that will be created by increased drilling. In addition, the commentator stated that vast areas of the Commonwealth impacted by Marcellus Shale activities are essentially unmonitored. In addition, he would like to see more hazardous air pollutants monitored.

Response: Since 1971, the Department has monitored air quality across the Commonwealth for a variety of air pollutants, in accordance with state and federal laws and regulations, to determine compliance with the National Ambient Air Quality Standards (NAAQS). To this end, the Commonwealth maintains a large network of monitoring stations across the Commonwealth to monitor criteria pollutants (ozone, particulate matter, lead, nitrogen dioxide, carbon monoxide, and sulfur dioxide), including sites in the Northeast portion of the state. The Department will continue to evaluate the adequacy of the existing network and will determine if additional ozone monitors are necessary following EPA's issuance of EPA's final rule concerning the "Reconsideration of the 2008 Ozone Primary and Secondary National Ambient Air Quality Standards" and the final Ambient Ozone Monitoring Rule, which should provide additional criteria concerning monitoring requirements for both the primary and secondary ozone standards.

Although DEP does not monitor ozone concentrations in the immediate vicinity of many Marcellus Shale drilling sites, data from the Commonwealth's existing monitoring network ozone monitors in the central, northeast and southwestern regions are not in violation of the 1997 8-hour ozone standard—implementation of the 2008 ozone standards has been stayed while EPA reconsiders the standards. These samplers would provide an indication of the impacts of drilling activities on ozone pollution, due to the nature of ozone formation in ambient air. Unlike some other types of air pollution, ozone in ambient air is a secondary pollutant. Ground-level ozone forms when nitrogen oxides (NO_x) and volatile organic compounds (VOC) combine and react in the presence of sunlight. Ozone and the precursor pollutants that cause ozone can be transported into an area from pollution sources located several to hundreds of miles away. However, all ozone monitoring sites located in the central, northeast and southwest regions of PA are currently monitoring attainment. We will continue to evaluate the need for additional monitors to assess the ambient air impacts of Marcellus Shale gas operations. We are also anticipating guidance from EPA following the promulgation of the reconsidered 2008 ozone standards, which is now expected in August 2011.

It is important to note that the Department has expanded the number of toxic monitoring sites in Pennsylvania over the past few years. The current network includes 17 air toxic monitoring sites measuring one or more of the following types of pollutants: volatile organic compounds, carbonyls, metals, and mercury.

As discussed in the response to Commenters 1-15 above, PA DEP completed three short-term screening-level air quality sampling initiatives in 2010. The goals of the initiatives included the short-term screening of ambient air concentrations of target pollutants (including many hazardous air pollutants) near certain Marcellus Shale gas operations, assessing preliminary air

quality impacts and determining if there were any immediate health risks from ambient pollutant concentrations to nearby residents or communities.

Each regional sampling initiative included four to five “sampling weeks” utilizing the PA DEP Bureau of Laboratories Mobile Analytical Unit to measure the concentrations of a target list of pollutants associated with Marcellus Shale Gas operations. The sampling weeks focused on ambient air pollution levels near various permanent and temporary Marcellus operations. Short-term sampling did detect concentrations of certain natural gas constituents including methane, ethane and propane, and associated compounds, in the air near Marcellus operations. However, results of air sampling did not identify concentrations of any pollutant at excessive levels that would likely trigger short-term health issues associated with Marcellus Shale activities.

Comments from Theodore Robinson, Staff Attorney for Citizen Power

Comment: The commentator and members of Citizen Power are concerned about ozone levels generated from Marcellus Shale gas drilling activities. The commentator points out ozone levels have risen in rural Wyoming as well as in the Barnett Shale in Texas as a result of gas drilling in these areas. He recommends that the ozone monitor in Biglerville be relocated to Bradford County, where it would be in a position to more accurately reflect on ozone values in the Marcellus region, as per the siting criteria in 40 CFR Part 58, Appendix D. In addition to moving an ozone monitor to Bradford County, Mr. Robinson also requests that the Department investigate the possibility of having a year-round ozone season to measure peaks in ozone activity, especially during winter time temperature inversions where pollutants are trapped close to the ground.

Response: The Department appreciates the commentator’s concern over ozone levels in gas drilling areas and his suggestion to relocate an existing ozone monitoring site. While there are currently no requirements as indicated in Table D-2 of 40 CFR Part 48, Appendix D to relocate an ozone monitor to Bradford County, the PA DEP will determine after the revised primary and secondary ozone standards and related rules including the Ambient Ozone Monitoring Rule are promulgated, whether the recommended Bradford County location or another non-urban ozone monitoring station location is appropriate.

The Department operates an ozone monitoring station in Tioga County, an area that is also impacted by Marcellus related activities. The 2008-2010 design value at the ozone monitor in nearby Tioga County was 0.070 ppm (parts per million), which is below the 1997 and 2008 ozone NAAQS. The Department has not observed increased ozone concentrations at the Tioga County monitoring site. However, the Department continues to watch this site closely to determine if the implementation of contingency measures will be necessary for any violation of the 1997 8-hour ozone standard. In the event that the area fails to maintain the 1997 ozone standard, the Department would be obligated to implement contingency measures in accordance with the maintenance plan approved by EPA on July 6, 2007, when the Tioga County area was re-designated to attainment for the 1997 8-hour ozone standard (72 Fed. Reg. 36,892).

Following the promulgation of EPA's reconsidered 2008 ozone standards and the final Ambient Ozone Monitoring Rule, which may extend the ozone season for certain states including Pennsylvania, PA DEP will determine if year-round monitoring is feasible for certain ozone monitoring stations in the Commonwealth's ambient monitoring network site.

Comments from Kurt Weist, Senior Attorney for Penn Future

Comment: In response to concerns over increasing Marcellus Shale drilling activities, the commentator requests the Department to expand its ozone ambient air monitoring network, particularly in gas drilling areas, including Bradford, Center, Clearfield, Clinton, Lackawanna, Lycoming, Luzerne, Potter, Susquehanna, Sullivan, Tioga, Wayne, and Wyoming Counties. The commentator cites studies correlating natural gas production and increased ozone levels in the Barnett Shale area in Texas, as well as the Green River Basin of Wyoming. Mr. Weist notes that in Pennsylvania, Marcellus Shale drilling may have attributed to 8-hour maximum ozone levels exceeding the ozone NAAQS of 75 ppb at PA DEP's Moshannon (Clearfield County) monitor in early June, and increased levels in Tioga County on the same day. The commentator is concerned ozone NAAQS exceedances will also increase in light of EPA's expected adoption of a standard between 60 and 70 ppb this summer. In addition, Mr. Weist recommends relocating the Department's ozone monitor in Biglerville, which will be discontinued in 2011, to an area closer to Marcellus drilling activities.

Response: The Department appreciates the detailed comments on the proposed network plan and will duly consider the concerns of the commentator as the DEP moves forward with the implementation of new national ambient air quality standards. However, it is important to note that DEP currently has ozone monitors currently operating in eight of the 13 counties mentioned by Mr. Weist. More importantly, the monitors in Centre, Clearfield, Lackawanna, Lycoming, Luzerne, and Tioga counties are monitoring attainment of the 1997 8-hour ozone standard.

As discussed in the response to Commentators 1-15 above, the Department has conducted short-term sampling in Marcellus areas. The sampling looked at many pollutants including ozone precursors (volatile organic compounds and oxides of nitrogen). However, despite these sampling studies, no evidence has been found to date that pollutants in or near these sources have risen to levels to where there is a direct threat to public health, or that NAAQS for any of the criteria pollutants monitored are violating the standards. As drilling expands, the Department will continue to evaluate the adequacy of the existing monitoring network. In addition, the Commonwealth will need to reexamine ozone monitoring requirements over the next few months to address the finalized monitoring network design requirements expected in December 2011. However, the Department is currently examining the feasibility of siting an ozone monitor in a non-urban area in the Northeast or Northcentral regions of the Commonwealth. Once a suitable site is located, the ozone monitor currently operating in Biglerville will be relocated to the selected monitoring site.

The Department agrees that there are distinct atmospheric and geographical differences between the shale play in the Upper Green River Basin of Sublette County, Wyoming. In light of these distinct differences, the Department does not believe that "winter ozone problems" will occur in

the Pennsylvania. However, DEP will determine if year-round ozone monitoring is appropriate for certain areas in the Commonwealth following the promulgation of EPA's "Ambient Ozone Monitoring Regulations: Revisions to Network Design Requirements" in December 2011.

The Department is aware of the study from the Barnett Shale Gas play which estimates that total emissions of ozone precursors from oil and gas facilities exceeded those of motor vehicles in the Dallas-Fort Worth ozone non-attainment area. Texas Commission on Environmental Quality Data indicates that even though gas production in the Dallas-Fort Worth ozone non-attainment area increased from 42 billion cubic feet per year (bcfy) in 1999 to 1773 bcfy in 2009, the eight-hour ozone design value decreased from 101 ppb (parts per billion) to 86 ppb over the same time frame.

The Department is cognizant of the challenges the Commonwealth will face if EPA's reconsidered 8-hour ozone standard is within the 60-70 part per billion range recommended by the Clean Air Scientific Advisory Committee. Should EPA promulgate a revised ozone standard of 70 parts per billion, DEP expects monitors in at least 30 counties to show nonattainment; if the revised standard is 60 or 65 parts per billion all ozone samplers in the Commonwealth will monitor nonattainment of the revised standard. In addition to the reconsidered ozone standard anticipated in August 2011, EPA will also propose the "Implementation of the 2011 National Ambient Air Quality Standard for Ozone and Anti-Backsliding Requirements for the Section 185 Fee Program for Purposes of the 1-hour Ozone NAAQS;" this proposal is expected to be issued as a final rule in December 2011. Due to the pendency of several federal actions related to the reconsidered 2008 ozone standards, it is premature for the Department to consider significant changes to the Department's existing ozone monitoring network or the operating schedule for ozone monitors in this Commonwealth.

Comments from Emily Kraffack, Wyoming County

Comment: In response to increasing Marcellus Shale drilling and associated natural gas processing activities, the commentor requests that DEP establish ambient air monitoring sites in Bradford, Susquehanna, and Wyoming Counties, for all criteria pollutants, as well as VOC and HAP, in particular formaldehyde-containing compounds. Commentor notes the significance of rapidly-expanding natural gas production is that these sites are not restricted to areas zoned for industry, but are often located near residential areas and schools.

Response: Marcellus gas compressor stations in Wyoming County are subject to General Plan Approval and/or General Operating Permit (GP-5). The conditions for operating under a GP-5 permit are described on the Department's web site at: www.dep.state.pa.us/dep/deputate/airwaste/aq/permits/gp.htm. While these stations are below a major-source threshold, the owners and operators of the sources must comply with emission limitations, performance testing, monitoring, recordkeeping, and reporting requirements.

As previously discussed, the Department is developing a long-term special-purpose monitoring study proposal to address the concerns of NAAQS exceedances and chronic risk from exposure to hazardous air pollutants including formaldehyde. The study will be long-term, stationary, and sited based on factors such as the combined emissions from Marcellus sources, population,

topography, and meteorology (to be determined). The monitoring will differ from the screening studies by using Federal Reference Method samplers for criteria pollutants. The study data will provide estimates of community exposure to air pollutants and create a valuable database for the analysis of long-term health impacts.

Comments from Thomas Au, Clean Air Board of Central Pa

Comment: Individual Marcellus gas wells may not be a major source of air pollution, but when combined they can have a significant impact on the air we breathe. He states the Department's short-term studies did not address these impacts and the proposed 2012 Ambient Air Monitoring network plan fails to include provisions for long-term monitoring for criteria pollutant near gas-drilling areas.

Response: The Department's short-term studies in the northcentral, northeast and southwest regions of the Commonwealth were designed to obtain state-specific ambient air concentrations of pollutants of concern (including many hazardous air pollutants) near certain Marcellus Shale gas operations, assess preliminary air quality impacts and determine if there were any acute health risks in nearby communities. Based on the preliminary findings, intends to develop a long-term special-purpose monitoring study proposal to address the concerns of NAAQS exceedances and chronic risk from exposure to hazardous air pollutants. The protocol for the study is being designed to obtain estimates of community exposure to air pollutants and create a database for the analysis of long-term health impacts.

Comments from Gavin Biebuyck, Liberty Environmental, Reading

Comment: In response to EPA findings regarding residual risk for the secondary lead smelter industry and the presence of nearby lead-acid battery plants, commentor requests heavy metals analysis of sample filters generated by the Department's lead monitors in Berks County; in response to EPA findings regarding "unregulated emissions points" and "fugitive emissions" not adequately covered by existing federal lead emissions regulations, commentor requests that all DEP lead monitors operate on a 1-in-3 day sample schedule, instead of the 1-in-6 sampling schedule currently in place.

Response: Currently, PA DEP operates a network of particulate samplers that are analyzed for toxic metals including arsenic, cadmium, beryllium, chromium and lead, and a separate network of particulate samplers using the Federal Reference Method for lead. Toxic metals are sampled on quartz fiber filters while lead samples must be sampled on glass fiber filters as required by the Federal Reference Method for lead. DEP has conducted a comparative study of metals collected via both glass fiber and quartz filters. This study indicates that the two sets of data are not directly comparable, due to higher blank levels associated with the glass fiber filters, particularly for arsenic.

The EPA document "CASAC+AAMMSC+Lead+FRM+PR+white+paper+08-12-10.pdf" discusses the need for laboratory evaluation of glass fiber filters and quartz fiber filters for lead

and other toxic metals. Until EPA issues further guidance or revises their requirements to allow lead sampling on quartz filters, DEP will not report other toxic metals analyzed on lead filters. The EPA guidance document “LeadDataReportingAQS043009.pdf” on creating source-related lead sites in and reporting lead results to the EPA Air Quality System (AIRS/AQS) specifies a 6-day sampling frequency and how the data will be used to calculate the quarterly rolling average concentration. Therefore, the Department will continue the 1-in-6 day lead sampling frequency.

Comment: The Department should conduct carbonyl sampling near the Pioneer Crossing Landfill in Berks County due to formaldehyde emissions; in response to EPA findings regarding unacceptably high cancer risks associated with dioxin/furans emitted by secondary lead smelters, commentator requests DEP to ascertain feasibility of monitoring for these pollutants around large sources.

Response: The Department acknowledges and understands the concerns of the commentator. However, the establishment of a carbonyl network is not feasible at this time. PA DEP evaluated the feasibility of developing laboratory capability to analyze for dioxins and furans after EPA issued ambient air toxics Method TO-9. Due to the technical requirements and cost of a high resolution GC/MS laboratory, it was not considered feasible. However, the Department will continue to require the owners/operators of sources emitting carbonyls including formaldehyde to conduct source testing to demonstrate compliance with enforceable emission limits. Dispersion modeling will also be required, when necessary, to assess acute and chronic risk. In the case of Pioneer Crossing landfill, the Department has found that the modeled ambient impact of formaldehyde is acceptable and there is no valid reason to conduct post-construction ambient air monitoring for formaldehyde. The Department’s analyses were based upon emission rates that will be verified through stack testing.

Comment: The Department should install source-impact ambient air monitors for sulfur dioxide (SO₂) near the GenOn Titus Station in Berks County, and the GenOn Portland Station in Northampton County.

Response: The PA DEP monitors for SO₂ in accordance with the Network Design Criteria mandated by EPA in 40 CFR Part 58, Appendix D. Effective August 23, 2010, EPA requires a monitoring agency to maintain a minimum number of SO₂ monitors in Metropolitan Statistical Areas (MSA), based on a combination of population and emission data. In addition, SO₂ monitoring sites are required to be one of several different types of monitoring sites, as referenced in 40 CFR Part 58, Appendix D, Section 4.4.

Using current available data, Population Weighted Emissions Index (PWEI) calculations for the Allentown-Bethlehem-Easton MSA (which includes Northumberland County) indicate a requirement for a minimum of one SO₂ monitor in this region. The SO₂ monitor at the Easton air monitoring site (Northumberland County) meets this requirement and will therefore not be relocated to areas near the GenOn Portland or Titus generating stations. The Easton air monitoring site is a population exposure-type site, which meets the requirements of 40 CFR Part 58, Appendix D, Section 4.4. Consequently, it is located in an area of high population density, away from immediate SO₂ sources, in accordance with EPA requirements. Although the GenOn

Portland Generating Station is a major SO₂-emitting source, the Department anticipates significant SO₂ reductions in order to comply with the annual SO₂ budgets in EPA's Cross State Air Pollution Rule signed by the EPA Administrator on July 6, 2011; additionally, EPA has been ordered by the U.S. Court of Appeals for the DC Circuit to finalize the "Utility MACT" Rule by November 16, 2011. Along with that rule, EPA is proposing to revise the new source performance standards (NSPS) for fossil-fuel-fired Electric Generation Units (EGUs) that would also establish emissions standards including particulate matter, sulfur dioxide, and nitrogen oxide emission limits for new coal- and oil-fired power plants.

Using current available data, PWEI calculations for the Reading MSA (which includes Berks County) indicate no requirement for a minimum number of SO₂ monitors in this region. However, to support SO₂ monitoring in this region, PA DEP will continue to maintain an SO₂ monitor at the Reading Airport monitoring site.

Comment: The Department should establish maximum-concentration ambient air monitoring sites for mercury near locations predicted to have high mercury deposition levels, such as coal-fired plants.

Response: Pursuant to the terms of a grant agreement with the Department, the Pennsylvania State University operates a network of nine mercury wet deposition monitoring sites in conjunction with the National Acid Deposition Program Mercury Deposition Network (MDM). To ensure consistency, there are strict quality controls and operating procedures for the national network sites and all mercury samples in the national network are analyzed at a single EPA contract laboratory. EPA modeled mercury deposition at a national level on a 40 km² resolution. PA DEP believes that the current network is adequate to characterize deposition patterns from major known mercury sources.

On March 16, 2011, EPA issued the proposed "Utility MACT Rule" which is expected to substantially reduce emissions of toxic air pollutants from power plants, a source that is estimated to be responsible for approximately 50 percent of all mercury emissions. Implementation of the final MACT rule will reduce emissions of heavy metals, including mercury, through various control technology systems including active carbon injection, dry sorbent injection and flue gas desulfurization units. Consequently, high mercury deposition levels will be reduced substantially in Pennsylvania. Moreover, the Department expects the performance testing requirements to demonstrate compliance with the Utility MACT rule and the existing mercury monitoring network will allow PA DEP to adequately assess mercury deposition in the Commonwealth.