

**Delaware  
Air Quality  
Management**

**2009 - 2013**

**Air Toxics Strategic Plan**

**Year End Status**  
(January through December 2009)

**Summary Report**

**Delaware**  
**Air Quality Management**  
**2009 Air Toxics Strategic Plan**

**The Air Toxics Strategic Plan (ATSP) is a five-year plan of activities to be undertaken by Air Quality Management and other DNREC agencies to reduce the risk of adverse health effects caused by the inhalation of air toxics. The 2009 ATSP, finalized on December 31, 2008, has been organized within the following framework.**

- **Implement and grow an ongoing program to address the risks from exposure to air toxics**
- **Build a greater understanding of ambient air toxics environment**
- **Identify the potential harm from exposure to air toxics**
- **Gather information related to air toxics sources**
- **Identify options for reducing air toxics in the environment**
- **Implement appropriate actions to reduce the harm from exposure to air toxics**
- **Evaluate the effectiveness of the actions taken to reduce harm from exposure to air toxics**
- **Enhance AQM Air Toxics Resources**

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **1. Implement appropriate actions to reduce the harm from exposure to air toxics**

### **a. Key Accomplishments**

- i. Awarded 193 grants and reserves totaling \$4.9 million, through the Delaware Energy Office, for implementation of renewable and advanced energy technologies programs. (Ongoing activity)
- ii. Completed 16 full compliance evaluations (FCEs) for the major source air toxics facilities covered in the 2008/2009 Compliance Monitoring Plan.
- iii. Completed 9 FCEs for the area source air toxics facilities.
- iv. Completed 19 compliance evaluations for perchloroethylene dry cleaning facilities.
- v. Completed 93 consultations of auto body shops to provide compliance assistance information on a recently promulgated federal regulation.
- vi. Completed 127 inspections of regulated gasoline dispensing facilities.
- vii. Tracked 291 vapor recovery tests of regulated gasoline dispensing facilities.
- viii. Completed 178 perceptible leak tests on gasoline delivery vessels.
- ix. Completed installation of the following diesel retrofits.
  1. Nineteen (19) Red Clay School District school buses.
  2. Heavy duty off-road diesel engines at the Port of Wilmington.
- x. Incorporated air toxics standard requirements into Delaware air permits.
  1. Incorporated area source hospital ethylene oxide sterilizer requirements in Section 9 of Regulation 1138 into Christiana Care's Regulation 1102 construction permit.
  2. Completed case-by-case MACT determination, incorporating PVC MACT requirements, and issued the final Formosa Plastics Title V permit.
- xi. Completed infrastructure development of the Delaware Sustainable Energy Utility and introduced two new energy efficiency programs.
  1. Appliance Rebate Program on September 9, 2009.
  2. Commercial Lighting Efficiency program on December 15, 2009.
- xii. Completed an adoption of the area source hospital ethylene oxide sterilizer standard (Section 9 of Reg. 1138). The newly adopted requirements are more public health protective than a similar national standard.
- xiii. Completed an adoption of the area source plating and polishing standard (Section 10 of Reg. 1138). The newly adopted requirements are more public health protective than a similar national standard.
- xiv. Requested delegation of Delaware's newly adopted area source standard for lead acid battery manufacturing plants (Section 11 of Reg. 1138) in lieu of the Federal standard at 40 CFR Part 63 Subpart PPPPPP.
- xv. Requested delegation of Delaware's newly adopted area source standard for hospital ethylene oxide sterilizers (Section 9 of Reg. 1138) in lieu of the Federal standard at 40 CFR Part 63 Subpart WWWW.
- xvi. Requested delegation of Delaware's newly adopted area source standard for plating and polishing operations (Section 10 of Reg. 1138) in lieu of the Federal standard at 40 CFR Part 63 Subpart WWWW.

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **1. Implement appropriate actions to reduce the harm from exposure to air toxics**

### **a. Key Accomplishments**

- xvii. Assisted small business by promoting programs and improving communications with the Department through telephone and personal visits.
  - 1. Provided assistance to 6 more newly pledged marinas in preparing the Operating and Maintenance Plans under the Clean Marina program. (Ongoing activity)
  - 2. Updated the asbestos educational, including addition of a Spanish translation, and distributed the information through a variety of medium.
    - a. The Governor’s Entrepreneurial Business Conference on June 5, 2009.
    - b. Local and county governmental agencies.
    - c. The Delaware Contractors Association.
    - d. DAWM Environmental Crime Unit.
  - 3. Participated in the Public Workshop for the proposed adoption of a new area sources standard applicable to plating and polishing operations on June 9, 2009 and miscellaneous part and products surface coating operations on September 24, 2009.
  - 4. Completed the Regulatory Advisory Service consultation for a potential new business subject to two air toxics standards, Sections 6 and 10 of Regulation 1138.
- xviii. Completed school bus anti-idling outreaches at the following:
  - 1. Woodside Farm Creamery’s “Day on the Farm” event on May 30, 2009.
  - 2. Delaware State Fair from July 23 – August 1, 2009.
  - 3. Coast Day on October 3, 2009.
- xix. Completed energy efficiency/conservation educational and outreach programs at the following:
  - 1. Great Green Expo on March 21, 2009.
  - 2. Delaware State Fair from July 23 – August 1, 2009.
  - 3. Delaware Electric Cooperative’s Annual Meeting on August 11, 2009.
  - 4. Coast Day on October 3, 2009.
- xx. Showcased the alternative fuel vehicle at the following:
  - 1. Great Green Expo on March 21, 2009.
  - 2. Bayshore Ford’s “Lunch and Learn” program on September 18, 2009.
- xxi. Completed SmartWay public outreaches at the following:
  - 1. Delaware State Fair from July 23 – August 1, 2009.
  - 2. Two Wilmington Blue Rock games in August 2009.
  - 3. Bayshore Ford’s “Lunch and Learn” program on September 18, 2009.
- xxii. Completed training and certification of 2 more class of “Energy Auditors” for the Home Performance with Energy Star Program. (Program now administered within the Delaware Tech curriculum)

### **b. Significant Current Activities**

- i. Implementing the grant received to install heavy duty diesel engine replacements on off-road diesel equipment at the Port of Wilmington. (Est. completion – 1Q/2010)
- ii. Implementing the grant received for installation of a truck stop electrification project at the Smyrna Rest Stop. (Est. completion – 2010)

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **1. Implement appropriate actions to reduce the harm from exposure to air toxics**

### **b. Significant Current Activities**

- iii. Incorporating electric arc furnace standard requirements in 40 CFR Part 63 Subparts YYYYYY during the renewal of Evraz Claymont Steel’s Title V permit. (Est. completion – July 2010)
- iv. Adopting three area source air toxics standards under Regulation 1138, in lieu of one all encompassing standard similar to the federal “Paint Stripping and Miscellaneous Surface Coating Standard” (40 CFR Part 63 Subpart HHHHHH).
  - 1. Section 13 applicable to paint stripping operations. (Est. completion – September 2010)
  - 2. Section 14 applicable to miscellaneous parts or products surface coating operations. (Est. completion – April 2010)
  - 3. Section 15 applicable to motor vehicle or mobile equipment surface coating operations. (Est. completion – September 2010)
- v. Continuing to develop new energy efficiency programs under the Delaware Sustainable Energy Utility.
  - 1. Developing a Residential Energy Efficiency program. (Est. introduction – 3Q/2010)
  - 2. Expanding the Commercial Efficiency program into other applications. (Est. introduction - 3Q/2010)
- vi. Assisting small business auto body shops by promoting programs and improving communications with the Department.
  - 1. Establishing an auto body work group to identify key issues and best communication practices. (Est. completion – 2010)
  - 2. Working with EPA to arrange a special “Collision Repair Training” program in early 2010. (Est. completion – January 2010)
  - 3. Providing timely regulatory information and compliance assistance tools to affected facilities. (Est. completion – October 2010)
- vii. Continuing to distribute the revised compliance calendar to new and existing perchloroethylene dry cleaning facilities. (Est. completion – 2010)
- viii. Continuing to provide compliance assistance to gasoline delivery fleet owners in meeting annual testing and permitting requirements. (Ongoing activity)
- ix. Working with EPA Region 3 to develop educational programs promoting the implementation of the SmartWay Transport programs. (Ongoing activity)

### **c. Pending**

- i. The adoption of federal area source standards applicable to gasoline distribution facilities (40 CFR Part 63 Subparts BBBB and CCCCC) have been postponed until 2010, due to a higher priority assigned to the adoption of area sources standards applicable to motor vehicle, mobile equipment, or miscellaneous parts or products surface coating operations and to plating and polishing operations (40 CFR Part 63 Subparts HHHHH and WWWWW). (Est. completion – 2011)
- ii. Implementation of DATAS Phase II communication and outreach plan and related activities were delayed pending completion of the updated DATAS Phase II risk assessments. (Est. completion – 2010)

## **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

### **2. Implement an ongoing program to address the risks from exposure to air toxics**

#### **a. Key Accomplishments**

- i. Issued the 2008 AQM Air Toxics Strategic Plan Year-End Status Report on February 23, 2009. This report summarized the key accomplishments during 2008 and identified the significant ongoing activities continuing into 2009.
- ii. Issued the 2009 AQM Air Toxics Strategic Plan Mid-Year Status Report on September 2, 2009. This report summarized the key accomplishments between January and June 2009 and identified significant ongoing activities.
- iii. Finalized the most appropriate regulatory strategy for Delaware’s adoption of the federal “Paint Stripping and Miscellaneous Surface Coating standard” (40 CFR Part 63 Subpart HHHHHH) that will affect over 200 Delaware sources. The cross-Departmental representation recommended separating the federal standard into three separate area source air toxics standards under Regulation 1138.
- iv. Provided technical updates to Mid-Atlantic Regional Air Management Association (MARAMA) for their March 2009 “HON/MON” MACT Workshop.

#### **b. Significant Current Activities**

- i. Actively participating on NACAA air toxics committee and supporting MARAMA’s air toxics programs. (Ongoing activity)
- ii. Continuing to encourage and support marinas to obtain certification on a case-by-case basis. Support was provided to six (6) new marinas seeking certification during 2009. This activity promotes the adoption of voluntary management practices to prevent pollution at marinas. (Ongoing activity)
- iii. Actively participating in local, regional, and national committees, including the following, to identify energy issues, develop strategies/solutions, and implement Delaware’s Energy Program. (Ongoing activities)
  1. Clean State Program (Alternative Fuels).
  2. National Association of State Energy Officials (NASEO).
  3. Delaware Tech Applied Energy Education Advisory Committee.
- iv. Actively developing the 2010 AQM Air Toxics Strategic Plan. The near final draft was circulation for comments at year end. The 2010 plan identifies planned activities to be undertaken by multiple Delaware agencies between 2010 and 2014 to reduce the adverse effects of air toxics in Delaware. (Est. completion – January 2010)

#### **c. Pending**

- i. EPA Region 3’s Claymont Industrial Partnership Initiative to identify voluntary measures to reduce air toxics from both stationary and mobile sources in the Claymont area continued to be inactive during the period. (Activity not included in the 2010 AQM Air Toxics Strategic Plan)

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **3. Build greater understanding of ambient air toxics environment**

### **a. Key Accomplishments**

- i. Monitoring of air toxics continued at the Wilmington [carbonyls, metals, and volatile HAPs] and Delaware City [volatile HAPs] monitoring stations. These air toxics monitoring data are being used to enhance our knowledge of air toxics in Delaware’s environment. (Ongoing activity)

### **b. Significant Current Activities**

- i. Continuing the “Community Air Toxics Study” monitoring project that utilizes a gas chromatographic/mass spectrometer to measure concentrations of multiple hazardous air pollutants (HAPs) at various sites, including schools, in Wilmington. This data will provide insights on the spatial variation of HAP concentrations compared to the existing HAP monitoring results at Wilmington monitoring station. (Est. completion – December 2011)
- ii. Continuing to provide support for the University of Delaware’s special project on near real time organic aerosol speciation at Wilmington monitoring station. This data will provide greater insights on the temporal variation of selected HAP concentrations compared to the existing HAP monitoring results at Wilmington monitoring station. (Est. completion – January 2010)

## **4. Identify potential harm from exposure to air toxics**

### **a. Key Accomplishments**

- i. Completed revisions of emissions inventory and modeling for the DATAS Phase II project following the initial quality assurance review.
- ii. Coauthored and presented a technical paper on use of Sub-Grid Scale Variability (SGV) in short and long term exposure assessments at the American Meteorological Society Annual Meeting.
- iii. Coauthored a technical paper on stochastic parameterization of within-grid concentration variability of concentrations for presentation at the American Meteorological Society Annual Meeting on January 21, 2010.

### **b. Significant Current Activities**

- i. Revising initial risk assessments of the DATAS Phase II project based on newly remodeled air toxics concentrations. (Est. completion – 2010)
- ii. Initiated development of the methodology for incorporation of final DATAS Phase II results into Geographic Information Systems (GIS). (Est. completion – 2010)

### **c. Pending**

- i. Evaluation of the impact of the DATAS Phase II risk assessment results on various AQM programs were delayed pending completion of the updated DATAS Phase II risk assessments. (Activities included in 2010 ATSP)

# 2009 Air Toxics Strategic Plan – Year End Status – Summary Report

## 5. Identify options for reducing air toxics in the environment

### a. Key Accomplishments

- i. Submitted a grant application for diesel retrofits through Mid Atlantic Diesel Collaborative. The project will reduce diesel particulate emissions from mobile equipment. (Delaware was not awarded a grant).
- ii. Submitted and awarded an American Recovery and Reinvestment Act grant in April 2009. The grant funding will be used for
  1. Smyrna Rest Area truck stop electrification.
  2. Fort Delaware alternative power.
  3. Additional school bus diesel retrofits.\*
  4. City of Wilmington heavy diesel engine retrofits.\*

\*Purchase orders issued for the two diesel retrofits during 3Q09)
- iii. Submitted both State and National Clean Diesel grant applications for installation of retrofits to State and municipal heavy diesel vehicles. These projects, if grants are awarded, will reduce diesel particulate emissions.
- iv. Identified path forward for implementing the case-by-case MACT determination for the vacated Boiler MACT standard in Delaware.
- v. Completed identification of Delaware sources potentially affected to the planned adoption of Section 14 of Regulation 1138 applicable to surface coating operations that spray apply coating to miscellaneous metal and/or plastic parts or products.

### b. Significant Current Activities

- i. Participating with WILMAPCO and DelDOT on developing 8-hour conformity determinations. Recommended the use of revisions to the conformity determination, which were subsequently made. (Ongoing activity)
- ii. Reviewed and made significant comments during update of Preliminary Land Use Service (PLUS) Application. (Ongoing activity)
- iii. Continuing to participate in the Claymont Community Coalition, as needed. (Ongoing activity)
- iv. Initiated new outreach activities in the communities near the Port of Wilmington. (Ongoing activity)
- v. **New activity.** Participating with MARAMA and EPA Region 3 to develop an outreach program for the Clean Diesel Campaign. (Est. completion – 2010)

### c. Pending

- i. A number of air toxics activities ranging from outreach to identification of mobile source “hot spots” were delayed pending completion of the updated DATAS Phase II risk assessments. (Activities included in 2010 ATSP)
- ii. Five EPA area source standards proposed during this period were not reviewed and commented upon, as resources were directed to higher priority activities. These five standards were applicable to area source reciprocating internal combustion engines, paint and allied products manufacturing, prepared feeds manufacturing, asphalt processing, and non-ferrous foundries.

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **6. Gather information related to air toxics sources**

### **a. Key Accomplishments**

- i. Monitoring of air toxics continued at the Wilmington [carbonyls, metals, and volatile HAPs] and Delaware City [volatile HAPs] monitoring stations. These air toxics monitoring data are being used to enhance our knowledge of air toxics in Delaware’s environment. (Ongoing activity)
- ii. Completed review of inventory for several pollutants that appeared to produce unexpected results in the modeling of the DATAS Phase II project. Identified several inventory errors and resubmitted corrected inventory of remodeling.
- iii. Completed the 2008 national emissions inventory protocols.
- iv. Submitted the UST Semiannual Activities Reports to EPA.

### **b. Pending**

- i. Development of the source apportionment information for air toxics emissions was delayed pending completion of the updated DATAS Phase II risk assessments. (Activity included in 2010 ATSP)

## **7. Evaluate the effectiveness of the actions taken to reduce harm from exposure to air toxics**

### **a. Key Accomplishments**

- i. Monitoring of air toxics continued at the Wilmington [carbonyls, metals, and volatile HAPs] and Delaware City [volatile HAPs] monitoring stations. These air toxics monitoring data are being used to enhance our knowledge of air toxics in Delaware’s environment. (Ongoing activity)

### **b. Significant Current Activities**

- i. Initiated discussion for additional reductions of multi-pollutants (including mercury) from electrical generation units less than 25 MW. (Est. completion – 2010)

### **c. Pending**

- i. Development of the source apportionment information for air toxics emissions was delayed pending completion of the updated DATAS Phase II risk assessments. (Activity included in 2010 ATSP)

# **2009 Air Toxics Strategic Plan – Year End Status – Summary Report**

## **8. Air toxics resources development**

### **a. Key Accomplishments**

- i. Delaware's air toxics modeler completed review of New Jersey study addressing personal risk exposure and co-authored a technical paper, based on this information, which was published in the May 2009 "Atmospheric Environment."

### **b. Significant Current Activities**

- i. Implemented and increasing the use of federal and other "Webinar" sources as a major component in education/training of personnel on air toxics related topics, in lieu of attendance of workshops that require travel. (Ongoing activities)