

**City of Philadelphia
Department of Public Health
Air Management Services (AMS)
Reasonably Available Control Technology (RACT)
State Implementation Plan (SIP) Revision
under the 1997 8-Hour Ozone
National Ambient Air Quality Standards (NAAQS)**

20150812 SIP Revision

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**Reasonably Available Control Technology (RACT) State Implementation Plan (SIP)
Revision for the 1997 8-hour Ozone National Ambient Air Quality Standard (NAAQS)**

Statutory Authority:

25 Pennsylvania Code Subpart C Article III
Philadelphia Air Management Code 3-301 of the Philadelphia Code

Background:

The federal Clean Air Act (CAA) of 1990 gives states primary responsibility for achieving the National Ambient Air Quality Standards (NAAQS). The NAAQSs are established by the U.S. Environmental Protection Agency (EPA) as the maximum concentrations in the atmosphere for specific air contaminants to protect public health and welfare. The principal mechanism at the state and local level for complying with the CAA is the State Implementation Plan (SIP). A SIP outlines the programs, actions, and commitments a state will carry out to implement its responsibilities under the CAA. Once approved by the EPA, a SIP is a legally binding document under both state and federal law.

In June 2004, EPA designated 126 areas of the country as “non-attainment” under the 1997 8-hour ozone NAAQS. Among those non-attainment areas is the Philadelphia-Wilmington-Atlantic City Moderate Non-Attainment Area (NAA) that includes three counties in Delaware, five counties in eastern Pennsylvania, and eight counties in southern New Jersey.

On November 29, 2005, EPA published an ozone implementation rule to address nonattainment SIP requirements for the 1997 8-hour ozone NAAQS (the Phase 2 Ozone Implementation Rule; 70 FR 71612). In the Phase 2 Ozone Implementation Rule, EPA required that states meet the RACT requirements under the 1997 8-hour ozone NAAQS, either through a certification that previously adopted RACT controls in their SIP approved by EPA under the 1-hour ozone NAAQS continue to represent adequate RACT control levels for 8-hour ozone attainment purposes, or through the adoption of new or more stringent regulations that represent RACT control levels (70 FR 71655).

On September 29, 2006, PADEP submitted on behalf of AMS a SIP revision for Philadelphia County to meet the RACT requirements for the 1997 8-hour ozone NAAQS. The 2006 SIP revision consisted of a demonstration that Philadelphia County has met the RACT requirements for Nitrogen Oxides (NO_x) and Volatile Organic Compounds (VOC), and included: (1) A certification that previously adopted RACT controls in Pennsylvania's SIP that were approved by EPA for Philadelphia County under the 1-hour ozone NAAQS are based on the currently available technically and economically feasible controls, and continue to represent RACT for the 8-hour implementation purposes; (2) the adoption of federally enforceable permits that represent RACT control levels for four major VOC sources; and (3) a negative declaration that certain VOC sources do not exist in Philadelphia County.

In November 2008, several parties challenged EPA's Phase 2 Ozone Implementation Rule. In particular, EPA's determination that compliance with the NO_x SIP Call could satisfy NO_x RACT requirements for EGUs in nonattainment areas was challenged. As a result of this litigation, the Court decided that the provisions in the Phase 2 Ozone Implementation Rule providing that a state need not perform (or submit) a NO_x RACT analysis for EGU sources subject to a cap-and-trade program in accordance with the NO_x SIP Call were inconsistent with the statutory requirements of section 172(c)(1) of the CAA. In the 2006 SIP Revision, AMS certified as RACT, 25 PA Code Chapter 145 Subchapter A, which established a NO_x budget and trading program for EGUs and other large sources to control transport emissions.

On June 22, 2010, PADEP submitted another SIP revision supplementing Philadelphia County's RACT demonstration under the 1997 8-hour ozone standard. The 2010 SIP revision consisted of: (1) The adoption of two regulations to meet control technique guidelines (CTG) RACT requirements, and (2) a negative declaration for a CTG source category.

On August 26, 2008 (73 FR 50270), EPA published a notice of proposed rulemaking (NPR) proposing approval of the 2006 SIP revision. On June 19, 2013 (78 FR 36716), EPA withdrew its August 26, 2008 proposed rule due to the Court decision regarding the Phase 2 Ozone Implementation Rule EPA determined it could not approve the presumption in the 2006 SIP submittal that the NO_x SIP Call constitutes RACT for EGU sources in Philadelphia County. In addition, EPA also determined that the 2006 SIP revision did not specifically and sufficiently address source-specific RACT controls for the 1997 8-hour ozone NAAQS required under 25 Pa Code 129.91-94. AMS had previously determined source-specific RACT controls for 46 major sources in Philadelphia County under the 1-hour ozone NAAQS, for which AMS needs to determine RACT under the 1997 8-hour ozone NAAQS.

On June 19, 2013, EPA also proposed conditionally approval of the Philadelphia County's RACT demonstration under the 1997 8-hour ozone NAAQS, as provided in the 2006 and the 2010 SIP revisions. The conditional approval was finalized on December 13, 2013 (78 FR 75902). The conditional approval was based upon PADEP's April 26, 2013 letter in which AMS committed to submit to EPA additional SIP revisions to address the deficiencies in the current RACT demonstration for Philadelphia County. The SIP revisions will provide source-specific RACT determinations for 10 major sources of VOC and NO_x in Philadelphia County, as listed in EPA's final notice, and a certification that previously adopted source-specific RACT controls approved by EPA in Pennsylvania's SIP for the 1-hour ozone NAAQS for the remaining sources in Philadelphia County continue to adequately represent RACT for the 1997 8-hour ozone NAAQS.

On June 26, 2014 and September 20, 2014, notice that AMS proposed to revise the SIP to meet the requirements of the RACT set forth by the Clean Air Act under the 8-hour Ozone NAAQS was published in the Philadelphia Daily News. Notice that AMS proposed to revise or issue RACT plan approvals for certain facilities was published in the Philadelphia Daily News on September 18, 19, and 22 of 2014.

SIP Revision:

This SIP revision is intended to partially satisfy AMS' commitment by addressing source-specific RACT determinations for certain major sources of VOC and/or NO_x and certifying that previously adopted source-specific RACT controls approved by EPA in the Pennsylvania's SIP under the 1-hour ozone NAAQS continue to adequately represent RACT for the 1997 8-hour ozone NAAQS.

Table 1 provides a list of facilities and the RACT documentation. The technical memos address source-specific RACT determinations and/or provide certifications that the 1-hour ozone NAAQS continue to adequately represent RACT for the 1997 8-hour ozone NAAQS.

This SIP revision also includes revisions to the approved RACT plan approvals for the following facilities:

- Philadelphia Energy Solutions Refining and Marketing LLC (including Tank Farm) (3144 Passyunk Ave)
- Exelon Generating Company – Richmond Station (3901 N. Delaware Avenue, Philadelphia, PA 19137)
- Veolia Energy – Schuylkill Station (2600 Christian Street, Philadelphia, PA 19146)
- Kinder Morgan, previously GATX (3300 North Delaware Avenue)
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The technical memos and RACT plan approvals listed in Table 1 supersede the RACT documents provided in the June 26, 2014 and September 20, 2014 SIP notices.

Table 1 – Technical Memos / RACT Plan Approvals

(files attached separately in zip file)

- Philadelphia Energy Solutions Refining and Marketing LLC (including Tank Farm) (3144 Passyunk Ave)
Technical Memo: **[01501] – TECHNICAL MEMO.pdf**
RACT Plan Approval: **[01501] – RACT PLAN APPROVAL.pdf**
[01501] – RACT Update July 2015 Rev E.pdf
[01501] – RACT Cost Effectiveness Update 7-24-15.xlsx
[01501] – RACT Attachment A.pdf

- Honeywell International (Formerly Sunoco Chemical) – Frankford Plant (4700 Bermuda Street)
Technical Memo: **[01551] – TECHNICAL MEMO.pdf**

- Sun Chemical (3301 Hunting Park Avenue)
Technical Memo: **[02052] – TECHNICAL MEMO.pdf**

- Allied Tube & Conduit Corporation (11350 Norcom Road)
Technical Memo: **[03363] – TECHNICAL MEMO.pdf**

- Cardone Industries (5660 Rising Sun Avenue)
Technical Memo: **[03887 – 02287] – TECHNICAL MEMO.pdf**

- Exelon Generating Company – Richmond Station (3901 N. Delaware Avenue, Philadelphia, PA 19137)
Technical Memo: **[04903] – TECHNICAL MEMO.pdf**
RACT Plan Approval: **[04903] – RACT PLAN APPROVAL.pdf**

- Veolia Energy – Schuylkill Station (2600 Christian Street, Philadelphia, PA 19146)
Technical Memo: **[04942] – TECHNICAL MEMO.pdf**
RACT Plan Approval: **[04942] – RACT PLAN APPROVAL.pdf**

- Kinder Morgan, previously GATX (3300 North Delaware Avenue)
Technical Memo: **[05003] – TECHNICAL MEMO.pdf**
[05003] – Vendor Quote (redacted) – Attachment F of memo.pdf
RACT Plan Approval: **[05003] – RACT PLAN APPROVAL.pdf**

- MIPC LLC - Philadelphia Terminal (formerly ConocoPhillips) (G Street & Hunting Park Avenue)
Technical Memo: **[05004] – TECHNICAL MEMO.pdf**

- Plains Products Terminal LLC (3400 South 67th Street)
RACT Plan Approval: **[05013] – RACT PLAN APPROVAL.pdf**
[05013] – Degassing Calc Method Attachment.pdf

- University of Pennsylvania (3451 Walnut Street)
Technical Memo: **[08912] – TECHNICAL MEMO.pdf**

- Philadelphia Prison System (8001 State Road)

Technical Memo: **[09519] – TECHNICAL MEMO.pdf**
RACT Plan Approval: **[09519] – RACT PLAN APPROVAL.pdf**

- Navy Foundry and Propeller Center (Navy Yard, Building 592)

Technical Memo: **[09702] – TECHNICAL MEMO.pdf**

- Naval Surface Warfare Center Cardrock Division (formerly NAVSSES) (5001 South Broad Street)

Technical Memo: **[09724] – TECHNICAL MEMO.pdf**
RACT Plan Approval: **[09724] – RACT PLAN APPROVAL.pdf**

- Veolia-Energy Efficiency (PA) LLC (2600 Christian Street)

Technical Memo: **[10459] – TECHNICAL MEMO.pdf**