

COMMONWEALTH OF PENNSYLVANIA

Department of Environmental Protection


October 3, 2016


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SUBJECT: Review of Application for Administrative Amendment  
For Plan Approval 25-029C  
Auth ID # 1148057; APS ID # 346142; PF ID # 50751  
Erie Coke Corporation  
Erie City, Erie County

TO: AQ/Facilities/FACOP/ TV-25-00029

FROM: Matthew Williams   
Facilities Permitting Chief  
Air Quality Program - Northwest Region

THROUGH: Christina S. Nag   
Air Quality Program Manager  
Northwest Region

**Introduction**

The subject application is for an administrative amendment to incorporate the conditions of Plan Approval 25-029C into the Title V Operating Permit, incorporate the change of responsible official, incorporate the most recent requirements for the Major Source Boiler MACT, and incorporate the RACT II requirements.

The Department received the original administrative amendment application on September 15, 2014. The application proposed incorporation of Plan Approval 25-029C into the Title V Permit. The New Source Review Section inspected the sources authorized by Plan Approval 25-029C and recommended incorporation of the Plan Approval requirements on October 9, 2014. During the review of the administrative amendment, it was noted that the Title V Permit contained a compliance schedule which stated "A RACT proposal for VOC emissions shall be submitted by July 6, 2014, as notified by letter on November 1, 2011". The relevancy of this compliance schedule was discussed internally from December 2014 to January 2015. The facility had conducted tests of the coke oven battery as part of the Consent Decree dated July 6, 2010 which required among other things, repair of the coke ovens. The testing was conducted with a maximum of 42 to 48 ovens operating per day in December 2014 but the facility indicated they had the capability to charge 54 ovens a day. Although the emissions from the testing indicated the facility was not major for VOCs based on actual testing, it was not known what effect if any would occur from running the facility with all the ovens. The facility conducted testing on December 10 and 11, 2014, but the results were not approved by the Department until May 11, 2016. The VOC results from the testing of the coke oven battery conducted in 2010, 2011, 2012, 2013, and 2014 were 94.3 TPY, 52.1 TPY, 32.3 TPY, 14.6 TPY, and 21.6 TPY, respectively. The facility also had other VOC emissions from the remaining sources which had to be combined with the coke oven battery

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emissions to determine the emissions from the facility. Further, the emissions may also increase if all of the ovens were operated at maximum capacity. The combined emissions on a potential basis would most likely exceed 50 TPY for VOC.

In February 2015, the Department (Ed Orris and the writer) contacted Randy Wiler and discussed the compliance schedule and the Boiler MACT requirements of 40 CFR 63, Subpart DDDDD that were in the current permit. In an email on March 4, 2015 from Randy Wiler to Ed Orris, the facility stated that in response to the correspondence dated February 16, 2015, and subsequent phone conversations on February 27, 2015, with the writer on March 3, 2015, Erie Coke would proceed with a VOC RACT analysis.

Regarding the Boiler MACT, the facility was given two options via email from the writer to Randy Wiler on March 10, 2015. The options for the Boiler MACT were to modify the permit to remove all non-applicable requirements and incorporate the applicable requirements based on the January 1, 2013 EPA revisions or the second option was to take a Federally Enforceable Limit on the Hazardous Air Pollutants (HAPs) (less than 10 TPY for each individual HAP and less than 25 TPY for all combined HAPs). The second option would negate the requirements of Option 1 (Major Source Boiler MACT requirements would not apply) and the requirements of the Area Source Boiler MACT would also not apply based on §63.11195(e) which states a gas-fired boiler is not subject to Subpart JJJJJ. The facility was provided a copy of the applicable requirements under both scenarios but it was stressed that to take advantage of the second option, the Federally Enforceable limitations would have to be incorporated into the Title V Permit prior to the January 31, 2016 compliance date.

The facility did not submit a RACT I analysis for VOC and did not choose either option for the Boiler MACT prior to the compliance date. Therefore, the second option for the Boiler MACT was not feasible after January 31, 2016. In addition, the Department finalized RACT II on April 23, 2016 which made the compliance schedule moot. On May 9, 2016, the writer sent a draft of the amendment to Randy Wiler requesting a response with any comments within two weeks. The draft amendment established the following:

- 1) Modified the Major Source Boiler MACT found in Group 2- NESHAP for Boilers to reflect the current requirements for the boilers (as of the latest revision by EPA on November 20, 2015).
- 2) Incorporated the RACT II Requirements in Group 11- RACT II Requirements.
- 3) Removed the older compliance schedule at the end of Section C which required the submittal of a VOC RACT and put in a new compliance schedule to address the RACT II Case-By-Case Proposal.
- 4) Added the pressure drop range for the coke shed baghouse and the RPM minimum limit in Group 9 – Coke Shed Requirements (Condition #002).
- 5) Added the pressure drop range and liquid flow rate for the scrubber in Source 805 (Condition #010).
- 6) Removed clarifications in the miscellaneous section of the permit under paragraph (f) which are no longer applicable.

Randy Wiler called the writer on May 23, 2016 and explained that Erie Coke and the US EPA had a conference call to discuss items Erie Coke would need to incorporate into the Title V Permit based on a draft Consent Decree with EPA. On June 23, 2016, Randy Wiler emailed the writer with discussions

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with Erie Coke's consultant (Montrose) regarding items listed in the draft US EPA Consent Decree. The facility was proposing to add the absorber / thionizer to the permit and reflect that a fixed cover was placed on the unit and the emissions were routed to the boilers. The facility was also proposing additional controls on the benzene units but needed to further evaluate the units and potential controls. To make the additions, it would require converting the administrative amendment to a permit modification to allow for public comment, EPA review, and publication in the newspaper.

On August 10, 2016, the Department received an additional administrative amendment application from Erie Coke for the change of responsible official for the permit. With this receipt, it was decided that the two applications for amendment would be combined into one authorization (AUTH #1148057). The proposed additional sources and changes in the draft EPA Consent Decree will be handled through a separate modification of the permit or will be added to the permit at a later date through an amendment of the plan approval for the changes requested.

### **Plan Approval 25-029C**

The Department issued plan approval 25-029C to Erie Coke on May 13, 2011. The plan approval was for the construction of a shed on the coke side of the battery. A 200,000 cfm two module baghouse was installed to control particulate matter emissions from the battery. The construction was completed at the time of the Title V Permit renewal (March 27, 2013) but the required performance testing was not yet approved by the Department. The conditions from plan approval 25-029C which were applicable at the time of the renewal were incorporated into the Title V permit. The results of the stack testing for the coke oven baghouse were approved by the Department on July 3, 2013. The New Source Review Section conducted an initial plan approval inspection of the sources in plan approval 25-029C on October 7, 2014. Compliance with the requirements was determined by the New Source Review Section. The plan approval required establishment of pressure drop ranges across the collector to provide a reasonable assurance of ongoing compliance with the emission limit. Similarly, the Title V permit required ranges for the scrubber. The facility chose the operating parameter of fan RPM to demonstrate ongoing compliance. The pressure drop ranges, scrubber liquid flow rates, and fan RPM were submitted by Erie Coke in an email to the writer dated November 12, 2014 and are as follows:

1. Coke Shed Baghouse pressure drop range of 1-7 inches.
2. Scrubber pressure drop range of 1-7 inches and liquid flow rate of 200-600 gallons per minute.
3. Fan RPM for the west and east side baghouse is 1035 RPM

### **Boiler MACT Changes**

At the time of the March 2013 Title V permit renewal, The Major Source Boiler MACT requirements of 40 CFR 63 Subpart DDDDD were incorporated into the permit. Those conditions included the emission limits, testing requirements, monitoring requirements, recordkeeping requirements, reporting requirements, work practice requirements, and additional requirements in §§63.7480-63.7575 and applicable Tables based on the March 21, 2011 version of the regulation. The EPA revised Subpart DDDDD on January 31, 2013 and again on November 20, 2015. The most recent requirements were incorporated into the current amendment. On June 16, 2014, Erie Coke conducted mercury testing of the coke oven gas to establish the boilers as units designed to burn gas 1 fuels. The mercury

concentration average from the three run test was 0.01 micrograms per dry standard cubic meter which was far below the allowable mercury concentration of 40 micrograms per dry standard cubic meter to be considered other gas 1 fuel as defined in §63.7575. Based on this change in subcategory and the revisions to the Major Source Boiler MACT, several of the requirements in the renewal permit were removed and or revised to reflect the current applicable requirements which are summarized as follows:

- §63.7495 – The compliance date for this Subpart is January 31, 2016. By this date, the facility had to conduct the initial boiler tune-up and one-time energy assessment.
- §63.7500 – The facility must meet the work practice requirements of Table 3 (tune-up and one-time energy assessment). The facility must operate and maintain the affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The boilers do not have any emission limits under this Subpart.
- §63.7505 – The general requirements require the facility to be in compliance with the work practice requirements.
- §63.7510 – Initial compliance is based on conducting the work practice requirements by the compliance date
- §63.7515 – An annual performance tune-up must be conducted on the boiler (no more than 13 months from the previous tune-up).
- §63.7530 – The Notification of Compliance Status must be submitted by the facility to demonstrate compliance with the work practice requirements. The fuel specification analysis had to be completed to demonstrate compliance with the mercury limit as mentioned earlier in this memo.
- §63.7540 – Continuous Compliance with this Subpart is based on conducting annual tune-ups for each boiler. The details of the tune-up requirements are found in paragraph (a)(10)(i-vi). If a boiler is not operating on the required date of the tune-up, it must be conducted within 30 days of the start-up. The facility conducted testing of the coke oven gas in accordance with ASTM Method D6350-14, 40 CFR §63.7521(f) through (i), and Table 6 of this subpart on June 16, 2014. The Hg concentration average was 0.01 micrograms per cubic meter which is less than half of the mercury specification to meet the definition of other gas 1 fuel (40 micrograms per cubic meter Hg). Therefore, the facility does not need to conduct any further sampling.
- §63.7545 – The initial notification must be submitted within 120 days after January 31, 2013. Performance test notifications must be submitted at least 60 days prior to the testing. The Notification of Compliance Status must be submitted within 60 days of the compliance date. The information required in the Notification of Compliance Status is found in paragraph (e).
- §63.7550 – The facility must submit annual compliance reports in accordance with Table 9 of this Subpart. The first annual report is due within 1 year of the compliance date (covering the period of January 1-December 31, 2016). The report must be post marked by January 31, 2017. Paragraph (c)(5) contains the contents of the report. The report must be signed by the responsible official.
- §63.7555 – The facility must keep records of the notifications (Initial Notification, Notification of Compliance Status, and Annual Compliance Reports), fuel sampling, and records of the calculations and results of the fuel specification for mercury
- §63.7560 – This section provides the format and duration of the records that must be kept.
- §63.7565 – The General Provisions are contained in Table 10 of this Subpart.
- §63.7570 – The implementation and enforcement of this Subpart is explained in this section.

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- §63.7575 – The definitions related to this Subpart can be found in the Code of Federal Regulations.

## **RACT II**

The Department published Additional RACT Requirements for Major Sources of NO<sub>x</sub> and VOC (RACT II) on April 23, 2016 in the Pennsylvania Bulletin. The effective date for these requirements was upon publication. The RACT II regulation applies to major NO<sub>x</sub> and/or VOC-emitting facilities. Among other things, this regulation provides three compliance options: (1) presumptive RACT requirements and/or emission limitations; (2) facility-wide or system-wide averaging for compliance with presumptive NO<sub>x</sub> emission limitations; and (3) RACT requirements determined on a case-by-case basis for sources that either do not have an applicable presumptive requirement or emission limitation or cannot comply with the applicable presumptive RACT requirement.

The RACT II regulation requires that an owner or operator of a major NO<sub>x</sub>-emitting facility or a major VOC-emitting facility demonstrate compliance with the RACT II requirements by January 1, 2017. If an owner or operator is proposing to install a control device to meet a presumptive RACT emission limitation or RACT emission limitation determined on a case-by-case basis, the owner or operator may petition the Department of Environmental Protection (DEP) for an alternative compliance schedule that goes beyond the January 1, 2017, compliance deadline. However, the RACT II regulation requires that the petition for an alternative compliance schedule or alternative RACT requirement (established on a case-by-case basis) be submitted to the DEP by October 24, 2016. Any petition approved by DEP must be incorporated in an applicable operating permit or plan approval.

The requirements of 25 Pa Code §§129.96 – 129.100 were added to the permit. The requirements were put in Group 11 with the description of Requirements from 25 Pa. Code Sections 129.96 - 129.100. Some of the sources in Group 11 are presumptive based on individual source potential to emit less than 5 TPY for NO<sub>x</sub> and 2.7 TPY for VOC. The presumptive requirements in these examples are installation, maintenance and operation of the source in accordance with the manufacturer's specifications and with good operating practices. Other of the sources will be required to submit a case-by-case RACT analysis which must be submitted by October 24, 2016.

### **Change of Responsible Official**

The Department was informed of a change to the responsible official for the facility in the administrative amendment application received on August 10, 2016. The responsible official changed to Anthony Nearhoof, Plant Superintendent as of August 1, 2016.

The rest of the information in the Title V Operating Permit remains the same as the previous permit (Authorization #866460).

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**Recommendation**

A draft of the amended permit was sent to Erie Coke on May 9, 2016 and September 22, 2016. Issuance of the Administrative Amendment is recommended with the respective changes as mentioned above.

cc: Dianne Maskrey, District Supervisor– Air Quality