AQ/Fac/Case/25-000-00029 DeM
Erie Coke Lori DM

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

MAY 16 2016

MEMO

TO Daniel D. Brophy DB
Air Quality Specialist
Northwest Regional Office

Compliant

FROM Rick Szekeres, M.S. RSS
Environmental Group Manager
Source Testing Section

THROUGH Charles J. Zadakis, P.E. CJZ
Environmental Program Manager
Division of Source Testing and Monitoring

DATE May 11, 2016

RE Source Test Review
Erie Coke Corp.
Coke Oven Batteries, pushing operations: (ID 802)
controlled by Coke Side Shed Baghouse (ID: C802A)
Erie, Erie County
TVOP 25-00029
eFACTS: 2350664 PFID: 50751
eFACTS Inspection Result: NOVIO

MESSAGE:
Erie Coke Corporation operates two coke oven batteries – Battery A (Ovens 1-23) and Battery B (Ovens 24-58), for the production of foundry coke. The coke, formed by the batch heating of pulverized bituminous coal to ~2000°F for 14-36 hours in a reducing atmosphere, is used to melt iron that is to be processed into iron castings. Emissions from pushing operations (ID: 802) are controlled by a 2-module baghouse ID: C802A), prior to being discharged to the atmosphere via a common stack (ID: S802A) with an inner diameter of 91".

On December 9-12, 2014, Air/Compliance Consultants, Inc. (ACCI) conducted compliance testing to determine the emissions of filterable particulate matter (FPM), visible emissions (VE), and condensable particulate matter (CPM) from the Coke Side Shed Baghouse during pushing operations, as required by a consent decree. The test runs were conducted in accordance with the test protocol, approved on November 15, 2012, MACT Subpart CCCCC, and EPA Methods 1-4, 5/202, and 9. The test results are acceptable to the Department as a credible representation of the actual emissions under the operating conditions during testing and may be used for compliance determinations. Note that the particle size distribution data was not evaluated for acceptability or conducted in accordance with any known federal reference method.

There is one issue of significance that will require changes to future testing and submission of another test protocol – sampling was conducted during pushing, plus the time required to exhaust the volume of the baghouse module four times. This is a deviation from the federal rule, 40 CFR 63.7322(b)(2).

> "During each particulate matter test run, sample only during periods of actual pushing when the capture system fan and control device are engaged. Collect a minimum sample volume of 30 dry standard cubic feet of gas during each test run. Three valid test runs are needed to comprise a performance test. Each run must start at the beginning of a push and finish at the end of a push (*i.e.*, sample for an integral number of pushes)."

Because of the limited pushing times and the delay between pushes, an extensive amount of time would be needed to complete the triplicate runs for each baghouse module. The testing contractor had brought this issue to my attention via email on August 14, 2012 and I solicited input and approval from Ron Myers (EPA's Office of Air Quality Planning & Standards), who formulated the plan that was approved by both the Department and the EPA in November 2012. In September 2015, Kai Tang of EPA Region 2 contacted me about this deviation in relation to testing being proposed at Tonawanda Coke Works. EPA Region 2 stated that there is an official procedure for getting approval to make deviations and implied that unless this procedure was followed, EPA did not have the authority to allow a deviation to the rule. Bill Cowell (the testing contractor) and Randy Wiler (the facility contact) were notified via email on May 4, 2016 that future testing for compliance with MACT Subpart CCCCC must strictly adhere to the rule, unless written permission is obtained.

The following is a summary of data, presented in the test report. The opacity from the coke shed did not exceed 25%; the standard is 30%; there was no visible emissions (VE) from the baghouse stack.

Emissions Summary (Coke Side Shed Baghouse – East Module)

Run No.	1	2	3	Average	Standard
Test Date	12/11/2014	12/11/2014	12/12/2014		
Flow [dscfm]					
Ref. Meth. [dscfm]	91,500	91,600	89,400	90,800	
Plant Flow Mon. [cfm]	112,600	109,600	112,200	111,500	
FPM (Method 5)					
[gr./dscf]	0.001	0.001	0.001	0.001	≤0.010
[lbs./hour]	0.12	0.09	0.08	0.10	
CPM (Method 202)					
[gr./dscf]	0.000	0.000	0.000	0.000	
[lbs./hour]	0.02	0.03	0.04	0.03	
Total PM (FPM + CPM)					
[gr./dscf]	0.001	0.001	0.001	0.001	
[lbs./hour]	0.14	0.12	0.12	0.13	
Process Data					
Pushes/Run	8	8	8	8	
Pushes/24-hours	29	29	30	29	
Fan (Amps)	258	255	251	255	
Fan Current (% max)	77.4	76.6	75.5	76.5	
Baghouse ΔP (in. WG)	1.7	1.9	2.6	2.1	

Emissions Summary (Coke Side Shed Baghouse – West Module)

Run No.	1	2	3	Average	Standard
Test Date	12/09/2014	12/10/2014	12/10/2014		
Flow [dscfm]					
Ref. Meth. [dscfm]	92,400	90,900	92,100	91,800	
Plant Flow Mon. [cfm]	114,100	174,500	117,900	135,500	
FPM (Method 5)					
[gr./dscf]	0.001	0.001	0.001	0.001	≤0.010
[lbs./hour]	0.13	0.12	0.11	0.12	
CPM (Method 202)					
[gr./dscf]	0.000	0.000	0.000	0.000	
[lbs./hour]	0.05	0.04	0.05	0.05	
Total PM (FPM + CPM)					
[gr./dscf]	0.001	0.001	0.001	0.001	
[lbs./hour]	0.18	0.16	0.16	0.17	
Process Data					
Pushes/Run	8	8	8	8	
Pushes/24-hours	34	35	35	35	
Fan (Amps)	250	251	253	251	
Fan Current (% max)	74.9	75.3	75.7	75.3	
Baghouse ΔP (in. WG)	3.0	4.5	4.7	4.1	

cc: EPA/AKB
AIMS/AKB
Reading File, Source Testing Section