

US EPA ARCHIVE DOCUMENT



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

OCT 30 2009

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Mark L. Kamholz
Manager – Environmental Control
Tonawanda Coke Corporation
3875 River Road
Tonawanda, New York 14150-6507

Re: Section 114 Letter Requiring Emissions Testing—Testing Protocols
Reference Number: CAA-02-2009-1470
Tonawanda Coke Corporation, Tonawanda, New York

Dear Mr. Kamholz:

In response to the U.S. Environmental Protection Agency's (EPA) July 6, 2009, Section 114 letter, on August 28, 2009, Tonawanda Coke Corporation (TCC) submitted Compliance Emission Test Protocols for its ammonia still stack, the boiler #7 stack and the main battery underfire/waste heat stack. EPA's review of the information contained in the protocols has identified numerous concerns that must be addressed before they can be approved. The proposed stack testing locations for the boiler #7 stack and the main battery underfire/waste heat stack are not acceptable. TCC must conduct the emissions testing at appropriate locations at the respective stacks. This will ensure that the required emissions sampling, to be conducted at TCC's current operating capacity, will conform to EPA Test Methods.

TCC must fully address the comments listed below and resubmit three (3) copies of the revised Compliance Emission Test Protocols, in their entirety, within twenty (20) business days of receipt of this letter. When addressing these comments, TCC should refer to Enclosure 2 of the July 6, 2009 Section 114 letter. TCC should also refer to Paragraphs 8 through 25 of Enclosure 1 of that letter, as modified by EPA's July 31, 2009 letter. Pursuant to Section 114 of the Clean Air Act (the "Act"), 42 U.S.C. § 7414, EPA now requires TCC to complete the emission sampling for the ammonia still stack, the boiler #7 stack, and the main battery underfire/waste heat stack, in accordance with EPA-approved protocols, by no later than March 31, 2010.

Section 114 of the Act authorizes EPA to require owners or operators of emission sources to, among other things, sample emission points and provide information, in order to determine whether any person is in violation of the Act and/or to carry out any provision of the Act. Failure to conduct the required emission sampling and/or submit the requested information is a violation of Section 114 of the Act, and may result in an order to comply, an order for administrative penalties, or a civil, administrative and/or criminal action for penalties and an injunction requiring compliance pursuant to EPA's enforcement authority under Section 113 of the Act. In accordance with Section 113(c)(2)(A) of the Act, criminal penalties may be imposed on a person who fails to file a response to this Section 114 Letter, who knowingly makes any false statement, representation, or certification in his/her response, or knowingly omits, alters, or conceals any material information.

You may address any questions concerning this matter to Mr. Harish Patel of my staff at patel.harish@epa.gov or (212) 637-4046, or Erick Ihlenburg, Assistant Regional Counsel, at ihlenburg.erick@epa.gov or (212) 637-3250.

Sincerely,



Dore LaPosta, Director
Division of Enforcement and Compliance Assistance

(Enclosure)

cc: Larry Sitzman, Air Pollution Control Engineer
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ENCLOSURE #1

Comments on Tonawanda Coke Corporation's boiler #7 stack and main battery underfire/waste heat stack test protocol, dated August 26, 2009, and submitted pursuant to EPA's CAA Section 114 letter, Reference Number: CAA-02-2009-1470:

1. Tonawanda Coke's proposed sampling locations do not meet EPA Test Method 1 (see Appendix A to 40 C.F.R. Part 60) criteria and the flow verification procedures described in the test protocol are not adequate. Tonawanda Coke has not provided information regarding the suitability of the proposed sampling locations. Such information must be provided. Timely completion of the required testing will likely be adversely impacted if Tonawanda Coke cannot demonstrate the acceptability of its proposed sampling locations. EPA emphasizes the importance of Tonawanda Coke proceeding with the necessary test platform and sampling port access construction activities while this and other test protocols are under review.
2. Section 7.1, Testing Station and Traverse Locations: For boiler #7, Tonawanda Coke proposes to conduct emissions and velocity sampling at a divergent section of exhaust ducting immediately upstream of a 90° bend. This proposed measurement site does not meet the siting criteria in Section 11.1.1 of Test Method 1. Furthermore, since the proposed measurement site is less than 2 equivalent or duct diameters downstream or less than one-half duct diameter upstream from a flow disturbance, the Alternative Measurement Site Selection Procedure in Section 11.5 of Test Method 1 must be followed. The test protocol does not address this alternate site selection procedure and this is not acceptable.
3. Section 7.1, Testing Station and Traverse Locations: For boiler #7, Tonawanda Coke proposes to sample at 30 traverse points at the proposed measurement location. Section 11.5.2 of Test Method 1 specifies a minimum of 42 traverse points for rectangular ducts, for the gas flow angle determinations. Also, if the measurement location is determined to be acceptable, in accordance with the criteria in the alternative procedure set forth in Test Method 1, then the same number of traverse points and locations are to be used for sampling and velocity measurements.
4. Section 7.1, Testing Station and Traverse Locations: For boiler #7, Tonawanda Coke suggested that it would conduct a cyclonic flow check at the proposed measurement site prior to Run 1. This is not adequate. The proposed measurement location must also meet the acceptability criteria specified in Section 12.3.4 of Test Method 1.
5. Section 7.1, Testing Station and Traverse Locations: For the main battery underfire/waste heat stack, Tonawanda Coke proposes to conduct emissions and velocity sampling from three out of four access ports of an underground tunnel (waste heat arch) that routes the exhaust from the underfire to the battery combustion stack. Tonawanda Coke stated problems with access to port "D." This would result in one-

quarter of the cross-sectional area at the measurement site not being sampled. This is not acceptable.

6. EPA reiterates that Tonawanda Coke must conduct the emissions testing for the main battery underfire/waste heat unit at the appropriate location in the battery combustion stack. In order to do this, Tonawanda Coke would have to install suitable test platforms and sampling access ports at the stack. Sampling for stack emissions at the stack would nullify bias concerns related to the potential particulate matter deposition downstream from the proposed underground measurement site, or the potential re-entrainment of previously settled particulate matter downstream from the proposed measurement site.

7. Section 7.1, Testing Station and Traverse Locations: For the battery underfire/waste heat stack, Tonawanda Coke has not provided information regarding potential efforts to reestablish access to port "D." If access is blocked by rail ties, has Tonawanda Coke considered reconfiguring the rail ties? If access is blocked by a rail, has Tonawanda Coke considered relocating the rail for the duration of the test? If access is blocked by an electric rail, has Tonawanda Coke considered de-energizing the electric rail, and relocating it, if necessary, for the duration of the test?

8. Section 7.1, Testing Station and Traverse Locations: For the battery underfire/waste heat stack, the traverse point locations at the underground tunnel, as shown in figure 4, do not appear to conform to Test Method 1. The horizontal location of ports "B," "C" and "D" are not identified.

9. Figure 4, Waste Heat Arch Sample Point Location: The horizontal location of port "A" and its traverse points is shown to be 18 inches from the right wall. However, in accordance with Test Method 1, the appropriate location for port "A" and its traverse points should be 12 inches from the right wall. TCC must resolve this discrepancy.

10. Section 7.5, Determination of Gaseous Emissions (Continuous Emissions Monitoring): The test protocol specifies that a gas sample will be continuously extracted from "the single Continuous Emissions Monitoring (CEM) port of the exhaust stack." The test protocol does not identify the location of the CEMS port at the stack for boiler #7, or the location of the CEMS port and that for the main battery underfire/waste heat stack. Tonawanda Coke must identify these CEMS port locations.

11. Section 5, QA Objectives: The test protocol must provide the calculations used to derive the minimum detection limit, at the lowest anticipated stack gas sampling volume and/or run time, for each pollutant to be measured. These calculations may be included along with other pertinent sample collection, temperature criteria, and sample handling and preservation information in Table 2.

12. Section 6, Process Description: The protocol must include information regarding the process operating capacity during emissions testing. Some of this information was redacted in the test protocol.

13. Section 7.7, Determination of Oxides of Nitrogen Emissions: What is the frequency of NO₂-to-NO converter efficiency testing?
14. Section 7.11, Determination of Filterable Particulate Matter, Hydrogen Chloride, and Chlorine: The protocol specifies that "The exit of the probe will be connected to a Teflon filter supported in a glass-filter holder inside an oven heated to 248 °F ± 25 °F." However, Section 8.1.5 of Test Method 26A specifies that this temperature must be greater than 248 °F (120 °C). Therefore, all test protocol references to the test probe and filter minimum temperatures must be revised to reflect the Test Method 26A requirement. In addition, field data sheet for these tests must be revised to reflect the Test Method 26A requirement.
15. Section 7.12, Cyanide Compounds Emissions: Page 13 of the protocol specifies that a minimum sample volume of 30 dry standard cubic feet (dscf) would be collected; however, Table 2 suggests that the minimum sample volume for the CN parameter would be 40 dscf. Please resolve this discrepancy. Note that Section 8.3.4 of Conditional Test Method CTM-033 (Draft Method XHCN) suggests a typical volume of 1 dry standard cubic meter (dscm) or 35.31 dscf.
16. Section 7.12.1, Cyanide Compounds Emissions; Sampling Train and Operations: An impinger pH pre-survey must be done to ensure that the pH remains greater than 13 through the duration of sampling. If the pH drops below 13 before the sampling period is concluded, then the impinger should be changed at the indicated frequency during the source test to ensure against negative bias that will occur at pH levels less than 13.
17. Section 7.13, Formaldehyde, Phenol and Methanol Emissions: The test protocol does not identify the emissions sampling locations for these parameters, or how such locations will be determined. This applies to both the boiler #7 stack test and the main battery underfire/waste heat stack test.
18. Section 7.13, Formaldehyde, Phenol and Methanol Emissions; and Appendix C, Chain of Custody SOP: The test protocol is not clear on whether the analyses for these parameters would be conducted onsite at Tonawanda, NY, or at the contract laboratory in Durham, NC. If these analyses will be conducted at the Durham lab, how will Tonawanda Coke ensure, verify, and document that the samples are maintained at or below 39° F following sample collection until their eventual receipt at the Durham lab? The generic prompts (in the chain of custody procedures and Analysis Request Forms) for "Special instructions and remarks for each sample," and "Temperature of samples upon receipt (if requested)," must be supplemented with specific instructions for sample handling and preservation, hold time limit, and verification of sample temperature upon receipt.
19. Section 7.15, Determination of Semi-volatile Organic Compounds Emissions: The protocol statement in Section 7.15.2, indicating that "The sampling train will be operated as described in Section 7.11.1 except that the conditioning system

temperature exiting the filter holder will also be recorded and maintained at a temperature not to exceed 68° F," is not adequate. In accordance with Sections 4.13.7 and 6.4.6 of Test Method 0010, the organic module condenser must be maintained at a temperature of 17° C ± 3° C, or 62.6° F ± 5.4° F. This temperature criterion must be included in the test protocol and on the field data sheet for this series of testing.

20. Section 7.15, Determination of Semi-volatile Organic Compounds Emissions: The test protocol is not clear as to whether the analyses for these parameters would be conducted on-site at Tonawanda, NY, or at the contract laboratory in Burlington, Ontario, Canada. If the analyses will be conducted at the Burlington lab, how will Tonawanda Coke ensure, verify, and document that the samples, excluding the filter, are maintained at or below 39° F following sample collection until their eventual receipt at the Burlington lab? The generic prompts (in the chain of custody procedures and Analysis Request Forms) for "Special instructions and remarks for each sample," and "Temperature of samples upon receipt (if requested)," must be supplemented with specific instructions for sample handling and preservation, hold time limit, and verification of sample temperature upon receipt.

21. Section 7.15, Determination of Semi-volatile Organic Compounds Emissions; Sample Recovery and Reporting: Identify the analytical procedures to be used for sample recovery and reporting with respect to semi-volatile organic compound emissions (e.g., GC/FID, HPLC).

22. Section 7.16, Determination of Carbon Disulfide, Benzene, Xylene, Chloromethane, and Toluene: The test protocol does not identify the emissions sampling locations for these parameters, or how such locations will be determined. This applies to both the boiler #7 stack test and the main battery underfire/waste heat stack test.

23. Section 7.16, Determination of Carbon Disulfide, Benzene, Xylene, Chloromethane, and Toluene: The protocol description of the sample system setup, in Section 7.16.1, does not adequately address other requirements contained in Section 2.0 of Test Method 0030, including but not limited to: ensuring a resin temperature of 20° C (68° F), maintaining and monitoring gas stream temperature of 20° C or less prior to passage through the first sorbent cartridge, limiting sample transfer lines from the probe to the volatile organic sampling train (VOST) to less than 5 feet in length, and achieving leak-free, vacuum-tight connections without the use of sealing grease.

24. Section 7.16, Determination of Carbon Disulfide, Benzene, Xylene, Chloromethane, and Toluene: The procedures for operating the VOST at a flow rate of 0.5 L/min, as specified in Section 7.16.2 of the test protocol, are not consistent with those specified in Section 1.1.5 of Test Method 0030. In accordance with Test Method 0030, it would be acceptable to operate the VOST at 0.5 L/min with traps being replaced every 40 minutes for a total of three 40-minute periods. This would satisfy the 2-hour sampling period requirement in Test Method 0030. The test protocol and Table 2 must be revised to conform to Test Method 0030 requirements. The test protocol also

must include a calculation of the minimum detection limits, under this sampling regime, expressed in the same units as the units used in reporting for these parameters.

25. Section 7.16, Determination of Carbon Disulfide, Benzene, Xylene, Chloromethane, and Toluene: The test protocol is not clear as to whether the analyses for these parameters would be conducted onsite at Tonawanda, NY, or at the contract laboratory in Burlington, Ontario, Canada. If the analyses will be conducted at the Burlington lab, how will Tonawanda Coke ensure, verify, and document that the samples would be kept on cold packs or refrigerated following sample collection until their eventual analysis at the Burlington lab? The generic prompts (in the chain of custody procedures and Analysis Request Forms) for "Special instructions and remarks for each sample," and "Temperature of samples upon receipt (if requested)," must be supplemented with specific instructions for sample handling and preservation, hold time limit, and verification of sample temperature upon receipt and analysis.

26. Section 7.16.3, Determination of Carbon Disulfide, Benzene, Xylene, Chloromethane, and Toluene; sample Recovery and Reporting: Provide reference(s) to recovery studies indicating that CS₂ is adequately recovered from Tenax.

27. Section 7.17, Deviations from Standard USEPA Testing Methodology: A split train, as described in this section of the test protocol, would not be necessary if emission sampling is conducted at the battery combustion stack for the main battery underfire/waste heat unit. The test protocol does not specifically identify any other deviations for evaluation by EPA. An approval of test method deviation will be effective only if expressly granted by EPA in writing. For any other deviations or discrepancies between the test protocol and any of the Test Methods, the relevant Test Methods shall control.

28. Section 7.19, Calculations: Include a copy of the computer spreadsheet used for the emission calculations in the Source Test Report, on a cd-rom in Microsoft Excel format, or its equivalent. This will facilitate the evaluation of the Source Test Report.

29. Section 8, Testing Schedule: The test protocol must provide a detailed schedule of how Tonawanda Coke intends to complete the various tests, including but not limited to: the sequence of the tests, which tests would be conducted concurrently, schedules for shipment of samples to analytical laboratories, etc.

30. Section 9, Plant Safety: The test protocol needs to include detailed safety requirements, including but not limited to: site-specific safety training, specific respirators and filter cartridges, etc. These requirements apply to personnel from Tonawanda Coke, the emissions sampling crew, and test observers from the regulatory agencies.

31. Section 10, Reporting: The thorough description of why a deviation was necessary must also include a description of the impact of such deviation on data

quality, including but not limited to: data usability, minimum detection limit, bias on reported value, etc.

32. Section 10, Reporting: Tonawanda Coke seeks a 15-day extension to the due date for the Source Test Report, from 30 to 45 days after completion of sampling. Tonawanda Coke's basis for the request is that the 21-day standard turnaround time for Test Method 0010 sample results may impact on its ability to review and finalize the report within a 30-day time period. What would preclude a shorter turnaround time for the sample analyses?

33. Table 2, Emissions Testing Summary: Update this table to reflect corrections and revisions to the test protocol. Include minimum detection limits and the other information requested in Comment #11, above, for each parameter.

Comments on Tonawanda Coke Corporation's ammonia still water sampling test protocol, dated August 26, 2009, submitted pursuant to EPA's CAA Section 114 letter, Reference Number: CAA-02-2009-1470:

1. Section 2, Project Description, and Section 6, Sample Procedure: Tonawanda Coke proposes to use the average of three grab samples from two sampling locations to represent the amount of pollutants emitted from the ammonia stripper stack. However, according to EPA's July 31, 2009 letter, EPA agreed that emissions from the ammonia stripper may reasonably be estimated by sampling the ammonia stripper's inlet process fluid and the following three conditions are met:

- a. Tonawanda Coke must assume that 100 percent of all pollutants detected in the inlet process fluid would be emitted to the atmosphere;
- b. Tonawanda Coke must sample the inlet process fluid stream to the excess ammonia-liquor storage tanks, and must assume that 100 percent of all pollutants detected in the inlet process fluid would be emitted to the atmosphere; and
- c. The sampling protocol shall also include a requirement for integrated water sampling.

The test protocol as submitted does not satisfy any of the conditions where water sampling could be conducted in lieu of air emissions sampling at the ammonia stripper stack. This is not acceptable.

2. Section 4, Process Description: The depiction and the description of the process and sampling locations are not acceptable. The test protocol must provide a detailed piping schematic of the entire ammonia still process from the by-products area to the ammonia still, including, but not limited to: piping, tanks, valves, pumps, outlets, instrumentation, etc. The schematic must also indicate mass flow rates into or through each component while the facility is operating at its current normal production rate.

3. Section 5, Project Organization and Responsibility: Tonawanda Coke or its analytical laboratory must provide the laboratory's documentation of demonstration-of-capability for the analysis of the pollutants using the cited test methods. Alternatively, the test protocol must include the laboratory's New York State accreditation for the analysis of the pollutants using the cited test methods.