

US EPA ARCHIVE DOCUMENT

IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA)
and)
STATE OF NEW YORK)
)
Plaintiffs,)
)
v.)
)
TONAWANDA COKE CORPORATION,)
)
Defendant.)

Civil Action No. [_____]

CONSENT DECREE

US EPA ARCHIVE DOCUMENT

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Plaintiff United States of America, on behalf of the United States Environmental Protection Agency (“EPA”), and Plaintiff State of New York (“New York” or “the State”), on behalf of the citizens and residents of the state and the New York State Department of Environmental Conservation (“NYSDEC”), (collectively referred to as the “Plaintiffs”), have filed a complaint in this action concurrently with this Consent Decree (or “Decree”), alleging that Defendant Tonawanda Coke Corporation (“Defendant” or “TCC”) violated Section 113 of the Clean Air Act (“CAA”), 42 U.S.C. § 7413, Section 301 of the Clean Water Act (“CWA”), 33 U.S.C. § 1311, Section 313 of the Emergency Planning and Community Right to Know Act (“EPCRA”), 42 U.S.C. § 11023, Article 19 of the New York State Environmental Conservation Law (“ECL”), and the regulations promulgated thereto at Parts 201, *et seq.*, of Title 6 of the New York Codes, Rules and Regulations (“6 NYCRR”), and TCC’s CAA Title V Operating Permit ID 9-1464-00113/00031 (“CAA Title V Permit”) at the by-product coke manufacturing facility (“Facility”) that TCC owns and operates in Tonawanda, New York.

The complaint against Defendant alleges that Defendant has violated various provisions of the CAA, including the National Emissions Standard for Hazardous Air Pollutant (“NESHAP”) General Duty Requirement, 40 C.F.R. § 61.12(c); NESHAP for Benzene Emissions from Coke By-Product Recovery, 40 C.F.R. Part 61, Subpart L, §§ 61.130 through 61.139; NESHAP for Equipment Leaks (Fugitive Emission Sources), 40 C.F.R. Part 61, Subpart V, §§ 61.240 through 61.247; NESHAP for Benzene Waste Operations, 40 C.F.R. Part 61, Subpart FF, §§ 61.340 through 61.359; National Emissions Standards for Coke Oven Batteries, 40 C.F.R. Part 63, Subpart L, §§ 63.300 through 63.313; NESHAP for Coke Ovens: Pushing, Quenching and Battery Stacks, 40 C.F.R. Part 63, Subpart CCCCC, §§ 63.7280 through 63.7352; New York State Implementation Plan requirements, 6 NYCRR Part 214; 6 NYCRR 211.2; the

general duty clause provisions of Section 112(r)(1) of the CAA, 42 U.S.C. § 7412(r)(1); and its CAA Title V Permit. Additionally, the complaint alleges that the Defendant failed to properly operate and maintain the Facility in violation of its CWA State Pollutant Discharge Elimination System (“SPDES”) Permit, exceeded effluent limits for its SPDES and Town of Tonawanda Industrial User (“IU”) Permits, and failed to maintain calibration and monitoring requirements contained in its SPDES and IU Permits. Finally, the complaint alleges that the Defendant failed to report certain activities involving toxic chemicals (as defined by the applicable regulations), in violation of EPCRA, 40 C.F.R § 372.30(d).

On July 19, 2011, parallel Administrative Orders on Consent were issued by EPA (CAA-02-2011-1013) and NYSDEC (R9-20110315-7) to Defendant, which required Defendant to implement certain corrective actions identified in a By-Product Area Assessment attached to each such order. The By-Product Area Assessment evaluated the condition of certain equipment in the By-Products area of the Facility as it relates to fugitive emissions or leaks of Coke Oven Gas (“COG”) in the system, and describes various projects that have since been completed and have reduced fugitive emissions or leaks of COG.

By letter, dated December 30, 2013, Defendant submitted the Proposed Design and Engineering Plan for the Cokeside Shed and Baghouse Installation (“Design Plan”) for the purpose of receiving approval of the pushing emission controls required by this Consent Decree. EPA and NYSDEC submitted comments on Defendant’s Design Plan by letter, dated February 3, 2014, and Defendant submitted its response to those comments by letter, dated February 18, 2014. By letter, dated March 6, 2014, EPA and NYSDEC approved Defendant’s Design Plan.

The Defendant has entered into this Consent Decree without the adjudication or admission of any issue of fact or law except as provided for in Section I of this Consent Decree.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation among the Parties, and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby ADJUDGED, ORDERED, AND DECREED as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, 1367 and Sections 113(b) and 304 of the CAA, 42 U.S.C. §§ 7413(b) and 7604, Section 309(b) of the CWA, 33 U.S.C. § 1319(b), and Section 325(b)(3) of EPCRA, 42 U.S.C. § 11045(b)(3) and over the Parties. Venue lies in the United States District Court for the Western District of New York (the “District”) pursuant to Section 113(b) of the CAA, 42 U.S.C. § 7413(b); Section 309(b) of the CWA, 33 U.S.C. § 1319(b); and EPCRA § 325(c)(4), 42 U.S.C. § 11045(c)(4), and 28 U.S.C. §§ 1391 and 1395(a), because the events giving rise to the claims alleged herein occurred in this District, and Defendant TCC does business and has its principal place of business in this District. For purposes of this Decree, or any action to enforce this Decree, Defendant consents to the Court’s jurisdiction over this Decree and any such action and over Defendant and consents to venue in this District.

2. For purposes of this Consent Decree, Defendant agrees that the complaint states claims upon which relief may be granted pursuant to Sections 113 and 304 of the CAA, 42 U.S.C. §§ 7413 and 7604, Section 309 of the CWA, 33 U.S.C. § 1319, Section 325 of EPCRA, 42 U.S.C. § 11045, and Articles 19 and 71 of the ECL.

II. APPLICABILITY

3. The obligations of this Consent Decree apply to and are binding upon the United States and the State, and upon Defendant and its successors, assigns, or other entities or persons otherwise bound by law.

4. No transfer of ownership or operation of the Facility, whether in compliance with the procedures of this Paragraph or otherwise, shall relieve Defendant of its obligation to ensure that the terms of this Decree are implemented. At least 30 Days prior to any proposed transfer of ownership or operation of the Facility, Defendant shall provide a copy of this Consent Decree to the proposed transferee, and shall simultaneously provide written notice of the prospective transfer, together with a copy of the proposed written agreement, to EPA - Region 2, the United States Attorney for the Western District of New York, the United States Department of Justice, NYSDEC - Region 9 and the Attorney General for the State of New York, in accordance with Section XVI of this Decree (Notices). Any transfer of ownership or operation of the Facility without complying with this Paragraph constitutes a violation of this Decree.

5. Defendant shall provide a copy of this Consent Decree to all officers, employees, and agents whose duties might reasonably include compliance with any provision of this Decree, as well as to any contractor retained to perform work required under this Consent Decree. Defendant shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

6. In any action to enforce this Consent Decree, Defendant shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

7. Terms used in this Consent Decree that are defined in the CAA, CWA, EPCRA, or ECL, or in regulations promulgated pursuant to the CAA, CWA, EPCRA, or ECL, shall have the meanings assigned to them in such statute or regulations, unless otherwise provided in this Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

a. “CAA Title V Permit” shall mean the Title V Operating Permit issued to TCC by the NYSDEC on April 30, 2002, referenced by permit number 9-1464-00113/00031.

b. “COG” or “Coke Oven Gas” shall mean any gas produced by the coking process at the Facility’s coke oven battery, including gas that is treated in the by-products area of the Facility, that is used as fuel gas in the Facility’s battery or boiler, or that is flared.

c. “Complaint” shall mean the complaint filed by the United States and the State in this action.

d. “Consent Decree” or “Decree” shall mean this Decree and all appendices attached hereto (listed in Section XXV).

e. “Covered Equipment” shall mean all pumps, valves, connectors, exhausters, open-ended lines, sumps, vessels and closed vent systems, in COG service.

f. “Covered Process Unit” shall mean any process unit that is, or under the terms of this Consent Decree becomes, subject to the equipment leak provisions of 40 C.F.R. Part 61, Subpart V.

g. “Date of Lodging” shall be the date upon which this Consent Decree is filed with the Court as part of a Notice of Lodging, as recorded on the Court’s docket, and shall

precede both the public comment period required by this Decree and a Motion to Enter the Decree.

h. “Day” shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day.

i. “Defendant” shall mean Tonawanda Coke Corporation.

j. “Design Plan” shall mean the Proposed Design and Engineering Plan for the Cokeside Shed and Baghouse Installation that was submitted by Defendant on December 30, 2013 and February 27, 2014, respectively, and approved by EPA and NYSDEC on March 6, 2014.

k. “DOR” shall mean Delay of Repair.

l. “ELP” shall mean the Enhanced Leak Detection and Repair Program specified in Paragraph 20 of this Consent Decree.

m. “EPA” shall mean the United States Environmental Protection Agency and any of its successor departments or agencies.

n. “Effective Date” shall have the definition provided in Section XVII.

o. “Facility” shall mean Defendant’s by-product coke manufacturing facility located in Tonawanda, New York.

p. “In COG Service” shall mean any piece of equipment, downstream of the exhauster, that contains or is in contact with COG.

q. “LDAR Personnel” shall mean all employees and contractors responsible for leak detection and repair (“LDAR”) monitoring, maintenance of LDAR equipment, LDAR repairs, and/or any other duties arising from the ELP.

r. “Method 21” shall mean the test method found at 40 C.F.R. Part 60, Appendix A, Method 21.

s. “NYSDEC” shall mean the New York State Department of Environmental Conservation.”

t. “Paragraph” shall mean a portion of this Decree identified by an Arabic numeral.

u. “Parties” shall mean the United States, the State, and Defendant.

v. “Repair Verification Monitoring” shall mean the utilization of monitoring (or another method that indicates the relative size of the leak) by no later than the end of the next calendar day of each attempt at repair of a leaking piece of Covered Equipment to achieve the best repair/lowest emission rate possible.

w. “Screening Value” shall mean the highest emission level that is recorded at each component and/or piece of equipment as it is monitored in compliance with Method 21.

x. “Section” shall mean a portion of this Decree identified by a Roman numeral.

y. “State” shall mean the State of New York, acting on behalf of its citizens and residents and NYSDEC.

z. “United States” shall mean the United States of America, acting on behalf of EPA.

IV. CIVIL PENALTY

8. Within 60 Days after the Effective Date of this Consent Decree, Defendant shall pay to the United States the sum of \$1,750,000 as a civil penalty, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the Date of Lodging.

9. Defendant shall pay the civil penalty due to the United States by FedWire Electronic Funds Transfer (“EFT”) to the U.S. Department of Justice in accordance with written instructions to be provided to Defendant, following entry of the Consent Decree, by the Financial Litigation Unit of the U.S. Attorney’s Office for the Western District of New York, 138 Delaware Avenue, Buffalo, NY 14202, 716-843-5700. At the time of payment, Defendant shall send a copy of the EFT authorization form and the EFT transaction record, together with a transmittal letter, which shall state that the payment is for the civil penalty owed pursuant to the Consent Decree in *United States v. Tonawanda Coke Corporation*, and shall reference the civil action number and DOJ case number 90-5-2-1-09994, to the United States in accordance with Section XVI of this Decree (Notices); by email to acctsreceivable.CINWD@epa.gov; and by mail to:

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

10. Within 60 Days after the Effective Date of this Consent Decree, Defendant shall pay to New York a civil penalty of \$1,000,000, together with interest accruing from the date on which the Consent Decree is lodged with the Court, at the rate specified in 28 U.S.C. § 1961 as of the Date of Lodging.

11. Defendant shall remit all payments due to New York to the Office of Attorney General of the State of New York, via certified check payable to the State of New York, and delivered to Joseph M. Kowalczyk, Assistant Attorney General, Environmental Protection Bureau, The Capitol, Albany, New York 12224-0341. Such certified checks shall be remitted by Defendant to the Office of the Attorney General within 60 Days after the Effective Date of this Consent Decree.

12. Upon the Effective Date, this Consent Decree will constitute an enforceable judgment for purposes of post-judgment collection, in accordance with Rule 69 of the Federal Rules of Civil Procedure, the Federal Debt Collection Procedures Act, 28 U.S.C. § 3001 *et seq.*, and any other applicable federal authority. The United States and the State will be deemed judgment creditors for purposes of collecting each Party's respective portion of any unpaid amounts of the penalty and interest due pursuant to this Section, or any stipulated penalty owed pursuant to Section X (Stipulated Penalties) of this Consent Decree.

13. Defendant shall not deduct any penalties paid under this Decree pursuant to this Section or Section X (Stipulated Penalties) in calculating its federal, state or local income tax.

V. COMPLIANCE REQUIREMENTS

14. TCC shall comply with all practices, standards and limits contained in all applicable permits issued for the Facility pursuant to the CAA, CWA, and ECL, and with all applicable requirements in the following regulations:

- a. The "National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants," 40 C.F.R. Part 61, Subpart L, § 61.130 *et seq.*;
- b. The "National Emission Standard for Equipment Leaks (Fugitive Emission Sources)," 40 C.F.R. Part 61, Subpart V, § 61.240 *et seq.*;

- c. The “National Emission Standard for Benzene Waste Operations,” 40 C.F.R. Part 61, Subpart FF, § 61.340 *et seq.*;
- d. The “National Emission Standards for Coke Oven Batteries,” 40 C.F.R. Part 63, Subpart L, § 63.300 *et seq.*;
- e. The “National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks,” 40 C.F.R. Part 63, Subpart CCCCC, § 63.7280 *et seq.* (“Coke Oven MACT”);
- f. The federally-enforceable requirements of the state implementation plan, titled “By-Product Coke Oven Batteries,” 6 N.Y.C.R.R. Part 214; and
- g. Article 19 of the ECL, 19-0101 *et seq.*, and all applicable regulations promulgated thereunder in 6 NYCRR, including, but not limited to, Parts 201 *et seq.*; 202; 211; 212; 214; and 225.

15. By-Products Area Repair and/or Replacement. TCC shall complete the following by-products area projects in accordance with the requirements and schedules in this Paragraph 15:

- a. TCC shall convert the existing primary cooler to an extractive primary cooler, as set forth in TCC’s By-Products Area Assessment, dated June 2011, attached hereto as Appendix A, by no later than May 31, 2015; and
- b. Within 3 months of the Date of Lodging, TCC shall submit a proposal to EPA and NYSDEC for the final disposition or proposed future use of the disconnected light-oil scrubber. TCC shall continue to maintain the disconnected light-oil scrubber under positive pressure with a nitrogen blanket to keep air out of the vessel until its final disposition. TCC shall

continue to monitor the gauge pressure at least twice per operating shift to assure that the unit is maintained under positive pressure. TCC shall keep complete records of the gauge pressure monitoring and shall submit such records to EPA and/or NYSDEC upon request.

- c. In accordance with the Nitrogen Oxides (NO_x) Reasonably Available Control Technology (RACT) Analysis for Boiler #7, dated March 31, 2014 (NO_x RACT Analysis), that included a control strategy for the ammonia still emissions:
- (i) TCC certifies that it made the permanent plumbing changes to move the East injection port to the new elevation set forth in the NO_x RACT Analysis;
 - (ii) TCC certifies that during the Fall 2014 annual boiler #7 outage for maintenance, it installed a new boiler door at the same optimal elevation on the West side of the boiler; and
 - (iii) TCC certifies that, as of December 31, 2014, it permanently relocated injection ports to the new elevation.
- d. Ammonia Emissions Contingency Plan.
- (i) TCC certified that it finalized the Standard Operating Procedure (SOP) plan for the “Alternative Ammonia Vapor Destruction” and began implementation by July 30, 2014. TCC shall not vent the ammonia vapor stream to the atmosphere for any purpose, at any time.

- (ii) TCC certifies that, as of November 1, 2014, it had completed the following modifications to the ammonia still system:
 - (1) installation of a steam pressure relief valve (set lower than normal supply steam pressure) on the stripping steam supply line at the inlet to the ammonia still;
 - (2) installation of a steam vent valve on the ammonia still vessel to be used for pressure control during the Alternative Ammonia Vapor Destruction SOP plan implementation. The vent valve will be labeled and locked closed during normal operation with boiler #7; and
 - (3) installation of an ammonia vapor/coke oven gas line valve with stainless steel blank.

16. Coke Oven Battery Pushing Controls.

- a. Consistent with 6 NYCRR 214.4, and to meet the emission limitations, standards and other requirements in 6 NYCRR 214 (“Part 214”) and the Coke Oven MACT, TCC shall install, operate, monitor and maintain a capture system and control device to address pushing emissions (“Pushing Controls”), including:
 - (i) a cokeside shed to capture pushing emissions from each Facility coke oven, which encloses the coke side of the battery and ventilates the emissions to a baghouse; and
 - (ii) a baghouse to control the pushing emissions captured by the cokeside shed.

- b. These Pushing Controls shall be implemented in accordance with the Design Plan and the following requirements and schedules:
- (i) TCC shall continue with construction of the Pushing Controls that began on April 1, 2014, in accordance with the Design Plan and the following requirements and schedules;
 - (ii) During the construction, and until startup of the Pushing Controls, TCC shall submit bimonthly progress reports to the EPA and NYSDEC. In conjunction with this requirement, the Defendant will include updates regarding any actions taken to refurbish the baghouse at the Facility;
 - (iii) TCC shall submit a protocol for initial performance testing by August 15, 2015, to be performed in accordance with the requirements of 40 C.F.R. §§ 63.7 and 63.7322;
 - (iv) The Pushing Controls shall be operational by September 15, 2015. TCC shall commence startup/shakedown by no later than September 15, 2015;
 - (v) By November 1, 2015, TCC shall conduct initial performance testing to demonstrate compliance with the requirements in the Coke Oven MACT, and shall submit the report to the EPA and NYSDEC by no later than December 1, 2015. TCC shall give EPA and NYSDEC at least 14 Days notice before the commencement of the initial performance testing; and

(vi) By no later than December 31, 2015, TCC shall commence operation of the Pushing Controls in compliance with the Coke Oven MACT and Part 214.

c. TCC shall submit each notice required under this Paragraph in accordance with Section XVI (Notices) of this Consent Decree.

17. Applicable Coke Oven MACT Emission Limitations and Standards. For purposes of Paragraph 14e, TCC accepts applicability of the Coke Oven MACT to the Facility, and the existing Facility coke oven battery is an “affected source” under the Coke Oven MACT. Except as provided in Paragraph 16 and Subparagraphs 17a and b of this Decree, TCC shall comply with all applicable Coke Oven MACT requirements by no later than September 15, 2015.

a. Continuous Opacity Monitoring System (“COMS”) Requirements.

Pursuant to 40 C.F.R. § 63.7330(e), for the Facility by-product coke oven battery, TCC must monitor at all times the opacity of emissions exiting each battery stack using a COMS in accordance with the requirements of 40 C.F.R. § 63.7331(j).

(i) Within 90 Days from the Effective Date of this Consent Decree, TCC must install, operate, and maintain each COMS in accordance with the requirements in 40 C.F.R. § 63.8(e);

(ii) Within 180 Days from the Effective Date of the Consent Decree, TCC must conduct a performance evaluation of each COMS in accordance with the requirements in 40 C.F.R. § 63.8;

(iii) Within 180 Days from the Effective Date of the Consent Decree, TCC must develop and implement a quality control program for

operating and maintaining each COMS in accordance with the requirements in 40 C.F.R. § 63.8(d);

- (iv) TCC shall report COMS excess emissions to EPA and NYSDEC in the semi-annual reports required by Paragraph 42 of this Consent Decree.

- b. Additional Requirements for Battery Work Practices. Within 60 Days after the Date of Lodging, TCC shall submit to EPA and NYSDEC, for review and approval, a written work practice plan (“Work Practice Plan”) for soaking in accordance with 40 C.F.R. § 63.7294(a), a written operation and maintenance plan (“O&M Plan”) in accordance with 40 C.F.R. § 63.7300(b), and a written startup, shutdown and malfunction (“SSM”) plan in accordance with 40 C.F.R. § 63.7310. The plans submitted pursuant to this Subparagraph shall satisfy each requirement in the above-cited regulations, and shall at a minimum incorporate the specific additional requirements in Subparagraphs 17b(i) through (viii) below. EPA will review the Work Practice Plan and the O&M Plan in consultation with NYSDEC, and the Plans shall become effective upon approval by EPA and NYSDEC. Once the Plans have been approved by EPA and NYSDEC, TCC shall comply with the requirements of these plans.

- (i) TCC shall identify ovens that cause or contribute to high opacity (as described below) by correlating the oven charging schedule with the occurrence of opacity exceedances recorded by the

COMS. TCC shall install an opacity exceedance alarm system, consisting of an audible alarm and/or readily visible light. The alarm system shall be triggered on each occasion when COMS data indicates opacity of greater than 20 percent for 3 consecutive minutes and/or opacity of greater than 60 percent for any 15 second reading. TCC shall propose procedures for promptly addressing the cause(s) of such high opacity, which shall include inspection of the heating wall flues of the most recently charged oven and making appropriate equipment repairs or changes in battery operation;

- (ii) As part of its O&M Plan, TCC shall develop a systematic O&M procedure for patching and sealing coke oven walls (including end-flue spray patching, dry gunning and/or silica dusting) to be conducted as necessary to maintain compliance with opacity standards; for inspecting the oven walls at least once every 3 charges; and for making repairs as needed based on routine inspections; and on personnel observations made during regular operations;
- (iii) In accordance with the O&M Plan, for the purpose of regulating fuel gas flow to ensure uniform coking, TCC shall monitor and record coke oven wall flue temperatures, and visually inspect and make a written record of the conditions in each flue while taking flue temperatures;

- (iv) TCC shall include in its O&M procedure a description of its charging mechanisms, and procedures used, to minimize fugitive emissions during coal loading. The O&M Plan must include a schedule for inspecting the charging mechanisms and evaluating the procedures used to minimize emissions, on at least a once per calendar year basis;
- (v) TCC shall use flue temperature monitoring, including visual inspection during such monitoring, to determine appropriate maintenance of the flue combustion equipment/systems. TCC shall inspect the flue combustion reversing system on a weekly basis and shall keep records of these inspections;
- (vi) In accordance with the O&M Plan, TCC shall continuously monitor and record the back-pressure on the battery. When pressure readings trend higher or lower (i.e., the readings are above or below the values or ranges established based on current operating conditions), TCC shall investigate the cause(s), and shall take action to adequately restore the back-pressure to the appropriate range. TCC shall keep records of all corrective actions taken;
- (vii) TCC shall provide annual refresher training for all battery workers to ensure the optimization of all battery operations and to minimize emissions; and

- (viii) TCC shall develop and implement a plan for inspecting all door plugs, jamb clips and jambs on all operating coke ovens, and for repairing or replacing any such equipment that may be causing or contributing to fugitive emissions. This plan shall include provisions for operating and maintaining the ovens in a manner consistent with reducing emissions.

18. Limitations on Furnace Coke Production. TCC shall, upon the Effective Date of this Consent Decree, operate and maintain the Facility in accordance with each of the following operational restrictions:

- a. The minimum battery coking time, as defined in 40 C.F.R. § 63.7352, for all coke produced shall be no less than 24 hours;
- b. The maximum amount of furnace coke produced, as defined in 40 C.F.R. § 61.131, shall not exceed 25 percent of the total amount of coke produced on an annual basis, unless each of the following requirements are met:
 - (i) the COMS referenced by Subparagraph 17a of this Consent Decree is installed and fully operational;
 - (ii) the battery rehabilitation evaluation and/or work that is required under Paragraph 21 of this Consent Decree is completed; and
 - (iii) the Pushing Controls required under Paragraph 16 of this Consent Decree have been installed and are fully operational.
- c. If, during any rolling 12 month period after TCC meets the requirements in Subparagraph 18b above, TCC produces more than 50 percent furnace coke, as defined in 40 C.F.R. § 61.131, then TCC shall comply with the

following emission limitations, as determined by the relevant procedures and requirements of Method 303 or 303A that are listed in 40 C.F.R.

§ 63.309(d):

- (i) 2 percent leaking coke oven doors;
- (ii) 0.2 percent leaking topside port lids;
- (iii) 1.25 percent leaking offtake system; and
- (iv) 6 seconds of visible emissions per charge.

- d. The restrictions identified in Subparagraph 18c, if applicable, will be removed once TCC produces furnace coke below the 50 percent limit in a subsequent rolling 12 month period.

19. Plan to Control Fugitive Dust. Within 60 Days of the Effective Date of this Consent Decree, TCC shall submit to EPA and the NYSDEC, for review and approval, a work plan, along with an implementation schedule, to effectively control fugitive dust at the Facility to prevent dust from constituting a nuisance or a hazard to human health and property. This work plan shall include, at a minimum, measures to control dust from paved and non-paved roadways, coal and coke handling equipment and storage areas, and any other sources of fugitive dust at the Facility. TCC shall implement the work plan in accordance with the approved schedule.

20. Enhanced Leak Detection and Repair Program (“ELP”). The requirements of this ELP shall apply to all Covered Equipment at the Facility. The requirements of this ELP are in addition to, and not in lieu of, the requirements of any other LDAR regulation that may be applicable to any Covered Equipment.

a. Facility-Wide LDAR Document

- (i) By no later than 6 months after the Date of Lodging, TCC shall develop a facility-wide document that describes:
- (1) the facility-wide LDAR program (*e.g.*, applicability of regulations to process units and/or specific equipment, leak definitions, and monitoring frequencies);
 - (2) a management of change (“MOC”) tracking program that ensures that new pieces of equipment added to the Facility for any reason are integrated into the LDAR program and that pieces of equipment that are taken out of service are removed from the LDAR program;
 - (3) The roles and responsibilities of all employee and contractor personnel assigned to LDAR functions at the Facility;
 - (4) how the number of personnel dedicated to LDAR functions is sufficient to satisfy the requirements of the ELP program; and
 - (5) how TCC plans to implement this ELP.
- (ii) TCC shall review this LDAR document on an annual basis, and update it as needed by no later than December 31 of each year. TCC may rely on its existing written COG Leak Survey and Repair program plan document to develop the document required under this Subparagraph 20a, but only to the extent that such plan

provisions are consistent with the requirements in this Paragraph 20 of the Consent Decree.

b. Monitoring Frequency and Equipment

- (i) Beginning on the Date of Lodging, TCC shall comply with the periodic monitoring frequencies identified in Subparagraph 20c(i), Table 1, unless more frequent monitoring is required by federal or state laws or regulations, or the relevant Covered Process Unit has been permanently shut down.
- (ii) Beginning on the Date of Lodging, TCC shall comply with Method 21 in performing LDAR monitoring, using a Thermo TVA-1000 or an equivalent instrument. Simultaneously, TCC shall use a recording data logger (or an equivalent instrument) to record the values detected at each piece of equipment during each monitoring session. These electronically logged values will provide back-up data to both the time-period of the session, and the values recorded by LDAR Personnel on component diagrams. The technician will record their name and the beginning and ending date and time on each component diagram. TCC shall transfer the electronic monitoring data to a database on at least a weekly basis during monitoring periods for recordkeeping purposes. If, during monitoring in the field, a piece of Covered Equipment is discovered that is not listed on the component diagram, TCC will monitor the piece of Covered Equipment and record, by any means

available, the Screening Value, the date and time of the Screening Value, and the name of the technician. TCC will also perform a MOC to add the piece of Covered Equipment.

c. Leak Detection and Repair Action Levels

- (i) Beginning on the Date of Lodging, for all leaks from Covered Equipment detected at or above the leak definitions listed in Table 1 for the specific equipment type, TCC shall perform repairs in accordance with the procedures identified in Subparagraph 20d below.

Table 1: Monitoring Frequency and Lower Leak Definitions by Equipment Type

Equipment Type	Monitoring Frequency	Lower Leak Definitions (ppm)	Comparative Monitoring Frequency (yrs)
Valves	Semi-annual	500	2
Connectors	Semi-annual	500	2
Pumps	Monthly	500	1
Exhauster	Monthly	500	1
OELs (at the Closure Device)	Semi-annual	500	2
Sumps/vessels	Monthly	500	1
Closed Vent System	Semi-annual	500	2

- (ii) For all Covered Equipment, at any time, including periods between required periodic monitoring, that evidence of a potential leak is detected through audio, visual, or olfactory sensing, TCC shall comply with all applicable LDAR regulations as if repair is required pursuant to Subparagraph 20d below.

d. Repairs

- (i) By no later than 5 Days after detecting a defined leak in any Covered Equipment above the leak definition, TCC shall perform a first attempt at repair. By no later than 15 Days after detection, TCC shall perform a final attempt at repair, or place the piece of Covered Equipment on the Delay of Repair (“DOR”) list.
- (ii) TCC shall perform monthly Repair Verification Monitoring for 2 consecutive months after the repairs under Subparagraph 20d(i) are completed.
- (iii) Drill and Tap for Valves (other than Control Valves).
 - (1) When repair attempts for defined leaking valves (other than control valves) have failed to reduce emissions to the applicable lower leak definition, and TCC cannot remove such valve from service, TCC shall attempt at least one drill-and-tap packing repair (with a second injection of an appropriate sealing material if the first injection is unsuccessful at addressing the leak) before placing the valve on the DOR list.
 - (2) Drill-and-tap packing repair is not required when there is a major safety, mechanical, product quality, or environmental issue with repairing the valve using the drill-and-tap method, in which case TCC shall document the reason(s)

why any drill-and-tap attempt was not performed prior to placing any valve on the DOR list.

- (3) If a drill-and-tap packing repair attempt can reasonably be completed within the 15 Day repair period, TCC shall complete the drill-and-tap repair attempt in that time period. If a drill-and-tap attempt cannot reasonably occur within the 15 Day repair period (*e.g.*, if TCC's drill-and-tap contractor is not local and must mobilize to the Facility), TCC may provisionally place the valve on the DOR list, pending the drill-and-tap repair attempt as expeditiously as practical. In no event (other than as provided in Subparagraph 20d(iii)(2)) may TCC take more than 30 Days from the initial monitoring to attempt a drill-and-tap repair. If drill-and-tap is successful, the valve shall be removed from the provisional DOR list.
- (4) TCC shall record the following information for each leak:
- (A) the date of all repair attempts;
 - (B) the repair methods used during each repair attempt;
 - (C) the date, time and Screening Values for all re-monitoring events; and, if applicable,
 - (D) documentation of compliance with Subparagraph 20d(ii) of this Decree for Covered Equipment placed on the DOR list.

(5) Nothing in Subparagraphs 20d(i) through (ii) is intended to prevent TCC from taking a leaking piece of Covered Equipment out of service. However, prior to placing the leaking piece of Covered Equipment back in service, TCC must repair the leak or must comply with the requirements in Subparagraph 20e below to place the piece of Covered Equipment on the DOR list.

e. Delay of Repair

(i) Beginning on the Date of Lodging, for all Covered Equipment placed on the DOR list, TCC shall:

- (1) Require sign-off from a General Foreman or person of higher authority that the piece of Covered Equipment is technically infeasible to repair without a process unit shutdown; and
- (2) Undertake at least quarterly monitoring of the Covered Equipment placed on the DOR list, or at the frequency required for other pieces of Covered Equipment of that type in the process unit.

f. MOC

(i) TCC shall ensure that each type of equipment listed in Subparagraph 20c(i), Table 1, added to the Covered Process Units for any reason, is evaluated to determine if it is subject to LDAR requirements. TCC shall also ensure that each type of equipment

listed in Subparagraph 20c(i), Table 1, that was subject to the LDAR program is eliminated from the LDAR program if it is physically removed from a Covered Process Unit. This evaluation shall be a part of TCC's MOC protocol.

g. Training

- (i) By no later than 6 months after the Date of Lodging, TCC shall develop a training protocol (or, as applicable, require its contractor to develop a training protocol for the contractor's employees) and shall ensure that all LDAR Personnel have completed training on all aspects of LDAR, including this ELP, that are relevant to the person's duties. Once per calendar year, starting in the calendar year after completion of initial training, TCC shall ensure that refresher training is performed with respect to each employee or contractor; provided, however, that refresher training is not required if an individual's employment at the Facility ceases prior to the end of the calendar year or no longer involves duties relevant to LDAR. TCC shall also ensure (or, as applicable, require its contractor to ensure for the contractor's employees) that new LDAR personnel are sufficiently trained prior to any involvement (other than supervised involvement for purposes of training) in the LDAR program.

h. Quality Assurance (“QA”)/Quality Control (“QC”)

- (i) Daily Certification by Monitoring Technicians. Beginning on the Date of Lodging, on each day that monitoring occurs, at the end of such monitoring, TCC shall ensure that each monitoring technician certifies that the data collected accurately represent the monitoring performed for that day by requiring the monitoring technician to sign a form that includes the following certification:

“On [insert date], I reviewed the monitoring data that I collected today and to the best of my knowledge and belief, the data accurately represent the monitoring that I performed today.”

- (ii) By no later than 3 months after the Date of Lodging, and at least once during every 6 month period thereafter, at times that are not announced to the LDAR monitoring technicians, an LDAR-trained employee or contractor who does not serve on a routine basis as an LDAR monitoring technician at the Facility shall act as an internal auditor, and undertake the following:

- (1) Verify that equipment was monitored at the appropriate frequency;
- (2) Verify that proper documentation and sign-offs have been recorded for all equipment placed on the DOR list;
- (3) Ensure that repairs have been performed in the required periods;

- (4) Review monitoring data and equipment counts (*e.g.*, number of pieces of equipment monitored per day) for feasibility and unusual trends;
 - (5) Verify that proper calibration records and monitoring instrument maintenance information are maintained;
 - (6) Verify that other LDAR program records are maintained as required; and
 - (7) Observe in the field each LDAR monitoring technician who is conducting leak detection monitoring to ensure that monitoring during QA/QC, during the applicable period, is being conducted as required.
- (iii) TCC shall promptly correct any deficiencies detected or observed. TCC shall maintain a log that: (1) records the date and time that the reviews, verifications, and observations required by this Subparagraph 20h are undertaken; and (2) describes the nature and timing of any corrective actions taken.

i. LDAR Audits and Corrective Action

- (i) LDAR Audit Schedule. TCC shall conduct an initial independent third party audit by no later than 180 Days after the Date of Lodging, and once every 2 years thereafter. For each subsequent LDAR audit, the LDAR Audit Completion Date shall occur within the same calendar quarter (of the subsequent year) that the first LDAR Audit Completion Date occurred. Each LDAR audit shall

include:

- (1) reviewing compliance with all applicable LDAR regulations, including LDAR requirements related to equipment listed in Subparagraph 20c(i), Table 1;
- (2) reviewing and/or verifying, as applicable, the same items that are required to be reviewed and/or verified in Subparagraph 20h(i) through 20h(iii);
- (3) reviewing whether any pieces of equipment that are required to be in the LDAR program are included; and
- (4) “comparative monitoring,” as described in Subparagraph 20i(ii) of this Consent Decree, is being properly followed.

LDAR audits after the first audit also shall include reviewing the Facility’s compliance with this ELP.

- (ii) Comparative Monitoring. Comparative monitoring during LDAR audits shall be undertaken as follows:

- (1) Calculating a Comparative Monitoring Audit Leak Definition Percentage. Covered Equipment shall be monitored in order to calculate a leak percentage, broken down by equipment type (*i.e.*, valves, pumps, connectors, and OELCDs). For descriptive purposes under this Subparagraph 20i(ii), the monitoring that takes place during the audit shall be called “Comparative Monitoring” and the leak percentages derived from the comparative monitoring

shall be called the “Comparative Monitoring Audit Leak Percentages.” In undertaking Comparative Monitoring, TCC shall not be required to monitor every component in the Facility.

- (2) Calculating the Historic, Average Leak Percentage from Prior Periodic Monitoring Events. The average leak percentage from prior periodic monitoring events broken down by equipment type, as listed in Subparagraph 20c(i), Table 1, shall be calculated per its listed frequency.
- (3) Calculating the Comparative Monitoring Leak Ratio. For each Covered Type of Equipment, the ratio of the Comparative Monitoring Audit Leak Percentage from Subparagraph 20i(ii)(1) above to the Historic, Average Leak Percentage (if greater than zero) from Subparagraph 20i(ii)(2) above shall be calculated. This ratio shall be called the “Comparative Monitoring Leak Ratio.” For statistical purposes in this calculation, if the Historic Average Leak Percentage is “zero,” it shall be assumed (for purposes of this calculation but not for any other purpose under this Consent Decree or under any applicable laws and regulations) that one leaking piece of equipment was found in the process unit through routine monitoring during the 12-month period before the Comparative Monitoring.

(4) For the first LDAR audit only, TCC shall not be required to undertake comparative monitoring on OELCDs or calculate a Comparative Monitoring Leak Ratio for OELCDs because of the unavailability of Historic, Average leak percentages for OELCDs.

(iii) When More Frequent Periodic Monitoring Is Required. If a Comparative Monitoring Audit Leak Percentage calculated pursuant to Subparagraph 20i(ii)(1) above of this Consent Decree triggers a more frequent monitoring schedule under any applicable federal or state law or regulation than the frequencies listed in Subparagraph 20c(i), Table 1, of this Consent Decree, TCC shall monitor the affected type of equipment at the greater frequency unless and until less frequent monitoring is again allowed under the specific federal or state law or regulation. At no time may TCC monitor at intervals less frequently than those listed in Subparagraph 20c(i), Table 1, above.

j. Corrective Action Plan (“CAP”)

- (i) By no later than 30 Days after each LDAR Audit Completion Date, TCC shall develop a preliminary Corrective Action Plan if:
- (1) the results of an LDAR audit identify any deficiencies; or
 - (2) a Comparative Monitoring Leak Ratio calculated pursuant to Subparagraph 20i(ii)(3) of this Decree is 3.0 or higher and the Comparative Monitoring Audit Leak Percentage

calculated pursuant to Subparagraph 20i(ii)(1) of this Decree is greater than or equal to 0.5 percent.

- (ii) The preliminary CAP shall describe the actions that TCC has taken or that TCC will take to address: (1) the deficiencies and/or (2) the causes of a Comparative Monitoring Leak Ratio that is 3.0 or higher (but only if the Comparative Monitoring Audit Leak Percentage is at or above 0.5 percent). TCC shall include a schedule by which actions that have not yet been completed shall be completed. TCC shall promptly complete each corrective action item with the goal of completing each action by no later than 3 months after the LDAR Audit Completion Date. If any action is not completed or is not expected to be completed within 3 months after the LDAR Audit Completion Date, TCC shall explain the reasons and propose a schedule for prompt completion in the final CAP to be submitted under Subparagraph 20j(iii) of this Decree.
- (iii) Submission of the Final CAP to EPA and NYSDEC. If one is necessary, TCC shall submit the final CAP to EPA and NYSDEC, together with a certification of the completion of each item of corrective action. If any action is not completed within 3 months after the LDAR Audit Completion Date, TCC shall explain the reasons, together with a proposed schedule for prompt completion.

TCC shall submit a supplemental certification of completion by no later than 1 month after completing all actions.

- (iv) EPA and NYSDEC Comment on CAP. EPA and NYSDEC may submit comments on the CAP. Except for good cause, EPA and NYSDEC may not request TCC to modify any action within the CAP that has already been completed or that is in progress at the time of the comments. By no later than 1 month after receipt of any comments, TCC shall submit a reply to such comments. Disputes arising with respect to any aspect of a CAP shall be resolved in accordance with the dispute resolution provisions of this Decree.

k. Certification of Compliance

- (i) By no later than 180 Days after the initial LDAR Audit Completion Date, TCC shall certify to EPA and NYSDEC that, to the signer's best knowledge and belief, to be formed after reasonable inquiry, TCC:
- (1) is in compliance with all applicable LDAR regulations and this ELP;
 - (2) has completed all corrective actions, if applicable, or is in the process of completing all corrective actions pursuant to a CAP; and

(3) has identified all equipment at the Facility that is regulated under the LDAR program, and has included all such equipment in the Facility's LDAR program.

(ii) To the extent that TCC cannot make the certification in all respects, it shall specifically identify any deviations from items (i)(1) through (i)(3), above.

l. Recordkeeping

(i) TCC shall keep, for a period of at least 5 years, all records required by this ELP, including each LDAR audit report, to document compliance with the requirements of this ELP. Upon request by EPA or NYSDEC, TCC shall make all such records available and shall provide, in electronic format if so requested, all LDAR monitoring data generated.

m. Reporting Requirements

(i) LDAR Compliance Status Reports. TCC shall submit the following information to EPA and the NYSDEC in accordance with the schedule set forth in Section IX (Reporting Requirements) of this Consent Decree, in the manner set forth in Section XVI (Notices) of this Decree:

(1) The number of LDAR personnel at the Facility (excluding personnel whose functions involve the non-monitoring aspects of repairing leaks) and the approximate percentage

of time each such person dedicated to performing his/her LDAR functions;

- (2) An identification and description of any non-compliance with the requirements in this Paragraph;
 - (3) An identification of any problems encountered in complying with the requirements in this Paragraph;
 - (4) A description of the trainings done;
 - (5) Any deviations identified in the QA/QC performed, as well as any corrective actions taken;
 - (6) A summary of LDAR audit results received during the reporting period, including the specific identification of all deficiencies; and
 - (7) The status of all actions under any CAP that was submitted during the reporting period, unless the CAP was submitted less than one month before the compliance status report.
- (ii) Each report submitted shall be signed by an officer of TCC, and shall include the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.”

21. Evaluation and Repair of Coke Oven Walls.

- a. Within 60 Days from the Effective Date, TCC shall submit to EPA and NYSDEC, a list of independent third party entities, with supporting background information, to assess the overall structural, mechanical, and operational condition of the Facility's coke oven battery walls. EPA and NYSDEC will review the list of third party entity assessors submitted by TCC to conduct the assessment in accordance with Section VI (Review and Approval of Submittals) of this Decree.
- b. Within 30 Days from EPA and the NYSDEC's approval of the list of third party assessors, TCC shall engage the services of one of the selected assessors via a signed contract to conduct a comprehensive assessment of the battery walls.
 - (i) TCC shall ensure that the third party coke oven battery wall assessor conducts a comprehensive evaluation of the condition of the battery walls and that the assessor submits to TCC an independent recommendation for any repairs or rebuilds that are found to be necessary to minimize all emissions associated with battery operations to the greatest extent practicable.
- c. Within 45 Days after the contract is signed, TCC shall submit to EPA and NYSDEC, a Battery Assessment Workplan ("BAW"), that delineates the process, duration and a schedule of the milestones that will be completed by the selected third party assessor.

- d. Within 30 Days after the BAW has been submitted, TCC shall ensure that the third party assessor has initiated the assessment.
- e. Within 60 Days of starting the assessment, TCC shall ensure that the third party assessor completes the assessment process, and submits a report of the findings and recommendations to TCC. Such report is to be provided to TCC by no later than 45 Days from completion of the assessment. TCC shall provide an unmodified copy of the third party assessor's report to EPA and NYSDEC within 5 Days of its receipt of the report.
- f. Within 60 Days of TCC's receipt of the third party assessor's report, TCC shall submit to EPA and NYSDEC, a Battery Repair Workplan ("BRW") that incorporates the findings of the assessor and/or disputes their findings with appropriate justification. This BRW shall include a schedule for completing this work.
- g. Within 30 Days from receiving comments from the EPA and NYSDEC on the BRW, TCC shall address any comments, if any. Once EPA and NYSDEC approve the BRW, TCC must begin work no later than 30 days from the date of approval. The requirements of the BRW shall be incorporated into this Consent Decree. TCC shall ensure that all of the work required under the BRW is completed by the due date in the approved BRW. TCC shall provide EPA and NYSDEC with monthly progress reports delineating the status of the repairs and of any problems/issues. Upon completion of all of the work in the BRW, TCC

shall notify EPA and NYSDEC that the work has been completed within 10 Days.

22. Programmable Logic Control (PLC) Hub Upgrades. TCC shall maintain the updates to its PLC hub system that are described in the modified PLC Hub Assessment, dated February 19, 2015, attached to this Consent Decree as Appendix B, and shall continue to update its PLC hub system, as appropriate, based on TCC's operating conditions.

23. Benzene Waste NESHAP TAB.

- a. Within 90 Days from the Effective Date, TCC shall submit to EPA and NYSDEC a list of at least 3 independent contractors, and examples of Benzene Waste Operations NESHAPs ("BWON") audits done by each contractor at a by-product coke oven, for the purpose of conducting a BWON audit at the Facility. EPA and NYSDEC will approve or disapprove contractor(s) from the list of contractors submitted by TCC to conduct this independent third party audit.
- b. By no later than 6 months after the Effective Date, TCC shall, using an approved third party contractor, complete a review and verification of the Facility's most recent Total Annual Benzene ("TAB") documentation. Such review and verification process shall include, but not be limited to:
 - (i) an identification of each waste stream that is required to be included in the Facility's TAB (*e.g.*, weak ammonia liquor draws, decanter sludge, decanter tar, drip tank collections, ammonia still draws, other sample wastes, maintenance wastes, and turnaround wastes);

- (ii) a review and identification of the calculations and/or measurements used to determine the flows of each waste stream for the purpose of ensuring the accuracy of the annual waste quantity for each waste stream; and
 - (iii) an identification of the benzene concentration in each waste stream, including sampling for benzene concentrations at no less than 10 waste streams, unless TCC produces less than 10 benzene containing waste streams, in which case samples should be taken from all such waste streams, consistent with the requirements in 40 C.F.R. § 61.355(c)(1) and (3); provided, however, that previous analytical data or documented knowledge of waste streams may be used for streams not sampled in accordance with 40 C.F.R. § 61.355(c)(2).
- c. By no later than 30 Days after the completion of the review and verification process, TCC shall submit a Benzene Waste NESHAP Compliance Review and Verification report ("BWON Compliance Review and Verification Report") to EPA and NYSDEC, which sets forth the results of the audit, including but not limited to, the items identified in this Paragraph 23.
 - d. If the results of the BWON Compliance Review and Verification Report indicate that TCC is not in compliance with the Benzene Waste NESHAP, it shall submit to EPA and NYSDEC, by no later than 60 Days after submittal of the BWON Compliance Review and Verification Report, a

plan that identifies the specific schedule that TCC will implement to ensure compliance with all applicable requirements as soon as practicable. If the results of the BWON Compliance Review and Verification Report indicate that the TAB at the Facility is: (i) below 1 Mg/yr; or (ii) less than 10 Mg/yr but equal to or greater than 1 Mg/yr, then TCC shall comply with the applicable Benzene Waste NESHAP regulations for such categories and the relevant provisions of the Benzene Waste NESHAP, 40 C.F.R. Part 61, Subpart FF. If the results of the BWON Compliance Review and Verification Report indicate that the TAB at the facility is greater than 10 Mg/yr, TCC shall comply with all applicable requirements of the Benzene Waste NESHAP regulations, as set forth in 40 C.F.R. § 61.342.

24. CWA Compliance Audit and Plan of Action.

- a. Within 4 months from the Effective Date of this Consent Decree, TCC shall have a third party contractor, chosen in consultation with the EPA and NYSDEC, and with expertise in Clean Water Act compliance at steelmaking and/or coke-making facilities, conduct a facility-wide compliance audit to evaluate TCC's compliance with its SPDES and Town of Tonawanda IU permits, including, but not limited to, evaluating the following:
 - (i) The accuracy of sampling and analytical methods, and the adequacy of sample frequencies used for all discharge monitoring required by TCC's SPDES permit;

- (ii) The adequacy and implementation of TCC's SPDES Best Management Practices plan required by TCC's SPDES permit, Special Conditions 1-6;
- (iii) The accuracy and adequacy of the composite and grab sampling and analytical methods required by TCC's IU permit;
- (iv) The location of all process wastewater discharge points;
- (v) Whether all categorical wastewaters flow through the process wastewater sampling point, as required by TCC's IU permit;
- (vi) Whether all wastewater flows are discharging from their respective permitted outfalls, as required by TCC's SPDES permit;
- (vii) Whether the SPDES outfall flow meters are properly calibrated and maintained, as required by 6 NYCRR 750-2.5(a)(5);
- (viii) The accuracy of flow monitoring devices pursuant to Part IV.5.f of TCC's IU permit;
- (ix) The existence and elimination of any unauthorized discharges and pipe leaks;
- (x) The condition of berms and secondary containment around fuel tanks and process areas, including, but not limited to, the by-products recovery area, equalization tanks, weak liquor tanks and the ammonia still, to ensure that spills are contained and that the containment is properly drained to ensure capacity within the contained area; and

(xi) Compliance with all effluent limitations and action level requirements contained in TCC's SPDES and IU permits.

- b. Within six months from the Effective Date of this Consent Decree, TCC shall submit for EPA and NYSDEC approval, a report describing the compliance audit findings and any noncompliance identified as a result of the compliance audit, including, as necessary, a compliance plan of action ("POA"), with an implementation schedule for correcting all identified noncompliance no later than 6 months from the completion of the audit, unless a longer period of time is agreed to by EPA and NYSDEC. The POA must include measures to achieve full compliance with pretreatment limits for cyanide at the guard gate outfall prior to entering the Town of Tonawanda's sewer.
- c. Within 12 months of EPA's approval of the POA, TCC shall submit written certification that TCC has corrected all noncompliance identified during the compliance audit, carried out any POAs specified under the compliance audit, and that TCC is in full compliance with its SPDES and IU permits.

25. EPCRA Reporting and State Emissions Inventory Statements

- a. No later than 60 days after the Effective Date of this Consent Decree, in accordance with Section 313 of EPCRA, 42 U.S.C. § 11023, Defendant shall submit an accurate Toxic Chemical Release Inventory Reporting Form, EPA Form 9350-1 ("Form R"), for ammonia for each of the years 2007 through 2012.

- b. No later than 60 days after the Effective Date of this Consent Decree, in accordance with Section 313 of EPCRA, 42 U.S.C. § 11023, Defendant shall submit an accurate Form R, for benzene for each of the years 2009 through 2012.
- c. No later than 60 days after the Effective Date of this Consent Decree, Defendant shall revise and re-submit emission inventory statements, in accordance with 6 NYCRR 202-2, for the years 2007 through 2013 to include the following information:
- (i) A breakdown of fugitive emissions for all contaminants, including all criteria air contaminants, hazardous air pollutants and total VOCs for all process categories at the Facility. The process categories include, but are not limited to, fugitive emissions from the coke battery (including the fugitive emissions from charging the coke ovens to quenching the coke), the by-products area, and all leaks at the Facility. The revised submissions, and future submissions, are to fraction out the emissions among the various processes and specific emission points.
 - (ii) An estimate of COG emissions from the operation of the Pressure Relief Valve for each calendar year from 2007 until the unit was taken out of service in March 2010.
 - (iii) All emissions information on benzene, naphthalene, toluene, mixed xylenes, carbon dioxide, ammonia, PM 10, COG emissions from

the combustion and industrial processes, PM 2.5 emissions and unspeciated VOC emissions reported from the industrial processes.

26. Incorporation of Consent Decree Requirements in Federally Enforceable Permits.
- a. Where any compliance obligation under this Section V requires Defendant to obtain a federal, state, or local permit or approval, Defendant shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Defendant may seek relief under the provisions of Section XI of this Consent Decree (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Defendant has submitted timely and complete applications, and has taken all other actions necessary to obtain all such permits or approvals.
 - b. No later than 90 Days after the Effective Date, TCC shall submit a supplemental Title V Permit renewal application to the NYSDEC permitting authority, in accordance with the procedures in 6 NYCRR 201-6.6. The supplemental submission shall include modifications to TCC's Title V Permit to incorporate all applicable requirements contained in the regulations listed in Paragraph 14, and the following applicable requirements listed below:
 - (i) Paragraph 16 (Coke Oven Battery Pushing Controls);

- (ii) Paragraph 17 (Applicable Coke Oven MACT Emission Limitations and Standards including Additional Battery Work Practices);
 - (iii) Paragraph 18 (Limitations on Furnace Coke Production);
 - (iv) Paragraph 19 (Plan to Control Fugitive Dust);
 - (v) Paragraph 20 (ELP); and
 - (vi) Paragraph 23 (Benzene Waste NESHAP TAB).
- c. The requirements referred to in this Paragraph shall survive termination of this Consent Decree, as those requirements are incorporated into the Defendant's Title V Permit.

VI. REVIEW AND APPROVAL OF SUBMITTALS

27. After review of any plan, report, or other document that is required to be submitted by TCC pursuant to this Consent Decree, EPA and NYSDEC shall, in writing:

- a. approve the submission;
- b. approve the submission upon specified conditions;
- c. approve part of the submission, and disapprove the remainder, with detailed comments explaining the basis for the disapproval; or
- d. disapprove the entire submission, with detailed comments explaining the basis for the disapproval.

28. If the submission is approved, TCC shall take all actions required by the plan, report, or other document, in accordance with the schedules and requirements of the plan, report, or other document, as approved. If the submission is conditionally-approved, or approved only in part, TCC shall, upon written direction of EPA and NYSDEC, take all actions required by the

approved portions of the plan, report, or other document that EPA and NYSDEC determine are technically severable from any disapproved portions, subject to TCC's right to dispute only the specified conditions, the disapproved portions, or the severability of approved portions, under Section XII (Dispute Resolution) of this Consent Decree.

29. If the submission is disapproved in whole or in part, TCC shall, subject to its right to dispute the disapproved portions pursuant to Section XII (Dispute Resolution), within 45 Days or such other time as the Parties agree to in writing, correct all deficiencies and resubmit the plan, report, or other document, or disapproved portion thereof, for approval, in accordance with the preceding Paragraphs. If the resubmission is approved, in whole or in part, TCC shall proceed in accordance with the preceding Paragraph 28.

30. Any stipulated penalties applicable to the original submission, as provided in Section X (Stipulated Penalties) of this Consent Decree, shall accrue during the 45 Day period or other specified period, but shall not be payable unless the resubmission is untimely or is disapproved in whole or in part; provided, that, if the original submission was so deficient as to constitute a material breach of TCC's obligations under this Decree, the stipulated penalties applicable to the original submission shall be due and payable notwithstanding any subsequent resubmission.

31. If a resubmitted plan, report, or other document, or portion thereof, is disapproved in whole or in part, EPA and NYSDEC may again require TCC to correct any deficiencies, in accordance with the preceding Paragraphs 28-29, or may themselves correct any deficiencies, subject to TCC's right to invoke dispute resolution under Section XII (Dispute Resolution) and the right of EPA and NYSDEC to seek stipulated penalties as provided in Section X (Stipulated Penalties).

VII. SUPPLEMENTAL ENVIRONMENTAL PROJECT

32. General Provisions

- a. Defendant shall implement a wetland preservation and enhancement/restoration Supplemental Environmental Project (“SEP”) whereby Defendant shall acquire or cause to be acquired a parcel(s) with on-site wetlands (“SEP Parcel(s)”) within the Niagara River and/or Lake Ontario watersheds, and within 30 miles of Defendant’s facility, for transfer to an appropriate third party (*e.g.*, a governmental entity, non-profit organization or land trust) (“Recipient”), which shall protect the parcel(s) in perpetuity from development or other man-made degradation by encumbering them with appropriate conservation easements, deed restrictions or covenants, and perform any wetlands enhancement and/or restoration necessary to ensure that the parcel(s) provide environmental and public health benefits.
- b. The purpose of this environmental preservation and enhancement/restoration project is to preserve and restore wetlands on the SEP Parcel(s) to provide significant environmental and public health protection through the filtration of stormwater, storage of flood waters and provision of wildlife habitat.
- c. Upon proposing a particular SEP Parcel(s), pursuant to Paragraph 33, below, Defendant shall certify the truth and accuracy of each of the following:
 - (i) Defendant is not required to perform or develop this SEP as part of

any federal, state or local law or regulation, and is not required to perform or develop the SEP by any other agreement, grant or as injunctive relief in this or any other case in any forum;

- (ii) The SEP is not a project that Defendant was planning or intending to construct, perform, or implement other than in the settlement embodied in this Consent Decree;
- (iii) Defendant has not received, and will not receive, credit for the SEP in any other enforcement action;
- (iv) Defendant will not receive any reimbursement for any portion of the SEP from any other person;
- (v) Defendant is not a party to any open federal financial assistance transaction that is funding or could be used to fund the same activity as the SEP. Further, to the best of Defendant's knowledge and belief after reasonable inquiry, there is no such open federal financial transaction that is funding or could be used to fund the same activity as the SEP, nor has the same activity been described in an unsuccessful federal financial assistance transaction proposal submitted to EPA within two years of the date of the settlement (unless the project was barred from funding as statutorily ineligible). For purposes of this certification, the term "open federal financial assistance transaction" refers to a grant, cooperative agreement, loan, federally-guaranteed loan guarantee or other mechanism for providing federal financial assistance

whose performance period has not yet expired; and

(vi) All information provided to the United States in connection with the approval of the SEP is complete and accurate and Defendant, in good faith, estimates that the cost to implement the SEP, or “Eligible SEP Costs,” is \$357,143 and, in good faith, estimates that the appraised market value of the SEP Parcel is no less than two hundred fifty thousand dollars (\$250,000), unless the United States agrees that a different appraised value of the SEP Parcel is satisfactory.

d. Defendant shall spend no less than \$357,143 in Eligible SEP Costs to implement the wetlands preservation and enhancement/restoration SEP.

Eligible SEP Costs include:

- (i) the costs incurred and paid by Defendant for the actual purchase price of the SEP Parcel(s), which shall be no less than seventy (70) percent of the total SEP cost, unless the United States agrees that a different percentage is satisfactory;
- (ii) the costs for any necessary enhancement, restoration and/or management of the wetlands, which shall not exceed fifteen (15) percent of the total SEP cost, unless the United States agrees that a different percentage is satisfactory; and
- (iii) the normal and customary costs associated with acquiring the land or easements: appraisal costs, broker fees, option fees, recording fees and taxes, survey costs, title and closing costs, title search and

insurance costs, which shall not exceed fifteen (15) percent of the total SEP cost.

- e. For federal and state income tax purposes, Defendant agrees that neither it, nor any affiliated entity, will capitalize into inventory or basis or take as a tax deduction in the United States or elsewhere any costs or expenditures incurred in performing the SEP.
- f. Each submission required under this Section shall be signed by an official with knowledge of the SEP and shall bear the certification language set forth in Paragraph 45 of this Consent Decree.
- g. Any public statement, oral or written, in print, film, or other media, made by Defendant making reference to the SEP shall include the following language:

“This project was undertaken in connection with the settlement of an enforcement action, United States v. Tonawanda Coke Corporation, taken on behalf of the U.S. Environmental Protection Agency for violations of the Clean Water Act.”

- h. Defendant shall complete the SEP, including submission of the SEP Completion Report described in Paragraph 36, below, no later than 420 Days after the Effective Date of this Decree, unless the Parties extend the time for completion by agreement in writing before the 420 Days have elapsed.

33. Parcel(s) Description and Work Plans

- a. No later than one hundred twenty (120) Days after the Effective Date of

this Decree, Defendant shall submit to EPA, for review and approval, a Parcel(s) Description and Work Plan(s) to accomplish the wetlands preservation and restoration SEP within the time period described in Paragraph 35, below. The Parcel(s) Description and Work Plan(s) shall include, for each proposed SEP Parcel, at a minimum:

- (i) A detailed description of the proposed wetland parcel, including its wetland characteristics (hydrology, vegetation and soils) and its ecological and water quality values (*e.g.*, its ability to filter stormwater, store flood waters and provide wildlife habitat);
 - (ii) The expected Recipient of the parcel;
 - (iii) The expected purchase price for the parcel, including the assessed value of the SEP parcel(s) by the local municipality;
 - (iv) A detailed schedule for completion of the SEP; and
 - (v) A detailed description of the estimated Eligible SEP Costs.
- b. Within forty-five (45) Days of receiving the Parcel(s) Description and Work Plan(s), EPA will, in writing, either:
- (i) Approve the Parcel(s) Description and Work Plan(s);
 - (ii) Approve the Parcel(s) Description and Work Plan(s) with specified conditions (“conditional approval”), or;
 - (iii) Disapprove the Parcel(s) Description and Work Plan(s), in whole or in part, with the grounds for any disapproval.
- c. If EPA approves the Parcel(s) Description and Work Plan(s), it shall be incorporated into this Decree and Defendant shall proceed to prepare and

submit the Transfer Documents, as provided in Paragraph 34, below.

- d. If EPA conditionally approves the Parcel(s) Description and Work Plan(s), Defendant shall, within thirty (30) Days after receiving EPA's conditional approval, address the grounds for any such conditional approval, noting any concerns with, or objections to, EPA's conclusions, and resubmit the Parcel(s) Description and Work Plan(s) to EPA for approval in accordance with the preceding paragraphs, unless the Parties extend the time for completion by agreement in writing before the thirty (30) Days have elapsed.
- e. If EPA disapproves the Parcel(s) Description and Work Plan(s) in whole or in part, Defendant shall, within thirty (30) Days of receiving EPA's disapproval, correct all deficiencies, noting any concerns with, or objections to, EPA's conclusions, and resubmit the Parcel(s) Description and Work Plan(s) to EPA for approval in accordance with the preceding paragraphs, unless the Parties extend the time for completion by agreement in writing before the thirty (30) Days have elapsed.

34. Transfer Documents

- a. No later than ninety (90) Days after EPA approves the Parcel(s) Description and Work Plan(s) submitted pursuant to Paragraph 33, above, Defendant shall submit to EPA, for review and approval, the following for each SEP Parcel:
 - (i) A proposed deed, conservation easement or other appropriate instrument under New York state law transferring interest in the

- parcel from the current owner(s) to the designated Recipient;
- (ii) A current land survey including a detailed description and map of the parcel, including an assessment of the actual environmental conditions of the parcel;
 - (iii) A current title study demonstrating that the parcel is not encumbered in any way, with the exception of the covenants or easements to be given to the designated Recipient;
 - (iv) An independent third-party appraisal or other third-party valuation prepared in accordance with established appraisal standards;
 - (v) A written certification by Defendant that the parcel is free from uses or physical conditions that are inconsistent with the purposes of the SEP, has not been subject to the use, generation, storage, disposal or release of any “hazardous waste” or “hazardous substance” as defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 *et seq.* or in the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. §§ 6901 *et seq.*, and is not subject to any other encumbrances or limitations that are inconsistent with the terms of the SEP; and
 - (vi) A deed restriction, covenant, and/or conservation easement ensuring that, upon the execution and recording of the final deed(s), the parcel will be preserved in perpetuity, restored and maintained consistent with ecosystem protection and with the

purposes of the SEP set forth in Paragraph 32b, above.

- b. Within forty-five (45) days of receiving the proposed Deed(s), EPA will, in writing, either:
 - (i) Approve the Transfer Documents;
 - (ii) Approve the Transfer Documents with specific conditions (“conditional approval”), or;
 - (iii) Disapprove the Transfer Documents, in whole or in part, with the grounds for any disapproval.
- c. If EPA approves the Transfer Documents, they shall be incorporated into this Decree and Defendant shall proceed to implement the SEP as provided in Paragraph 35, below.
- d. If EPA conditionally approves the Transfer Documents, Defendant shall, within forty-five (45) Days after receiving EPA's conditional approval, address the grounds for any such conditional approval, noting any concerns with, or objections to, EPA’s conclusions, and resubmit the Transfer Documents to EPA for approval in accordance with the preceding paragraphs, unless the Parties extend the time for completion by agreement in writing before the forty-five (45) Days have elapsed.
- e. If EPA disapproves the Transfer Documents in whole or in part, Defendant shall, within forty-five (45) Days after receiving EPA’s disapproval, correct all deficiencies, noting any concerns with, or objections to, EPA’s conclusions, and resubmit the Transfer Documents to EPA for approval in accordance with this paragraph, unless the Parties

extend the time for completion by agreement in writing before the forty-five (45) Days have elapsed.

35. Implementation. No later than sixty (60) Days after EPA approves the Transfer Documents submitted pursuant to Paragraph 34, above, Defendant shall record all documents necessary for the creation of the conservation easement on the title(s) of the SEP Parcel(s) with the appropriate governmental records office, and fully implement the approved Work Plan(s).

36. Completion Report

- a. No later than sixty (60) Days after completing the implementation of the wetlands preservation and enhancement/restoration SEP, Defendant shall submit a SEP Completion Report to EPA containing the following:
- (i) Written certification that Defendant has completed the SEP according to the terms of this Decree;
 - (ii) A description of the SEP as implemented;
 - (iii) A description of any problems encountered in completing the SEP, and the solutions thereto;
 - (iv) An accounting of all Eligible SEP Costs incurred by Defendant in the implementation of the SEP, along with supporting documentation, such as invoices, purchase orders or receipts;
 - (v) Photographs of the SEP Parcel(s) showing the completed implementation of the SEP;
 - (vi) A copy of the recorded deed(s) and any other transfer documents, showing that they have been executed and recorded in the appropriate governmental records office; and
 - (vii) A description, including quantification, where feasible, of the environmental and public health benefits resulting and expected from implementation of the SEP.

- b. EPA may, in its sole discretion, consistent with the scope and purpose of the SEP outlined in the SEP Completion Report, require information in addition to that described in this Paragraph, in order to evaluate Defendant's performance of the SEP.
- c. EPA will notify Defendant in writing whether Defendant has satisfactorily completed the SEP. Satisfactory completion shall mean that Defendant has implemented the SEP in accordance with the submissions required herein and has spent at least ninety percent (90%) of the Eligible SEP Cost. If EPA advises that Defendant has not satisfactorily completed the SEP, it will specify any deficiencies, and Defendant shall have ninety (90) Days from the date of such notice (or such longer period as the Parties agree to in writing before the expiration of the ninety (90) Day period) to cure any such deficiencies.

VIII. ENVIRONMENTAL BENEFIT PROJECT

37. As an Environmental Benefit Project (EBP), Defendant shall remit to the Office of Attorney General of the State of New York a certified check in the amount of \$1,000,000 payable in accordance with Section IV (Civil Penalty), Paragraph 11, of this Consent Decree. For federal and state income tax purposes, Defendant agrees that neither it, nor any affiliated entity, will capitalize into inventory or basis or take as a tax deduction in the United States or elsewhere any costs or expenditures incurred in performing the EBP.

38. As soon as practicable, the Attorney General and NYSDEC will enter into a Cooperative Agreement with a third party for the purpose of establishing the EBP Fund and identifying the EBP Fund Administrator. Upon entering into the Cooperative Agreement, the

Attorney General will transmit the EBP monies to the EBP Fund Administrator to be used exclusively to fund projects consistent with this Consent Decree and the Cooperative Agreement, and to administer the EPB Fund.

39. Projects funded with EBP monies will be designed to secure environmental or public health protection and improvements benefiting the Tonawanda community.

40. Projects funded with EBP monies will be designed to advance New York's policy to conserve, improve and protect its natural resources and environment and to prevent, abate and control water, land and air pollution, in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well-being.

41. Public statements or representations made by Defendant regarding the EBP payment and projects shall expressly state that the projects were funded pursuant to a consent decree resolving a civil action brought by the Attorney General on behalf of NYSDEC and the citizens and residents of the state to enforce New York State's Environmental Conservation Law.

IX. REPORTING REQUIREMENTS

42. Defendant shall submit the following reports:

- a. Within 30 Days after the end of each semi-annual period (*i.e.*, by July 30 and January 30) after lodging of this Consent Decree, until termination of this Decree pursuant to Section XX below (Termination), Defendant shall submit a semi-annual report for the preceding semi-annual period that shall include the status of any construction or compliance measures; completion of milestones; problems encountered or anticipated in addressing any specific action required by this Consent Decree, together with implemented or proposed solutions; status of permit applications, if

any; operation and maintenance issues or malfunctions; and a discussion of Defendant's progress in satisfying its obligations in connection with the SEP under Section VII above of this Decree including, at a minimum, a narrative description of activities undertaken; status of any construction or compliance measures, including the completion of any milestones, and a summary of costs incurred since the previous report.

- b. The semi-annual report shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the likely cause of any such violation and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If Defendant violates, or has reason to believe that it may violate, any requirement of this Consent Decree, Defendant shall notify the United States and the State of such violation, and its likely duration, in writing, within 10 working Days of the Day Defendant first becomes aware of the violation. Such notification is to include an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Defendant shall state so in the report. Defendant shall investigate the cause of the violation, and shall then submit an amendment to the report, including a full explanation of the cause of the violation within 30 Days of the Day Defendant becomes aware of the cause of the violation. Nothing in this Section IX relieves

Defendant of its obligation to provide the notice required by Section XI below of this Consent Decree (Force Majeure), if applicable.

43. Whenever any violation of this Consent Decree or of any applicable permits or any other event affecting Defendant's performance under this Decree, or the operation of its Facility, may pose an immediate threat to the public health or welfare or the environment, Defendant shall notify EPA and the State orally, or by electronic or facsimile transmission, as soon as possible, but no later than 24 hours after Defendant first knew of the violation or event. This procedure is in addition to the other requirements set forth in the preceding Paragraph 42.

44. All reports shall be submitted to the persons designated in Section XVI below of this Consent Decree (Notices).

45. Each report submitted by Defendant under this Section IX shall be signed by an official of the submitting party and include the following certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

This certification requirement does not apply to emergencies or similar instances where compliance would be impractical.

46. The reporting requirements of this Consent Decree do not relieve Defendant of any reporting obligations required by any federal, state, or local law, regulation, permit, or other requirement.

47. Any information provided pursuant to this Consent Decree may be used by the United States and the State in any proceeding to enforce the provisions of this Consent Decree, and as otherwise permitted by law.

X. STIPULATED PENALTIES

48. Subject to Section XII (Dispute Resolution) of this Consent Decree, Defendant shall be liable for stipulated penalties to the United States and the State for Violations of this Consent Decree, as specified below, unless excused under Section XI (Force Majeure). A violation includes failing to perform any obligation required by the terms of this Decree, including any work plan or schedule approved under this Decree, according to all applicable requirements of this Decree and within the specified time schedules established by or approved under this Decree.

49. Late Payment of Civil Penalty If Defendant fails to pay the civil penalty required to be paid under Section IV of this Decree (Civil Penalty) when due, or the payment for the Environmental Benefit Project required to be paid by Section VIII of this Decree, Defendant shall pay a stipulated penalty of \$5,000 per Day for each Day that such payment is late.

50. Emission Limits The following stipulated penalties shall accrue per violation per Day for each instance of excess particulate matter and/or opacity emissions, in violation of Paragraph 17 of this Consent Decree (Coke Oven MACT Emission Limitations and Standards).

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$2,000	1st through 14th Day
\$3,000	15th through 30th Day
\$5,000	31st Day and beyond

51. Compliance Milestones

- a. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraph 16 (Coke Oven Battery Pushing Controls):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,500	1st through 14th Day
\$3,000	15th through 30th Day
\$5,000	31st Day and beyond

- b. Except as provided in the preceding Subparagraph 51a with respect to violations of emission limits and standards, the following stipulated penalties shall accrue per violation per Day for each violation of the requirements identified in Paragraph 15 (By-Products Area Repair and/or Replacement), Paragraph 17 (other than emission limits) (Applicable Coke Oven MACT Emission Limitations and Standards) Paragraph 18 (Limitations on Furnace Coke Production), Paragraph 19 (Plan to Control Fugitive Dust), Paragraph 21 (Evaluation and Repair of Coke Oven Walls), Paragraph 23 (Benzene Waste NESHP TAB), and Paragraph 24 (CWA Compliance Audit and Plan of Action):

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14th Day
\$2,000	15th through 30th Day
\$3,000	31st Day and beyond

52. Enhanced Leak Detection and Repair Requirements. The following stipulated penalties shall accrue for each violation of the LDAR requirements identified in Paragraph 20 of this Consent Decree:

- a. Failure to develop the facility-wide ELP document:

<u>Penalty per Day</u>	<u>Period of Delay or Non-Compliance</u>
\$400	1st through 15th Day after deadline
\$500	16th through 30th Day after deadline
\$600	Beyond 30th Day after deadline

- b. Failure to comply with frequency of monitoring requirements: \$200 per component per Day, up to \$25,000 per month;

- c. Failure to implement 500 ppm leak definitions: \$300 per component per Day, up to \$20,000 per month;

- d. Failure to complete timely repairs: \$500 per component per Day, up to \$37,500 per month;

- e. Failure to perform required drill and tap:

<u>Penalty per Component per Day</u>	<u>Period of Delay or Non-Compliance</u>
\$400	1st through 15th Day after deadline
\$600	16th through 30th Day after deadline
\$800	Beyond 30th Day after deadline

- f. Failure to provide required training: \$1,500 per person, per month of noncompliance;

- g. Failure to implement the requirements of a QA/QC program: \$1,000 per event; and

h. Failure to timely submit initial audit or subsequent audit: \$500 per Day.

53. CWA Permit Violations. The following stipulated penalties shall accrue per violation per Day for each instance of an exceedance of any applicable effluent limitation contained in a permit issued to the Facility pursuant to the CWA:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$2,000	1st through 14th Day
\$3,000	15th through 30th Day
\$5,000	31st Day and beyond

54. Reporting Requirements. The following stipulated penalties shall accrue per violation per Day for each violation of the requirements of Section IX (Reporting Requirements) of this Consent Decree:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$500	1st through 14th Day
\$1,000	15th through 30th Day
\$2,000	31st Day and beyond

55. The following stipulated penalties shall accrue per violation per Day for each violation of any other provision of this Consent Decree not specifically listed in this Section X (Stipulated Penalties), including but not limited to the requirements listed in Paragraph 14:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$750	1st through 14th Day
\$1,500	15th through 30th Day
\$2,000	31st Day and beyond

56. SEP Compliance. If Defendant fails to satisfactorily complete any requirements of the SEP by the deadlines set forth herein, Defendant shall pay stipulated penalties to the United States for each day for which it fails to satisfactorily complete any such requirement, as follows:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$750	1st through 14th Day
\$1,000	15th through 30th Day
\$1,250	31st Day and beyond

57. Defendant shall pay stipulated penalties described herein to the United States or State, as directed in Section XVI (Notices).

58. Stipulated penalties under this Section X shall begin to accrue on the Day after performance is due or on the Day a violation occurs, whichever is applicable, and shall continue to accrue until performance is satisfactorily completed or until the violation ceases. Stipulated penalties shall accrue simultaneously for separate violations of this Consent Decree.

59. Defendant shall pay stipulated penalties to the United States and the State within 30 Days of a written demand by either Plaintiff. Except as provided in Paragraph 56 above, Defendant shall pay 50 percent of the total stipulated penalty amount due to the United States and 50 percent to the State. The Plaintiff making a demand for payment of a stipulated penalty shall simultaneously send a copy of the demand to the other Plaintiff.

60. Either Plaintiff may, in the unreviewable exercise of its discretion, reduce or waive stipulated penalties otherwise due it under this Consent Decree.

61. Stipulated penalties shall continue to accrue as provided in Paragraph 58, during any Dispute Resolution, but need not be paid until the following:

- a. If the dispute is resolved by agreement or by a decision of EPA or the State that is not appealed to the Court, Defendant shall pay accrued penalties determined to be owing, together with interest, to the United States or the State within 30 Days of the effective date of the agreement or the receipt of EPA's or the State's decision or order.
- b. If the dispute is appealed to the Court and the United States or the State prevails in whole or in part, Defendant shall pay all accrued penalties determined by the Court to be owing, together with interest, within 60 Days of receiving the Court's decision or order, except as provided in subparagraph 61.c below.
- c. If any Party appeals the District Court's decision, Defendant shall pay all accrued penalties determined to be owing, together with interest, within 15 Days of receiving the final appellate court decision.

62. Upon the Effective Date of this Consent Decree, the stipulated penalty provisions of this Decree shall be retroactively enforceable with regard to any and all violations of Section V (Compliance Requirements) of this Decree that have occurred between the Date of Lodging and the Effective Date, provided that the stipulated penalties that may have accrued prior to the Effective Date may not be collected unless and until this Consent Decree is entered by the Court.

63. Defendant shall pay stipulated penalties owing to the United States and the State in the manner set forth and with the confirmation notices required by this Consent Decree, except

that the transmittal letter shall state that the payment is for stipulated penalties, and shall state for which violation(s) the penalties are being paid.

64. If Defendant fails to pay stipulated penalties according to the terms of this Consent Decree, Defendant shall be liable for interest on such penalties, as provided for in 28 U.S.C. § 1961, accruing as of the date payment became due. Nothing in this Paragraph 64 shall be construed to limit the United States or the State from seeking any remedy otherwise provided by law for Defendant's failure to pay any stipulated penalties.

65. Subject to the provisions of Section XIV of this Consent Decree (Effect of Settlement/Reservation of Rights), the stipulated penalties provided for in this Consent Decree shall be in addition to any other rights, remedies, or sanctions available to the United States for Defendant's violation of this Consent Decree or applicable law. Where a violation of this Consent Decree is also a violation of federal or state law, Defendant shall be allowed a credit for any stipulated penalties paid against any statutory penalties imposed for such violation.

XI. FORCE MAJEURE

66. A Force majeure, for purposes of this Consent Decree, is defined as any event arising from causes beyond the control of Defendant, of any entity controlled by Defendant, or of Defendant's contractors, that delays or prevents the performance of any obligation under this Consent Decree despite Defendant's best efforts to fulfill the obligation. The requirement that Defendant exercise best efforts to fulfill the obligations includes using best efforts to anticipate any potential force majeure event and best efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. Force Majeure does not include Defendant's financial inability to perform any obligation under this Consent Decree

67. If any event occurs or has occurred that may delay the performance of any obligation under this Consent Decree, whether or not caused by a force majeure event, Defendant shall provide notice orally or by electronic or facsimile transmission to the Plaintiffs, within 72 hours of when Defendant first knew that the event might cause a delay. Within 7 Days thereafter, Defendant shall provide in writing to the Plaintiffs an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Defendant's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Defendant, such event may cause or contribute to an endangerment to public health, welfare or the environment. Defendant shall include with any notice all available documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Defendant from asserting any claim of force majeure for that event for the period of time of such failure to comply, and for any additional delay caused by such failure. Defendant shall be deemed to know of any circumstance of which Defendant, any entity controlled by Defendant, or Defendant's contractors knew or should have known.

68. If the Plaintiffs agree that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Consent Decree that are affected by the force majeure event will be extended by the Plaintiffs for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for

performance of any other obligation. The Plaintiffs will notify Defendant in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

69. If the Plaintiffs do not agree that the delay or anticipated delay has been or will be caused by a force majeure event, the Plaintiffs will notify Defendant in writing of their decision.

70. If Defendant elects to invoke the dispute resolution procedures set forth in Section XII (Dispute Resolution), it shall do so no later than 21 Days after receipt of Plaintiffs' notice.

In any such proceeding, Defendant shall have the burden of demonstrating by a preponderance of the evidence that the delay or anticipated delay has been or will be caused by a force majeure event, that the duration of the delay or the extension sought was or will be warranted under the circumstances, that best efforts were exercised to avoid and mitigate the effects of the delay, and that Defendant complied with the requirements of Paragraphs 66 and 67, above. If Defendant carries this burden, the delay at issue shall be deemed not to be a violation by Defendant of the affected obligation of this Consent Decree.

XII. DISPUTE RESOLUTION

71. Unless otherwise expressly provided for in this Consent Decree, the dispute resolution procedures of this Section XII shall be the exclusive mechanism to resolve disputes arising under or with respect to this Consent Decree. Defendant's failure to seek resolution of a dispute under this Section shall preclude Defendant from raising any such issue as a defense to an action by the United States or the State to enforce any obligation of Defendant arising under this Decree.

72. Informal Dispute Resolution. Any dispute subject to Dispute Resolution under this Consent Decree shall first be the subject of informal negotiations. The dispute shall be considered to have arisen when Defendant sends the Plaintiffs a written Notice of Dispute. Such

Notice of Dispute shall state clearly the matter in dispute. The period of informal negotiations shall not exceed 21 Days from the date the dispute arises, unless that period is modified by written agreement. If the Parties cannot resolve a dispute by informal negotiations, then the position advanced by Plaintiffs shall be considered binding unless, within 21 Days after the conclusion of the informal negotiation period, Defendant invokes formal dispute resolution procedures as set forth below.

73. Formal Dispute Resolution. Defendant shall invoke formal dispute resolution procedures, within the time period provided in the preceding Paragraph 72, by serving on the Plaintiffs a written Statement of Position regarding the matter in dispute. The Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting Defendant's position and any supporting documentation relied upon by Defendant.

74. The Plaintiffs shall serve a Statement of Position within 45 Days of receipt of Defendant's Statement of Position. Such Statement of Position shall include, but need not be limited to, any factual data, analysis, or opinion supporting that position and any supporting documentation relied upon by the Plaintiffs. Such Statement of Position shall be binding on Defendant, unless Defendant files a motion for judicial review of the dispute in accordance with the following Paragraph 75.

75. Defendant may seek judicial review of the dispute by filing with the Court and serving on the Plaintiffs, in accordance with Section XVI of this Consent Decree (Notices), a motion requesting judicial resolution of the dispute. The motion must be filed within 30 Days of receipt of the Plaintiffs' Statement of Position pursuant to the preceding Paragraph 74. The motion shall contain a written statement of Defendant's position on the matter in dispute, including any supporting factual data, analysis, opinion, or documentation, and shall set forth the

relief requested and any schedule within which the dispute must be resolved for orderly implementation of the Consent Decree.

76. The Plaintiffs shall respond to Defendant's motion within the time period allowed by the Local Rules of this Court. Defendant may file a reply memorandum, to the extent permitted by the Local Rules.

77. Standard of Review

- a. Disputes Concerning Matters Accorded Record Review. Except as otherwise provided in this Consent Decree, in any dispute brought under Paragraph 75 pertaining to the adequacy or appropriateness of plans, procedures to implement plans, schedules or any other items requiring approval by EPA and NYSDEC under this Consent Decree; the adequacy of the performance of work undertaken pursuant to this Consent Decree; and all other disputes that are accorded review on the administrative record under applicable principles of administrative law, Defendant shall have the burden of demonstrating, based on the administrative record, that the position of the United States or the State is arbitrary and capricious or otherwise not in accordance with law.
- b. Other Disputes. Except as otherwise provided in this Consent Decree, in any other dispute brought under Paragraph 71, Defendant shall bear the burden of demonstrating that its position complies with this Consent Decree.

78. The invocation of dispute resolution procedures under this Section XII shall not, by itself, extend, postpone, or affect in any way any obligation of Defendant under this Consent Decree, unless and until final resolution of the dispute so provides. Stipulated penalties with respect to the disputed matter shall continue to accrue from the first Day of noncompliance, but payment shall be stayed pending resolution of the dispute as provided in Paragraph 61. If Defendant does not prevail on the disputed issue, stipulated penalties shall be assessed and paid as provided in Section X (Stipulated Penalties).

XIII. INFORMATION COLLECTION AND RETENTION

79. The United States, the State, and their representatives, including attorneys, contractors, and consultants, shall have the right of entry into the Facility covered by this Consent Decree, during all hours of operation, upon presentation of credentials, to:

- a. monitor the progress of activities required under this Consent Decree, including, but not limited to, inspecting any equipment, practices and operations regulated under any permit or order;
- b. verify any data or information submitted to the United States or the State in accordance with the terms of this Consent Decree;
- c. obtain samples, and splits of any samples, taken by Defendant or its representatives, contractors, or consultants;
- d. obtain documentary evidence, including photographs and similar data; and
- e. assess Defendant's compliance with the specific requirements of this Consent Decree.

80. Upon request, Defendant shall provide EPA and NYSDEC or their authorized representatives splits of any samples taken by Defendant. Upon request, EPA and NYSDEC shall provide Defendant splits of any samples taken by EPA or the NYSDEC.

81. Until 5 years after the termination of this Consent Decree, Defendant shall retain, and shall instruct its contractors and agents to preserve, all non-identical copies of all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that relate in any manner to Defendant's performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States or the State, Defendant shall provide copies of any documents, records, or other information required to be maintained under this Paragraph 81.

82. At the conclusion of the information-retention period provided in the preceding Paragraph 81, Defendant shall notify the United States and the State at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph 81 and, upon request by the United States or the State, Defendant shall deliver any such documents, records, or other information to EPA or the State. Defendant may assert that certain documents, records, or other information is privileged under the attorney-client privilege or any other privilege recognized by federal law. If Defendant asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title of each author of the document, record, or information; (4) the name and title of each addressee and/or recipient; (5) a description

of the subject of the document, record, or information; and (6) the privilege asserted by Defendant. However, no documents, records, or other information created or generated pursuant to the requirements of this Consent Decree shall be withheld on grounds of privilege.

83. Defendant may also assert that information required to be provided under this Section is protected as Confidential Business Information (“CBI”) under 40 C.F.R. Part 2. As to any information that Defendant seeks to protect as CBI, Defendant shall follow the procedures set forth in 40 C.F.R. Part 2.

84. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States or the State pursuant to applicable federal or state laws, regulations, or permits, nor does it limit or affect any duty or obligation of Defendant to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

XIV. EFFECT OF SETTLEMENT/RESERVATION OF RIGHTS

85. This Consent Decree resolves the civil claims of the United States and the State for the violations alleged in the Complaint filed in this action through the Date of Lodging. The United States and the State reserve all legal and equitable remedies available to enforce the provisions of this Consent Decree, except as expressly stated in this Paragraph 85.

86. This Consent Decree shall not be construed to limit the rights of the United States or the State to obtain penalties or injunctive relief under any laws or implementing regulations, or under other federal or state laws, regulations, or permit conditions, except as expressly specified in Paragraph 85. The United States and the State further reserve all legal and equitable remedies to address any imminent and substantial endangerment to the public health or welfare

or the environment arising at, or posed by, Defendant's Facility, whether related to the violations addressed in this Consent Decree or otherwise.

87. In any subsequent administrative or judicial proceeding initiated by the United States or the State for injunctive relief, civil penalties, other appropriate relief relating to the Facility or Defendant's violations, Defendant shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim preclusion, claim-splitting, or other defenses based upon any contention that the claims raised by the United States or the State in the subsequent proceeding were or should have been brought in the instant case, except with respect to claims that have been specifically resolved pursuant to Paragraph 85 of this Section.

88. This Consent Decree is not a permit, or a modification of any permit, under any federal, State, or local laws or regulations. Defendant is responsible for achieving and maintaining complete compliance with all applicable federal, State, and local laws, regulations, and permits; Defendant's compliance with this Consent Decree shall be no defense to any action commenced pursuant to any such laws, regulations, or permits, except as set forth herein. The United States and the State do not, by their consent to the entry of this Consent Decree, warrant or aver in any manner that Defendant's compliance with any aspect of this Consent Decree will result in compliance with provisions of the Clean Air Act, 42 U.S.C. § 7401 *et seq.*, the Clean Water Act, 33 U.S.C. § 1251 *et seq.*, the Emergency Planning and Community Right to Know Act, 42 U.S.C. § 11001 *et seq.*, or with any other provisions of federal, State, or local laws, regulations, or permits.

89. This Consent Decree does not limit or affect the rights of Defendant or of the United States or the State against any third parties not party to this Consent Decree, nor does it

limit the rights of third parties, not party to this Consent Decree, against Defendant, except as otherwise provided by law.

90. This Consent Decree shall not be construed to create rights in, or grant any cause of action to, any third party not party to this Consent Decree.

XV. COSTS

91. The Parties shall bear their own costs of this action, including attorneys' fees, except that the United States and the State shall be entitled to collect the costs (including attorneys' fees) incurred in any action necessary to collect any portion of the civil penalty or any stipulated penalties due, but not paid by, Defendant.

XVI. NOTICES

92. Unless otherwise specified herein, whenever notifications, submissions, or communications are required by this Consent Decree, they shall be made in writing and addressed as follows:

To the United States:

Chief, Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-2-1-09994

and

Chief, Air Branch
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007-3250

and

Chief, Air Compliance Branch
Division of Enforcement and Compliance Assistance
U.S. Environmental Protection Agency
Region 2
290 Broadway
New York, NY 10007

To the State:

Chief, Affirmative Litigation Section
State of New York
Office of Attorney General
Environmental Protection Bureau
Albany, New York 12224-0241

and

Regional Attorney
Region 9
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, New York 14203

To Defendant:

Rick W. Kennedy, Esq.
Hodgson Russ LLP
The Guaranty Building
140 Pearl Street, Suite 100
Buffalo, New York 14202

93. Any Party may, by written notice to the other Parties, change its designated notice recipient or notice address provided above.

94. Notices submitted pursuant to this Section XVI shall be deemed submitted upon mailing, unless otherwise provided in this Consent Decree, or by mutual agreement of the Parties in writing.

XVII. EFFECTIVE DATE

95. The Effective Date of this Consent Decree shall be the date upon which this Consent Decree is entered by the Court or a motion to enter the Consent Decree is granted, whichever occurs first, as recorded on the Court's docket; provided, however, that Defendant hereby agrees that it shall be bound to perform duties scheduled to occur prior to the Effective Date.

XVIII. RETENTION OF JURISDICTION

96. The Court shall retain jurisdiction over this case until termination of this Consent Decree, for the purpose of resolving disputes arising under this Decree or entering orders modifying this Decree, pursuant to Sections XII and XIX, or effectuating or enforcing compliance with the terms of this Decree.

XIX. MODIFICATION

97. The terms of this Consent Decree, including any attached appendices, may be modified only by a subsequent written agreement signed by all the Parties. Where the modification constitutes a material change to this Decree, it shall be effective only upon approval by the Court.

98. Any disputes concerning modification of this Decree shall be resolved pursuant to Section XII of this Decree (Dispute Resolution), provided, however, that, instead of the burden of proof provided by Paragraph 77, the Party seeking the modification bears the burden of demonstrating that it is entitled to the requested modification in accordance with Federal Rule of Civil Procedure 60(b).

XX. TERMINATION

99. After Defendant has completed the requirements of Section V (Compliance Requirements) of this Decree, and has thereafter maintained continuous satisfactory compliance

with this Consent Decree and Defendant's Title V Permit for a period of 5 years, and has complied with all other requirements of this Consent Decree, including those relating to the SEP and EBP required by Sections VII and VIII of this Consent Decree, and has paid the civil penalty and any accrued stipulated penalties as required by this Consent Decree, Defendant may serve upon the United States and the State a request for termination notice ("Request for Termination"), stating that Defendant has satisfied those requirements, together with all necessary supporting documentation.

100. Following receipt by the United States and the State of Defendant's Request for Termination, the Parties shall confer informally concerning the Request for Termination, and any disagreement that the Parties may have as to whether Defendant has satisfactorily complied with the requirements for termination of this Consent Decree. If the Plaintiffs agree that the Decree may be terminated, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree.

101. If the Plaintiffs do not agree that the Decree may be terminated, Defendant may invoke dispute resolution under Section XII (Dispute Resolution) of this Decree. However, Defendant shall not seek dispute resolution of any dispute regarding termination until 120 days after service of its Request for Termination.

XXI. PUBLIC PARTICIPATION

102. This Consent Decree shall be lodged with the Court for a period of not less than 30 Days for public notice and comment in accordance with 28 C.F.R. § 50.7. The United States reserves the right to withdraw or withhold consent if the comments regarding the Consent Decree disclose facts or considerations indicating that the Consent Decree is inappropriate, improper, or inadequate. Defendant consents to entry of this Consent Decree without further notice and

agrees not to withdraw from or oppose entry of this Consent Decree by the Court or to challenge any provision of the Decree, unless the United States has notified Defendant in writing that it no longer supports entry of the Decree.

XXII. SIGNATORIES/SERVICE

103. Each undersigned representative of Defendant, New York State Attorney General, and the Assistant Attorney General for the Environment and Natural Resources Division of the Department of Justice, certifies that he or she is fully authorized to enter into the terms and conditions of this Consent Decree and to execute and legally bind the Party he or she represents to this document.

104. This Consent Decree may be signed in counterparts, and its validity shall not be challenged on that basis. Defendant agrees to accept service of process by mail with respect to all matters arising under or relating to this Consent Decree and to waive the formal service requirements set forth in Rules 4 and 5 of the Federal Rules of Civil Procedure and any applicable Local Rules of this Court including, but not limited to, service of a summons.

XXIII. INTEGRATION

105. This Consent Decree constitutes the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in the Decree and supersedes all prior agreements and understandings, whether oral or written, concerning the settlement embodied herein. Other than deliverables that are subsequently submitted and approved pursuant to this Decree, no other document, nor any representation, inducement, agreement, understanding, or promise, constitutes any part of this Decree or the settlement it represents, nor shall it be used in construing the terms of this Decree.

XXIV. FINAL JUDGMENT

106. Upon approval and entry of this Consent Decree by the Court, this Consent Decree shall constitute a final judgment of the Court as to the United States, the State, and Defendant. The Court finds that there is no just reason for delay and therefore enters this judgment as a final judgment under Fed. R. Civ. P. 54 and 58.

XXV. APPENDICES

107. The following appendices are attached to and part of this Consent Decree:

Appendix A: TCC's By-Products Area Assessment, dated June 2011

Appendix B: PLC Hub Assessment, dated February 19, 2015.

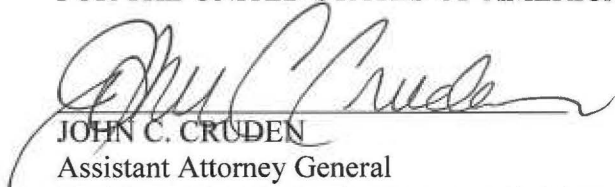
Dated and entered this __ day of _____, 2015.

UNITED STATES DISTRICT JUDGE
Western District of New York

THE UNDERSIGNED PARTY enters into this Consent Decree in this action captioned United States and the State of New York v. Tonawanda Coke Corporation, (W.D.N.Y.):


FOR THE UNITED STATES OF AMERICA

DATE: 5/11/2015



JOHN C. CRUDEN
Assistant Attorney General
Environment & Natural Resources Division
U.S. Department of Justice
Washington, D.C. 20530

DATE: May 8, 2015

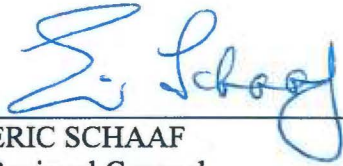


SUSAN M. AKERS
SCOTT S. BAUER
CLAIRE WOODS
Attorneys
Environmental Enforcement Section
Environment and Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, D.C. 20044-7611
(202) 514-4831

US EPA ARCHIVE DOCUMENT

THE UNDERSIGNED PARTY enters into this Consent Decree in this action captioned United States and the State of New York v. Tonawanda Coke Corporation, (W.D.N.Y.):

DATE: 4/16/15


ERIC SCHAAF
Regional Counsel
U.S. Environmental Protection Agency,
Region 2

Of Counsel:

ERICK R. IHLENBURG
Assistant Regional Counsel
U.S. Environmental Protection Agency,
Region 2

CHRIS SAPORITA
Assistant Regional Counsel
U.S. Environmental Protection Agency,
Region 2


CARL R. HOWARD
Assistant Regional Counsel
U.S. Environmental Protection Agency,
Region 2

THE UNDERSIGNED PARTY enters into this Consent Decree in this action captioned United States and the State of New York v. Tonawanda Coke Corporation, (W.D.N.Y.):

FOR THE STATE OF NEW YORK

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

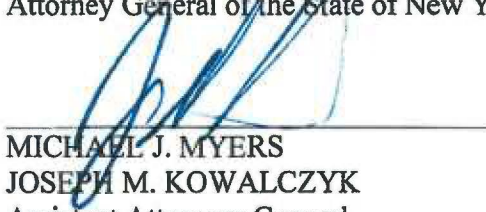
DATE: 4/22/15



EDWARD F. MCTIERNAN
Deputy Commissioner and General Counsel

ERIC T. SCHNEIDERMAN
Attorney General of the State of New York

DATE: 4/23/15



MICHAEL J. MYERS
JOSEPH M. KOWALCZYK
Assistant Attorneys General
Environmental Protection Bureau

US EPA ARCHIVE DOCUMENT

THE UNDERSIGNED PARTY enters into this Consent Decree in this action captioned United States and the State of New York v. Tonawanda Coke Corporation, (W.D.N.Y.):

DATE: 4/14/15

FOR TONAWANDA COKE CORPORATION
Michael K. Durkin
Michael K. Durkin
President

DATE: 4/10/15

Edward Dinsmore
Edward Dinsmore
Vice President, Environmental Compliance

US EPA ARCHIVE DOCUMENT

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,)
)
 Plaintiff,)
)
 v.)
)
 TONAWANDA COKE CORP.,)
)
 Defendant.)
 _____)

Consent Decree – APPENDIX A

US EPA ARCHIVE DOCUMENT



**CONESTOGA-ROVERS
& ASSOCIATES**

285 Delaware Avenue, Suite 500, Buffalo, New York 14202
Telephone: 716-856-2142 Facsimile: 716-856-2160
www.CRAworld.com

June 7, 2011

Reference No. 059849

Jean H. Regna, Esq.
U.S. Environmental Protection Agency
Office of Regional Counsel
290 Broadway – 17th Floor
New York, New York 10007-1866

Ellen Banner
U.S. Environmental Protection Agency
Emergency and Remedial Response Division
Response and Prevention Branch
2890 Woodbridge Avenue
Edison, New Jersey 08837

Dear Ms. Regna and Ms. Banner:

Re: Administrative Compliance Order CAA-02-2010-1005
Tonawanda Coke Corporation
Revised By-Product Area Assessment Report

Pursuant to the request in Ms. Teresa Mucha's May 24, 2011 email to Mr. Rick Kennedy, this correspondence provides the revised By-Product Area Assessment for the Tonawanda Coke Corporation facility. The report has been updated to reflect the agreed-upon project schedule that was attached to Ms. Mucha's email.

Please contact Mr. Kennedy or me if you have any questions about this submittal.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES

A handwritten signature in black ink that reads 'R. G. Adams'.

Robert G. Adams, P.E.
Senior Project Manager

RGA/ck/059849-Regna-Banner-001

c.c.: R. Kennedy, Hodgson Russ, LLP
T. Mucha, NYSDEC
E. Ihlenburg, USEPA
K. Eng, USEPA
L. Sitzman, NYSDEC

Equal
Employment
Opportunity Employer

REGISTERED COMPANY FOR
ISO 9001
ENGINEERING DESIGN



BY-PRODUCT AREA ASSESSMENT

TONAWANDA COKE CORPORATION
TONAWANDA, NEW YORK



Robert G. Adams
6/7/11

JUNE 2011
REF. NO. 059849 (26)

Prepared by:
**CRA Infrastructure
& Engineering, Inc.**

285 Delaware Avenue, Suite 500
Buffalo, NY 14202

Tel: 716•856•2142
Fax: 716•856•2160

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FIGURE 1 BY-PRODUCT PLANT GENERALIZED FLOW DIAGRAM

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TABLE 1 PROPOSED BY-PRODUCT PLANT PROJECTS

1.0 INTRODUCTION

This report provides an assessment and evaluation of the Tonawanda Coke Corporation (TCC or Facility) by-products (BP) area. The work was performed in response to the United States Environmental Protection Agency's (USEPA) December 22, 2010 letter which calls for additional work pursuant to Administrative Order No. CAA-02-2010-1005 (AO). The letter requires an assessment and evaluation of the condition of equipment in the BP area of the Facility, along with a schedule and cost estimate for completing recommended actions.

The By-Product Area Assessment report was initially submitted to USEPA and to the New York State Department of Environmental Conservation (NYSDEC) (collectively, the Agencies) on February 22, 2011. Following several exchanges of comments with the Agencies, this revised By-Product Area Assessment report has been prepared.

Section 2 of this report provides a brief description of the components of the BP area. Section 3 provides an assessment of the BP area based on the project team's site visits and evaluations. Recommendations for projects that will improve the integrity of the BP area equipment are provided in Section 4.

1.1 PROJECT ORGANIZATION

A team of engineers and scientists from Conestoga-Rovers and Associates (CRA) and ByP Consulting LLC (ByP) performed the work associated with this report. The team members visited the Facility on several occasions to view the BP area and pertinent equipment. CRA members of the team included a supervising engineer and several scientists with experience in BP facilities. The team also consisted of several engineers from ByP with particular expertise in coke manufacturing, by-products operations, and coke oven gas processing.

1.2 EVALUATION PROCEDURES

This assessment draws on CRA's ongoing leak detection work at the plant and its understanding of the regulations governing the design and operations of the BP plant. Additionally, the development of BP area "as built" drawings was undertaken by ByP Consulting as part of their ongoing work at the facility.

The initial step in the assessment process was to articulate a set of criteria or guidelines for the evaluation. These guidelines are as follows:

- All repair, modification, or replacement activities will be conducted in a manner to minimize battery down time and the disruption of plant production.
- Repairs, modifications or replacement activities will be scheduled so that TCC can get cost-effective, maximum fugitive emission reduction.
- All coke oven gas (COG) releases will be through the BP flares whenever possible.
- Modifications or replacements should be designed to minimize ongoing and future maintenance efforts.
- Modifications should allow for simplified isolation of equipment whenever possible.
- Connection to the future PLC Hub system should be considered.

2.0 BP PLANT DESCRIPTION

The purposes of the BP plant are to recover salable products¹ from COG, and to clean COG sufficiently for use as fuel to heat the battery and generate steam in the boilers.

The components of the BP plant are described below. Figure 1 is a generalized process flow diagram of the BP plant.

2.1 TAR RECOVERY AND COG COOLING

COG is drawn out of the battery collector main into a slight vacuum. Two large automatic butterfly control valves in the crossover piping between the battery and the BP plant control the collector main back-pressure. One automatic butterfly control valve in the BP area controls vacuum in the crossovers. The effluent stream at this point contains COG, water vapor, flushing liquor (BH liquor), tar, and solids. Once this stream arrives at the BP plant, much of the liquor, tar and solids drop into the Tar Decanter (BH Decanter), and the COG stream continues to the gas coolers.

In the Tar Decanter, solids settle to the bottom and liquor rises above the tar. The solids are continuously scraped out of the "self-cleaning" decanter into a hopper. Liquor is taken off the top and is returned to the flushing liquor recirculation tank (BH liquor recirculation tank). Tar moves by gravity to one of two Tar Storage Tanks. One of these tanks is steam heated and the second is used as a backup. While in storage, additional dewatering of the tar occurs and this liquor is returned to the decanter.

COG is cooled in a series of two countercurrent flow spray coolers (Primary and Secondary Coolers). BH liquor is chilled in a pair of non-contact plate heat exchangers utilizing Niagara River water. Liquor and condensed material are returned to the Tar Decanter and then to the heat exchangers before returning to the coolers. A condensate collection tank is located after the secondary cooler. Liquid collected in this tank is pumped to the Tar Decanter.

This entire Section of the BP plant is under negative pressure (vacuum).

¹ At TCC, tar is the only product currently recovered for sale.

2.2 EXHAUSTERS

Suction is created and COG is moved through the BP Plant by one of three rotary blowers known as exhausters. Exhausters No. 1 and 2 are driven by electric motors, while Exhauster No. 3 is driven by a steam turbine. This Section of the plant also includes the inlet and exhaust manifolds and valves associated with the exhausters.

2.3 AMMONIA REMOVAL

Once the COG leaves the exhausters, it travels first through the Tar Precipitator, and then to the ammonia scrubbers (LGAs).

The Tar Precipitator is an electro-static precipitator (ESP) that is capable of removing fine particulate matter from the COG. Two sumps are located adjacent to the scrubber and are used to collect recovered tar and return it to the Tar Decanter.

Following the precipitator, COG is further treated in three ammonia scrubbers (LGAs No. 4, 5, and 6). Each scrubber is equipped with a recirculation pump and spray nozzles. Water is used as the scrubbing medium to remove both ammonia and acid gases from the COG. Small amounts of blowdown are generated and sent via the surge tank to the excess ammonia liquor storage tanks (Weak Liquor Storage) before being treated and released under permit to the publicly owned treatment works (POTW).

2.4 LIGHT OIL RECOVERY

The next step in the BP Plant is recovery of light oil (benzene, toluene, and xylene). Light oil has historically been removed from the gas stream in the Light Oil Scrubber (LBA). This scrubber is a counter current flow scrubber with wash oil as the scrubbing medium.

Light oil is no longer recovered at TCC. Since this scrubber is no longer being used, there is no wash oil being supplied to the vessel. COG bypasses the LBA; however, the outlet valve is kept open to maintain COG pressure in the vessel and prevent air infiltration. If air were allowed to contact the scrubber packing (wood slats), there could be a potential for unwanted internal oxidation and overheating of the vessel.

This Section of the plant includes the newly installed West BP Flare. This new pressure relief flare will allow plant personnel to control the maximum pressure allowed in the COG system by bleeding gas to the flare. The flare is equipped with a natural gas pilot burner to assure that the pilot is lit at all times.

At this point in the BP system, there are several condensate drop out points to allow for the removal and collection of COG condensate. Condensate is pumped to the Tar Decanter for removal of any tar.

2.5 FUEL GAS

After the Scrubbers, the cleaned COG is used as fuel gas for the plant. This fuel gas is piped under slight pressure to the battery, the boiler house and a gas holder. A second pressure relief flare, the East BP Flare, is available to control the maximum fuel gas pressure allowed in the fuel system as required.

3.0 BP PLANT ASSESSMENT

3.1 PLANTWIDE CONCERNS

Coke Oven Gas Piping

COG piping, valves, and flanges have been evaluated by visual inspection, Forward-Looking Infrared Radar (FLIR) camera observations, and flame ionization analyzer (FIA) hydrocarbon monitoring. Leak identification on the COG system has been ongoing since before the Differential Absorption Light detection and ranging (DIAL) testing in May 2010. Over the years, as leaks have been found, BP area maintenance crews have made repairs. Following repairs, the areas have been resurveyed. In most cases, the repairs have been successful. However, in some cases, additional leaks have been found near the original leaks, or the repaired area has started to leak again.

Coke Oven Gas Condensate

COG condensate is collected from approximately 16-20 drip legs and drip pods throughout the BP area. Ultimately, the condensate is returned to the BH Liquor Decanter, tar is removed, and the aqueous phase material is added to the battery collector main flushing liquor.

COG condensate is being handled in a variety of ways at the facility:

- Enclosed tanks are vented to control, with condensate pumped to the Tar Decanter.
- Sumps with condensate are pumped to the Tar Decanter.
- Tanks with pump transport of condensate to the Tar Decanter.
- Tanks with transfer of condensate by vacuum truck to the Tar Decanter.

Process Vessel Vents

Process vessels located in the BP area are enclosed and vented as required. Process vessel vent off gas is controlled by venting tanks to the vacuum (suction) side of the COG system. Site inspections have found instances where cleanout valves have been left open and vacuum gauges have not indicated any negative pressure.

Some tank vent piping has become blocked and requires regular steam cleaning. In some cases vacuum vent lines on tanks with existing vacuum relief systems are allowing air to be pulled into the suction side of the COG system.

3.2 COMPONENT SPECIFIC CONCERNS

Tar Decanter (BH Liquor Decanter)

EPA identified several areas on the top of the tar decanter where high volatile organic compounds (VOC) concentrations were encountered. These areas were corroded and may be rusted through in some locations. CRA measured elevated VOC concentrations near the tar level control.

Tar Storage/ Dehydrators

Currently, only one of the two tanks is heated and available for year round use. These tanks are in good condition, with no visible signs of corrosion or malfunctioning components. The ventilation systems of the two tanks are tied together with a single vacuum gauge, and this system is connected to the Tar Decanter ventilation system.

Primary and Secondary Coolers

These two coolers use chilled liquor to cool the COG stream and condense water, inorganic and organic compounds and minor amounts of VOCs. The liquor is chilled using four river water non-contact plate type heat exchangers. Cooling efficiency is limited by the temperature of the river water and varies seasonally. These process vessels are on the vacuum (suction) side of the COG system, so leaks here would result in air being pulled into the COG system instead of gases leaking out.

Tar Precipitator

Several significant leaks were identified at the Tar Precipitator during an EPA inspection. The largest of these was from the lid flange. A second was from the gate valve flange at the outlet of the precipitator, and has since been repaired. During a scheduled maintenance outage, the lid was removed and resealed, thus eliminating the leak. The vessel shell appears to be in good condition with no significant visible corrosion. The two sumps associated with the precipitator have been covered and vented to control as requested by the EPA.

Ammonia Scrubber System (LGA)

Several COG leaks have been identified in the LGA vessel systems and in the gas piping to and from those vessels. EPA has documented leaks on several occasions in the scrubber liquor recirculation pumps and piping. The scrubber liquor blow down sump (LaBour Sump) has been replaced with a stainless steel tank and vented to control. The tank level indicator is a float and a flag. Scrubber liquor blow down is transferred manually from this enclosed tank to the surge tank, using the LaBour pump located adjacent to the tank.

Light Oil Scrubber (LBA)

The LBA is no longer operational. Currently, the scrubber is kept under gas pressure with no wash oil flow. The primary reason for this is to keep the LBA purged free of oxygen from air infiltration. The largest single leak identified in the DIAL test program was found on the top of the LBA. This leak has since been plugged and was not leaking during a subsequent EPA inspection in October 2010. Three old, previously repaired leaks on the LBA outlet downcomer were found to be leaking in May 2010. TCC BP staff has removed and reattached the bands on these leak repairs. Several other leaks have been identified and repaired in the piping both leading to, away from, and around the LBA.

4.0 RECOMMENDATIONS

The following activities are proposed in response to the observed conditions and work practices. Section 4.1 describes projects that are proposed to be commenced during 2011 and 2012. Section 4.2 describes projects proposed beyond 2012. Table 1 provides a basic schedule for completing the proposed projects in 2011 and 2012. The cost estimates provided are budgetary and are subject to modification once the details of each project are more clearly defined

4.1 SCHEDULED PROJECTS

COG Leaks

Leaks in the COG system have been attributed to corrosion of piping and process vessels and seal failures on valves and flanges. TCC BP maintenance staff has been addressing leaks as they are located. In the past, there was no formal program for documenting the location and the repair of leaks on the COG system.

TCC will implement a set of procedures to find, document, and repair COG system leaks. These procedures will include notification of appropriate TCC staff and documentation of the timely repair of such leaks. TCC has submitted a draft of these written procedures to the Agencies for their approval, and will begin identifying the location of repairs using a pipe section identification system, developed by CRA, in June 2011.

Installation of West BP Flare and Piping

TCC has installed a new flare located on the west side of the plant, which is currently operational. This new flare will allow for better COG overpressure control and give TCC more options with respect to bypassing larger sections of the plant COG system for more intensive maintenance operations. This new flare includes an audible alarm system, with visual indicator, on the pilot system to notify operators in the event of pilot failure.

Ammonia Emissions Control Plan

The planned new configuration of the ammonia still includes the discharge of exhaust gas directly into #7 Boiler. In order to understand the impacts of this moist caustic air stream on the boiler, TCC will evaluate the control efficiency of this configuration and

discuss the impact on the boiler. This assessment will be part of a comprehensive plan to address control of ammonia emissions from the ammonia still and will be completed by August 1, 2011.

COG Condensate

Condensate is handled by a variety of methods throughout the plant. A comprehensive COG condensate management plan should be developed that both describes the various ways condensates are handled, and that considers consolidating the number of collection points. TCC will complete the first draft of a written COG condensate handling plan by August 30, 2011.

Tar Decanter (BH Liquor Decanter) Top Repair

Weak areas on the top of the Tar Decanter indicate that the top needs to be repaired. A top repair project will consist of the following:

- Removal of redundant or unused piping/components.
- Preparation of the damaged decanter top.
- Top replacement reskin installation.
- Restore to service and test.

This project is scheduled to be completed by September 30, 2011.

Process Vessel Vents

Under the current configuration, process vessels in the BP area are vented to the vacuum (suction) side of the COG system. While this configuration is adequate for controlling volatile emissions, any openings result in air being drawn into the COG system.

The ventilation system should be modified to include pressure control, limitations on air infiltration, and the capability for steam cleaning to prevent or reduce previously observed vent system blockages. The first draft of a plan to improve the process vessel venting system along with an implementation schedule will be completed by October 30, 2011.

Coke Oven Gas Conveyance Monitoring

One of the recommendations of the September 2010 report entitled "Incident Investigation and Engineering Assessment: March 17, 2009 and March 31, 2010 Incidents" (Exhauster Investigation), was to design a Programmable Logic Controller (PLC Hub) to provide centralized monitoring of the key operating parameters of the COG conveyance system. The development of the PLC Hub is being tracked through monthly reports being submitted pursuant to the requirements of Administrative Order (AO) No. CAA-02-2010-1005 issued to TCC on April 28, 2010. The design of the PLC was completed by May 31, 2011, and the installation of the PLC Hub components will be completed by November 30, 2011.

Ammonia Scrubber System (LGA) Rehabilitation

Leaks have been identified at various times in the COG piping, valves, and LGA shells. Repairs in this area have been ongoing since before the DIAL test program. This area also contains piping and valves related to former LGAs Nos. 1, 2, and 3 (removed in 2010) that are no longer in use, are corroded, and contain old blank flanges that are also sources of COG leaks. The rehabilitation of this area of the plant should be a high priority. The following is a sequence of activities for the LGA area.

- Install new LGA system bypass to isolate the Tar Precipitator and the LGAs.
- Purge piping and LGAs.
- Repair LGA shells as needed.
- Replace old 30-inch LGA bypass line.
- Repair leaks in existing piping.
- Remove unused valves and replace with flange blanks as necessary.
- Perform any preventive maintenance necessary during the out of service conditions.
- Restore system to COG service and check for leaks.

This work is scheduled to be completed by December 30, 2011.

New BP Gas Main Bypass to West BP Flare

In order to facilitate some of the work that will be required on the piping and vessels within the BP area in the future, a bypass main may be needed. TCC will conduct an engineering assessment to evaluate the need for this bypass. This project is scheduled to be completed no later than March 29, 2012.

Light Oil Scrubber (LBA) Removal and Piping Upgrades

The LBA system is presently an unnecessary potential source of COG leaks and should be removed. Piping located between the ammonia scrubber pad and the point where gas is turned back to fuel the battery and the boilers has been known to have several leaks, is overly complicated, and contains unused components from previously removed vessels and piping. This piping can be significantly reduced and simplified.

Removal of the LBA will be a significant project, since it will require care in handling the LBA packing. The LBA will need to be kept purged with steam until it can be safely demolished. The LBA can currently be bypassed using the existing piping arrangement, but a proposed permanent "U" bypass further upstream will eliminate the entire LBA system, including all inlet, outlet, and downcomer piping from the system. Purging and isolation of the LBA is scheduled to begin by May 1, 2012, depending on weather conditions. Unseasonable cold weather may have an effect on steam demand and could delay this project until later in the season.

4.2 PROJECTS SCHEDULED BEYOND 2012

New Ammonia Scrubber Installation

The ammonia scrubbers will eventually need to be replaced. Replacement can proceed by adding a newly designed LGA scrubber on the adjacent pad formerly used for LGA's Nos. 1, 2, and 3. The existing scrubbers can be left in place and used as a backup. The new piping arrangement should be designed to allow for isolation of either set of scrubbers and for complete bypass of both ammonia scrubbers if necessary. New piping should also allow for continued operation of the Tar Precipitator even with the ammonia scrubbers bypassed. Ammonia scrubber replacement has a moderate priority assuming all the problem areas can be repaired as planned in 2011. This replacement project will be discussed further with the agencies. The schedule for this project will be determined after the agency discussions.

Primary Cooler Modification to EPC Type

By converting one of the existing coolers to an Extractive Primary Cooler (EPC), and utilizing the more efficient (extractive type) design, one of these two coolers can be taken out of service. Since neither of these vessels is a source of COG leaks and both are in good condition, modification of the cooler is considered a project with low to moderate urgency with respect to BP Plant integrity. Conversion of one of the coolers promises to

have many operational benefits, such as improved gas cleaning, and availability of the second unit for back-up use. This project is scheduled to be completed at some time after 2012.

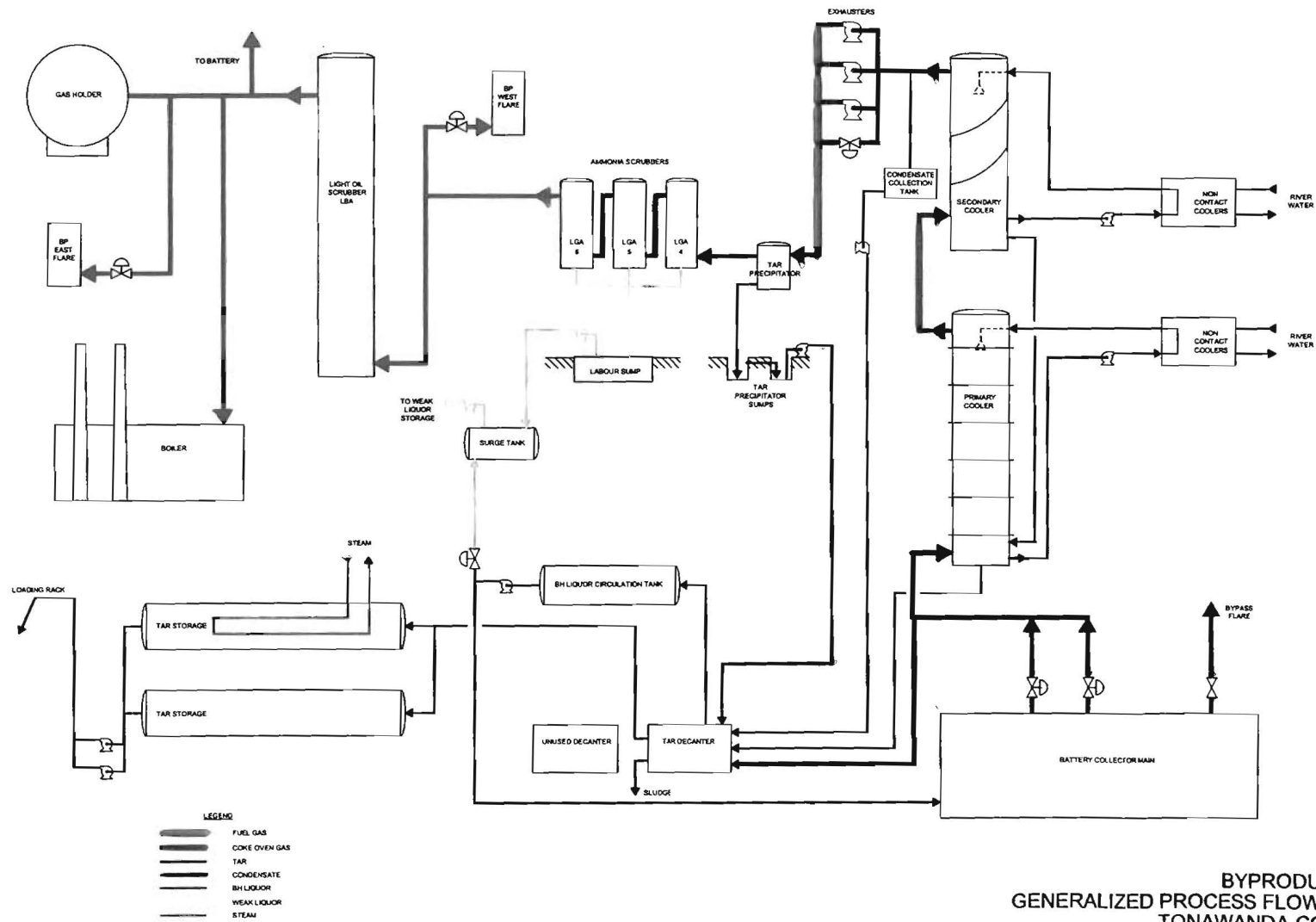


figure 1
 BYPRODUCTS AREA
 GENERALIZED PROCESS FLOW DIAGRAM
 TONAWANDA COKE CORP.
 Tonawanda, New York



TABLE 1
 PROPOSED BYPRODUCT PLANT PROJECTS
 TONAWANDA COKE CORPORATION
 JUNE 2011

<i>Activity</i>	<i>Completion Date</i>	<i>2011</i>	<i>2012</i>	<i>Beyond 2012</i>	<i>Total</i>
1 <i>BP Area COG System Leak Survey and Repairs</i>					
Prepare a written plan for a Leak Survey and Repair Program.	May 31, 2011	\$25,000			\$25,000
Ongoing repairs and replacement of equipment identified as leaking or needing replacement.	Ongoing	\$30,000	\$30,000	\$30,000	\$90,000
2 <i>Installation of West BP Flare and Piping</i>					
Construction of the West BP flare is complete; it is currently used for better overpressure control. The flare pilot has an audible alarm with visual indicator.	June 30, 2011	\$75,000			\$75,000
3 <i>Ammonia Emissions Control Plan</i>					
Prepare a written plan to address control of ammonia emissions from the ammonia still. Plan should include the impacts on the boiler. Interim draft plan to be submitted 30 days after new order is executed.	August 1, 2011	\$25,000			\$25,000
4 <i>Coke Oven Gas Condensate Handling Plan</i>					
Plan to minimize handling of COG condensate around the facility.	August 30, 2011	\$25,000			\$25,000
5 <i>Tar Decanter Top Repair</i>					
Fabricate and install new Tar Decanter top. New top to be sealed and applied over existing top.	September 30, 2011	\$24,000			\$24,000
6 <i>Improved Process Vessel Venting Plan</i>					
Prepare a written plan that describes modifications necessary to improve process vessel venting.	October 30, 2011	\$25,000			\$25,000
7 <i>Complete Programmable Logic Controller Installation</i>					
Install the components of the PLC Hub design (done in conjunction with the Exhauster Investigation)	November 30, 2011	\$203,000			\$203,000

TABLE 1
 PROPOSED BYPRODUCT PLANT PROJECTS
 TONAWANDA COKE CORPORATION
 JUNE 2011

<i>Activity</i>	<i>Completion Date</i>	2011	2012	<i>Beyond 2012</i>	<i>Total</i>
<p>8 <i>Ammonia Scrubber Rehabilitation</i></p> <p>Install short LGA by-pass, isolate and purge the precipitator and LGA piping circuits, reseal leaking seals and repair leaking piping within the circuit. Replace 30" LGA by-pass, repair leaks in the LGA system. Reseal leaking flanges and repair or re-pack leaking valves. Add valves to the system to allow future isolation for easier future repairs and to allow for the future placement of a replacement LGA scrubber.</p>	December 30, 2011	\$50,000			\$50,000
<p>9 <i>New BP Gas Main Bypass to West BP Flare</i></p> <p>Perform an engineering assessment to evaluate the need for this bypass.</p>	March 29, 2012		\$25,000		\$25,000
<p>10 <i>Light Oil Scrubber (LBA) Removal and Piping Upgrades</i></p> <p>Isolate and purge the LBA. Keep an inert gas purge on the LBA tower until actual demolition of the vessel itself.</p>	May 1, 2012		\$95,000		\$95,000
<p>11 <i>New Ammonia Scrubber Installation</i></p> <p>Design and prefabricate new LGA ammonia scrubber. Install new scrubber on old LGA pad adjacent to the three existing scrubbers. Put new scrubber into service. Conduct further repairs to the existing LGAs if necessary.</p>	TBD			\$70,000	\$70,000
<p>12 <i>Primary Cooler Modifications to EPC type</i></p> <p>Design and prefabricate modified top section of existing cooler to convert cooler to an extractive type primary cooler. Run plant on one cooler during modifications, isolate and purge cooler to be modified. Install modifications.</p>	TBD			\$130,000	\$130,000
	<i>Total</i>	\$482,000	\$150,000	\$230,000	\$862,000

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

UNITED STATES OF AMERICA,)
)
 Plaintiff,)
)
 v.)
)
 TONAWANDA COKE CORP.,)
)
 Defendant.)
 _____)

Consent Decree – APPENDIX B

Tonawanda Coke Corporation

Programmable Logic Control Hub Upgrades Description

February 19, 2015

On October 4, 2013, Tonawanda Coke Corporation (TCC) received a letter from the New York State Department of Environmental Conservation (NYSDEC) requesting additional information regarding a number of items, including the operation of the Programmable Logic Control (PLC) Hub at the TCC facility. Specifically, NYSDEC requested the submission of a proposed plan for addressing certain aspects of the PLC Hub's functionality by no later than December 31, 2013. The plan, as called for by the October 4, 2013 letter, was to be submitted by November 1, 2013. TCC sought, and was granted, an extension of time to respond until November 8, 2013 by e-mail, dated October 30, 2013. The plan was submitted on November 8, 2013, with all improvements noted therein completed by December 31, 2013.

On September 30, 2014, the United States Environmental Protection Agency (USEPA) and TCC entered into an Administrative Order on Consent, Index No. CAA-02-2014-1012 (the "Order"). Certain injunctive relief required by the Order included upgrades to the PLC Hub. All such upgrades have been installed.

This PLC Hub functionality includes all system hardware and software changes made since November 8, 2013 for inclusion in this appendix.

The TCC Facility

The TCC facility is a large and multi-faceted site that encompasses numerous processes and operations, including the three following core operations:

Power Supply Operation

The power supply operation includes three boilers, a 2.5 mW steam turbine generator, a 2 mW diesel powered generator, and two electric power feeds and a river water intake, both at the river substation.

By-Product Area Operation

The by-product area operation includes a coke oven gas collection piping system with flushing liquor pumps, gas flares, tower gas coolers with plate liquor coolers, three large gas blowers (exhausters), an electrostatic tar precipitator, an ammonia scrubber, a tar decanter with tar storage tanks, and an ammonia distillation unit with two supporting liquor feed tanks.

Coke Manufacturing Operation

The manufacturing operation is comprised of three areas: a battery of 60 coke ovens supported by a pushing machine, charge car, door machine, quench car, and two quench stations; a coal processing area supported by a bulk density control station, and two coal crushers; and a coke screening area to size and load coke into trucks.

Coke Making Process

Each of the three main operations is effected by numerous variables that are dependent upon the daily weather: ambient temperature, wind and precipitation, seasonal variation, and coal moisture and other coal qualities. The power supply operation has to make much more steam in the winter than in the summer – and do so with colder starting water. The by-product operation has to address different cooling water temperatures every month that alter liquor plate cooler temperatures, and subsequently alter coke oven gas temperatures and gas quality. The coke manufacturing operation has to address different precipitation rates every week that change coal moisture and coal bulk density.

In addition to the variables facing each of the three operations individually, each of the three operations is dependent upon changes in the other two. The power supply operation uses coke oven gas supplied by the by-product operation, which itself must respond to different gas production rates coming from the coke manufacturing operation. Additionally, the coke manufacturing operation uses coke oven gas supplied by the by-product operation, as well as steam supplied by the power supply operation.

Due to the qualitative nature of so much of the work required to run the facility, and all the variations described above, the ranges of normal operation of most parameters are not, and cannot be, narrowly defined. For instance, a parameter value that might be an alarm condition under certain circumstances, might not be under a different set of conditions. Therefore, it is important that each operation at the facility have trained operators on staff 24 hours a day, seven days a week, to monitor the operations, and assure that operating parameters are appropriate for the variable conditions present at that time. Each operation is dependent upon continuous human involvement.

The PLC Hub

The installation of the PLC Hub originated from a root cause analysis of prior exhauster failures that were documented in the September 2010 "Incident Investigation and Engineering Assessment: March 17, 2009 and March 31, 2010 Incidents," by Conestoga-Rovers & Associates on behalf of TCC. As documented in that report, the PLC hub was intended to monitor key operating parameters in the following areas, which have been incorporated into the as-programmed version in operation today:

- Collector Main
- Exhausters
- Flare Stacks
- Plant Power

The installation of the PLC Hub itself required the installation of the following components:

- The PLC computer
- Four human-machine interfaces (HMIs) - three PanelViews and one PC
- Multiple plant-wide fiber optic cables
- Wireless communication to the river substation
- Sensitive transmitters to monitor for pressure, vacuum, flow, temperature, gas, and position
- Vibration detection devices

As installed, the PLC Hub includes instantaneous access to a great deal of operating information for plant operators to monitor and to observe, which is continuously displayed in four separate locations throughout the coking operation: the battery, the by-product area, the boiler house, and the plant superintendent's office. While extremely useful, the installation of the PLC Hub was not designed to relieve the operators of having to make rounds, or to replace their required continuous attention to operating conditions in their respective areas. The changing conditions in an operating coke plant require human attention on an ongoing basis.

Current Operating Parameters

Included below is a list of the current operating parameters collected by the PLC Hub system and displayed on the 3 HMI units located in the 3 main operational areas of the facility. Note that in all cases, the total range, and any listed alarm set-point, is currently programmed into the PLC Hub system unless otherwise specified. Many parameters are not alarmed due to the fact that they vary widely, by design, on a regular basis during ongoing operations.

BATTERY (PLC Rack #1)**Collector Main "Back" Pressure**

Total Range: -10 to 25 mm kerosene column pressure
Normal Range: 6.5 to 10.5 mm (average: 8.5 mm)

Battery Suction Main Vacuum

Total Range: 0 to 250 mm kerosene column vacuum
Normal Range: 40 to 120 mm (average: 80 mm)

Battery Coke Oven Gas Plant Pressure

Total Range: 0 to 250 cm kerosene column pressure
Normal Range: 40 to 199 cm (average: 90 cm)

Battery Coke Oven Gas Flow

Total Range: 0 to 340,000 SCFH
Normal Range: 100,000 to 300,000 SCFH (average depends on season, production rate, etc...)

Collector Main Backpressure Control Valve Positions

Total Range: 0 to 100%
Normal Range: 5 to 50% (average: 20%)
High Alarm: 50%

BY-PRODUCTS (PLC Rack #2)**BP Suction Main Vacuum**

Total Range: 0 to 250 mm kerosene column vacuum
Normal Range: 40 to 120 mm (average: 80 mm)

BP Coke Oven Gas Plant Pressure

Total Range: 0 to 250 cm kerosene column pressure
Normal Range: 40 to 199 cm (average: 90 cm)
Low Pressure Alarm: 39 cm
High Pressure Alarm: 200 cm

West Flare Coke Oven Gas Flow

Total Range: 0 to 600,000 SCFH
Normal Range: 0 to 300,000 SCFH (average depends on season, production rate, etc...)

West Flare Instrument Air Failure

When instrument air pressure to the west flare is lost for any reason, a back-up air compressor automatically supplies air to the west flare. A local horn and light indicate to operators that back-up air compressor is running. This same signal is tied into the PLC Hub, with a “notification light appearing on the PLC Hub HMI screens.

West Flare Bleeder Valve Position

Total Range: 0 to 100%
 Normal Range: 0 to 50% (average depends on season, production rate, and other associated factors)

West Flare Proof-of-Pilot Temperature

Total Range: 0 to 1,260 degrees C [2,300F]
 Normal Range: 66 to 1000 C (average: 300 C [572F])
 Low Temp. Alarm Range: 54 C [129F] to 66 C [151F]

Suction By-Pass Control Valve Position

Total Range: 0 to 100%
 Normal Range: 9 to 81% (average: 45%)
 Low Alarm: 9%
 High Alarm: 81%

Exhauster Inboard Peak Vibration

Total Range: 0 to 100%
 Normal Range: 2 to 10% (average: 6%)

Exhauster Outboard Peak Vibration

Total Range: 0 to 100%
 Normal Range: 2 to 10% (average: 6%)

Exhauster Building LEL

Total Range: 0 to 100%
 Normal Range: 0 to 1% (average: 0.5%)
 Warning: 20%
 High Alarm: 75%

River Water Pump Pressure

Total Range: 0 to 100 psig
 Normal Range: 30 to 60 psig (average: 45 psig)

#3 Exhauster Lube Oil Tank Level

Total Range: 0 to 21 inches

Normal Range: 6 to 18 inches

Low Level Alarm Range: 6 to 8 inches

Coke Oven Gas Temperature From Battery (before Primary Cooler)

Total Range: -20 to 120 degrees C

Normal Range: 75 to 95 C (average: 85 C [185F])

High Temp Alarm: 115 C [239F]

Plant Electric Power Feed Breakers at River Station (wireless)

#1 Feed Breaker Trip

#2 Feed Breaker Trip

River Pump Indicators and Fault Alarms (wireless)

#1 Pump Running Indicator and VFD Fault

#2 Pump Running Indicator and VFD Fault

Plant Air Pressure Low Indication

Total range: 0 to 150 psi

Normal Range: 81 to 110 psi (average: 88 psi)

Low Pressure Alarm: 80 psi

BOILER HOUSE (PLC Rack #3)

Standpipe Water Level

Total Range: 0 to 90 feet

Normal Range: 50 to 70 feet

Low Level Alarm: 50 feet

Still Feed Flow

Total Range: 0 to 100 GPM

Normal Range: 15 to 60 GPM (average: 38 GPM)

Still Stripping Steam Flow

Total Range: 0 to 6,000 pounds per hour (pph)

Normal Range: 2,000 to 4,000 pph (average: 3,000 pph)

Still Effluent pH

Total Range: 0 to 14

Normal Range: 7 to 11 (average: 9)

Low pH Alarm: 7

High pH Alarm: 11

Still Top (Vapor) Temperature

Total Range: -20 to 150 degrees C
Normal Range: 95 to 106 C (average: 101 C)

Still Liquid Level

Total Range: 0 to 78 inches of water
Normal Range: 10 to 18 in. (average: 14 in.)

East Flare Bleeder Valve Position

Total Range: 0 to 100%
Normal Range: 0 to 50% (average depends on season, production rate, and other associated factors)

East Flare Proof-of-Pilot Temperature

Total Range: 0 to 1,260 degrees C [2,300F]
Normal Range: 66 to 1,000 C (average: 300 C [572F])
Low Temp. Alarm Range: 54 C [129F] to 66 C [151F]

Gas Holder (Ball) Proof of Pressure

Total Range: 0 to 250 cm kerosene column pressure
Normal Range: 21 to 199 cm (average: 80 cm)
Low Pressure Alarm: 20 cm
High Pressure Alarm: 199 cm

PLC Hub Improvements

In November 2013, TCC reviewed the PLC Hub installation and hardware, and identified several areas of improvement that were then implemented:

1. HMI programing was upgraded to display the following:
 - a. The engineering units of each measured parameter.
 - b. The "Normal Range" for each parameter, as specified in this document.
 - c. A separate HMI alarm screen displaying all programmed alarm values was created that allows management access for adjustment to alarm set-points to maximize the value of the alarm feedback under different plant operating conditions. The ability to change alarm values is protected under engineering password.
 - d. The graphics on the HMI pages was cleaned up to remove clutter on the screens, and to make them easier to view and to interpret.
2. The *Exhauster Peak Vibration* parameter was evaluated to determine whether an alarm capability was appropriate, as rotation speed is regularly changed depending on battery suction

APPENDIX B

conditions and valve positions. Vibration harmonics depend on rotation speed, so there is no single value that will cover all vibration possibilities for this input. It was determined that the vibration signals cannot be relied upon as the only feedback to evaluate exhauster performance and reliability. There is no substitute for a combination of visual, olfactory, auditory and tactile observations performed and evaluated by experienced operators. The exhausters are located less than 50 feet away from the by-product operator's office. Each exhauster has unique vibration characteristics depending on its motive power source and its installation location, such that there is no single alarm condition that would improve operator warning reliability over operator attention. As such, it was determined that there shall be no alarm conditions installed for purposes of addressing the *Exhauster Peak Vibration* parameters.

3. A high-temperature alarm was added to the *Coke Oven Gas Temperature From Battery* parameter in the by-product area to provide an advanced warning of flushing liquor disruption or of flushing liquor pump failure.

As noted above, the Order also required certain upgrades to the PLC Hub. Specifically, the following tasks were completed:

1. Installation of an alarm horn and light on the outside of the equipment shed structure housing the west flare back-up instrument air compressor unit, which has been tied into the HMI's of the PLC Hub system.
2. Installation of a low pressure alarm for primary instrument air, including transmitter and flow regulator.
3. Installation of a pressure transmitter and low and high pressure alarm for the gas holder.
4. Installation of the Proof of Pilot Thermocouple with low temperature alarm for the east flare.

Continuous Improvement

The parameters described in this document provide the centralized monitoring of key operating parameters necessary to meet the original intention and purpose of the PLC Hub. Only these active parameters appear on the HMI screens. The normal ranges and the alarm set-points in this document are those that appear to be most beneficial to TCC at the current production rates and current operating conditions. It is possible that information obtained during future operational changes may result in the need to revise some of the normal parameter ranges and alarm set-points discussed in this document. TCC ordered the PLC Hub hardware with continuous quality improvement in mind, and will continue to monitor the system for potential upgrades.