



Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137



Title V Construction Permit

Permit No.: C-0001-21-0002-V

Plant ID: 0001

Effective Date: 06/03/2021

Expiration Date: 06/30/2021

Source: **Carbide Industries, LLC**
4400 Bells Lane
Louisville, KY 40211

Owner: **Carbide Industries, LLC**
4400 Bells Lane
Louisville, KY 40211

is authorized to install the described process equipment by the Louisville Metro Air Pollution Control District. Authorization is based on information provided with the application submitted by the company and in accordance with applicable regulations and the conditions specified herein.

Process equipment description:

Replace the existing rotary coke dryer in the U2 area with a new fluidized bed coke dryer, including associated material handling equipment

Public Notice Date: 05/01/2021

Permit writer: Shannon Hosey

DocuSigned by:

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Air Pollution Control Officer
6/3/2021

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Construction Permit Revisions and Changes

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
C-0001-21-0002-V	05/01/2021	06/13/2021	Initial	Replace the existing rotary coke dryer in the U2 area with a new fluidized bed coke dryer

Application and Related Documents

Document Number	Date	Description
181811	01/11/2021	Construction Application to replace the existing rotary coke dryer in the U2 area with a new fluidized bed coke dryer.
186847	01/12/2021	Potential emissions calculations
190225	02/15/2021	Application deficiency letter from APCD
201186	03/17/2021	Revised Construction Application
201729	03/17/2021	Revised potential emissions calculations
210586	04/09/2021	NO _x and SO ₂ Demonstrations

Abbreviations and Acronyms

AP-42	- AP-42, <i>Compilation of Air Pollutant Emission Factors, published by U.S.EPA</i>
APCD	- Louisville Metro Air Pollution Control District
BAC	- Benchmark Ambient Concentration
BACT	- Best Available Control Technology
Btu	- British thermal unit
CEMS	- Continuous Emission Monitoring System
CFR	- Code of Federal Regulations
CO	- Carbon monoxide
District	- Louisville Metro Air Pollution Control District
EA	- Environmental Acceptability
gal	- U.S. fluid gallons
GHG	- Greenhouse Gas
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- Hour
in.	- Inches
lbs	- Pounds
l	- Liter
LMAPCD	- Louisville Metro Air Pollution Control District
mmHg	- Millimeters of mercury column height
MM	- Million
(M)SDS	- (Material) Safety Data Sheet
NAICS	- North American Industry Classification System
NO _x	- Nitrogen oxides
PM	- Particulate Matter
PM ₁₀	- Particulate Matter less than 10 microns
PM _{2.5}	- Particulate Matter less than 2.5 microns
ppm	- parts per million
PSD	- Prevention of Significant Deterioration
psia	- Pounds per square inch absolute
QA	- Quality Assurance
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
STAR	- Strategic Toxic Air Reduction
TAC	- Toxic Air Contaminant
UTM	- Universal Transverse Mercator
VOC	- Volatile Organic Compound
w.c.	- Water column
year	- Any period of twelve consecutive months, unless "calendar year" is specified
yr	- Year, or any 12 consecutive-month period, as determined by context

Preamble

This permit covers only the provisions of Kentucky Revised Statutes Chapter 77 Air Pollution Control, the regulations of the Louisville Metro Air Pollution Control District (District) and, where appropriate, certain federal regulations. The issuance of this permit does not exempt any owner or operator to whom it has been issued from prosecution on account of the emission or issuance of any air contaminant caused or permitted by such owner or operator in violation of any of the provisions of KRS 77 or District regulations. Any permit shall be considered invalid if timely payment of annual fees is not made. The permit contains general permit conditions and specific permit conditions. General conditions are applicable unless a more stringent requirement is specified elsewhere in the permit.

General Conditions

- G1. The owner or operator of the affected facility covered by this permit shall notify the District of any process change, equipment change, material change, or change in method or hours of operation. This requirement is applicable to those changes (except equipment changes) that may have the potential for increasing the emission of air contaminants to a level in excess of the applicable limits or standards specified in this permit or District regulations.
- G2. The owner or operator shall obtain new or revised permits from the District in accordance with District Regulation 2.16 for Title V sources, District Regulation 2.17 for FEDOOP sources or District Regulation 2.03 for other sources including:
 - a. The company relocates to a different physical address.
 - b. The ownership of the company is changed.
 - c. The name of the company as shown on the permit is changed.
 - d. Permits are nearing expiration or have expired.
- G3. The owner or operator shall submit a timely application for changes according to G2. Timely renewal is not always achievable; therefore, the company is hereby authorized to continue operation in compliance with the latest District permit(s) until the District issues the renewed permit(s).
- G4. The owner or operator shall not be authorized to transfer ownership or responsibility of the permit. The District may transfer permits after appropriate notification (Form AP- 100A) has been received and review has been made.
- G5. The owner or operator shall pay the required permit fees within 45 days after issuance of the SOF by the District, unless other arrangements have been proposed and accepted by the District.
- G6. This permit allows operation 8,760 hours per year unless specifically limited elsewhere in this permit.
- G7. The owner or operator shall submit emission inventory reports as required by Regulation 1.06.
- G8. The owner or operator shall timely report abnormal conditions or operational changes, which may cause excess emissions as required by Regulation 1.07.
- G9. Unless specified elsewhere in this permit, the owner or operator shall complete required monthly record keeping within 30 days following the end of each calendar month.
- G10. If a change in the Responsible Official (RO) occurs during the term of this permit, the owner or operator shall provide written notification (Form AP-100A) to the District within 30 calendar days of the date the RO change occurs.

- G11. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following:

Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance With Emissions Standards And Maintenance Requirements
1.06	Source Self-Monitoring, Emission Inventory Development and Reporting
1.07	Excess Emissions During Startups, Shutdowns, and Upset Conditions
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
1.18	Rule Effectiveness
1.19	Administrative Hearings
2.01	General Application (Permit Requirements)
2.02	Air Pollution Regulation Requirements and Exemptions
2.03	Authorization to Construct or Operate; Demolition/Renovation Notices and Permit Requirements
2.04	Construction or Modification of Major Sources in or Impacting Upon Non-Attainment Areas (Emission Offset Requirements)
2.05	Prevention of Significant Deterioration
2.06	Permit Requirements – Other Sources
2.07	Public Notification for Title V, PSD, and Other Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Modification, Revocation, or Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
3.01	Ambient Air Quality Standards
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.04	Particulate and Sulfur Dioxide Reduction Requirements
4.05	Hydrocarbon and Nitrogen Oxides Reduction Requirements
4.06	Carbon Monoxide Reduction Requirements
4.07	Episode Reporting Requirements
6.01	General Provisions (Existing Affected Facilities)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (New Affected Facilities)

District Only Enforceable Regulations:

Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors
2.08	Emission Fee, Permit Fees and Permit Renewal Procedures
2.16	Title V Operating Permits
5.00	Definitions
5.01	General Provisions
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants
5.14	Hazardous Air Pollutants and Source Categories
5.15	Chemical Accident Prevention Provisions
5.20	Methodology for Determining Benchmark Ambient Concentration of a Toxic Air Contaminant
5.21	Environmental Acceptability for Toxic Air Contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant
5.23	Categories of Toxic Air Contaminants
7.02	Adoption and Incorporation by Reference of Federal New Source Performance Standards

Emission Unit U2: Coke Handling Unit

Applicable Regulations

FEDERALLY ENFORCEABLE REGULATIONS		
Regulation	Title	Applicable Sections
1.14	Control of Fugitive Particulate Emissions	1, 2, 8
6.09	Standards of Performance for Existing Process Operations	1, 2, 8
7.08	Standards of Performance for New Process Operations	1, 2, 3
7.09	Standards of Performance for New Process Gas Streams	1, 2, 3, 4, 5

Equipment

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E008	Coke Ground Pile and Haul Roads (Frontend Loader Movement)	1968	1.14	NA	Fug
E016	Coke Screen	2005	7.08	NA	Fug
E017	Pneumatic Transfer System	2005	7.08	NA	Fug
E018	Fines Storage Bin	2005	7.08	BV2	BV02
E019	85 Ton East Storage Bin	2005	7.08	C2	S2
E020	85 Ton West Storage Bin	2005	7.08	C2	S2
E021	Fines Truck Loading Station	2005	7.08	NA	Fug
E022	Fines Weigh Belt for Coke	2005	7.08	C1	S1
E023	East Bin Weigh Belt	1968	6.09	C1	S1
E024	West Bin Weigh Belt	1968	6.09	C1	S1
E009N	Hoppers 1, 2, 3 (Iron City Conveyors LLC) - Hopper Loading	New	7.08	NA	Fug
E010N	Hopper Collection Conveyor (Iron City Conveyors LLC) – Transfer from Hopper to Conveyor	New	7.08	NA	Fug
E011N	Hopper Transfer Conveyor (Iron City Conveyors LLC) – Transfer from Conveyor to Conveyor	New	7.08	NA	Fug

Emission Point	Description	Install Date	Applicable Regulations	Control ID	Release ID
E012N	Fluidized Bed Coke Dryer (Carrier Vibrating Equipment, Inc.), 20 ton/hr design rate, 24 MMBTU/hr, fueled by natural gas and off-gas	New	7.08, 7.09	C2	S2
E013N	Dryer Outlet Chute/Hopper (Carrier Vibrating Equipment, Inc.) – Transfer from Dryer to Hopper	New	7.08	C2	S2
E014N	Dried Coke Vibrating Conveyer (Carrier Vibrating Equipment, Inc.) – Transfer from Hopper to Conveyer	New	7.08	C2	S2
E015	Bucket Elevator – Transfer from Conveyer to Elevator	1968	6.09	C2	S2

Control Devices

Control ID	Description	Control Efficiency
C1	F1 Baghouse - (R.L.Flowers) 12,000 ft ³ /min ΔP = 4 - 8 in. water [also controls emissions from U1 and U3]	99.9% ¹
C2	F2 Baghouse - (Amerex) 45,000 ft ³ /min ΔP = 4 - 10 in. water, Rebuilt March 2013	99.5%
BV02	Bin vent (Coke fines storage)	99.5% ²

¹ The performance test was conducted on 2/11/2020 and determined a control efficiency of 99.9%.

² The control efficiency was determined by manufacturer's specifications.

U2 Specific Conditions

S1. Standards

[Regulation 2.03, section 6.1]

a. CO

The exhaust from Emission Point E012N shall not contain CO unless the input fuel-gas streams have been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame. [Regulation 7.09, Section 5]

b. NO_x

The exhaust from Emission Point E012N shall not contain NO_x at a concentration greater than 300 ppm, when expressed as NO₂, nor shall there be a visible discharge.³ [Regulation 7.08, Section 4]

c. Opacity

The owner or operator shall not cause or allow any gases that may contain PM equal to or in excess of 20% opacity to be discharged into the atmosphere. [Regulation 6.09, section 3.1 and Regulation 7.08, section 3.1.1]

d. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall limit the process rate of wet coke to 84,000 tons during each consecutive 12-month period.
- ii. The owner or operator shall make inoperable and remove existing Emission Points E009, E010, E012, E013, and E014, before construction of new Emission Points E009N, E010N, E011N, E012N, E013N, and E014N.
- iii. For Emission Points E009N, E010N, E011N, E012N, E013N, E014N, and E015, the owner or operator shall not allow PM emissions to exceed 40.41 tons during each consecutive 12-month period. [Regulation 2.05]
- iv. For Emission Points E009N, E010N, E011N, E012N, E013N, E014N, and E015, the owner or operator shall not allow PM₁₀ emissions to exceed 20.61 tons during each consecutive 12-month period. [Regulation 2.05]
- v. For Emission Points E009N, E010N, E011N, E012N, E013N, E014N, and E015, the owner or operator shall not allow PM_{2.5} emissions to exceed 6.07

³ Carbide submitted a NO_x demonstration on April 9, 2021 showing that the maximum NO₂ emissions from this operation are 54.23 ppm.

tons during each consecutive 12-month period.
[Regulation 2.05]

- vi. The owner or operator shall maintain and operate a fugitive-dust suppression watering system or similar method that shall be used during periods of dry windy weather and at other times as the company deems necessary to minimize fugitive dust emissions from Emission Point E008 and the coke haul-road. [Regulation 1.14, Section 2]
- vii. The owner or operator shall not allow the emission of particulate matter to exceed the following limits:
 - (1) Emission Point E015, E023, and E024:
[Regulation 6.09, section 3.2]
 - (a) 2.58 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $4.10 \times P^{0.67}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
 - (c) $(55.0 \times P^{0.11}) - 40$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
 - (2) Emission Points E016 – E022, E009N, E010N, E011N, E012N, E013N, and E014N: [Regulation 7.08, section 3.1.2]
 - (a) 2.34 lb/hr if the process weight rate is less than or equal to 0.50 tons per hour;
 - (b) $3.59 \times P^{0.62}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 0.50 tons per hour and less than or equal to 30.0 tons per hour;
 - (c) $17.31 \times P^{0.16}$ lb/hr (where P is the process weight rate), if the process weight rate is greater than 30.0 tons per hour.
- viii. For Emission Point E012N, the owner or operator shall operate and maintain baghouse C2, at all times that the process equipment is in operation, including periods of startup, shutdown, and malfunction, in a manner consistent with good air pollution control practice for minimizing emissions.⁴ [Regulation 2.05 and Regulation 7.08]

⁴ A one-time PM compliance demonstration for Emission Point E012N was performed and the hourly standard cannot be exceeded controlled. Therefore, controls must be operational at all times for Emission Point E012N.

e. SO₂

The exhaust from Emission Point E012N shall not contain SO₂ at a concentration greater than 28.63 grains per 100 dscf at 0% excess oxygen.⁵
[Regulation 7.09, Section 4]

S2. Monitoring and Record Keeping

[Regulation 2.03, section 6.1]

The owner or operator shall maintain the following records for a minimum of five years and make the records readily available to the District upon request.

a. CO

- i. The owner or operator shall keep records of the amount of wet coke that is processed during each consecutive 12-month period.
- ii. The owner or operator shall calculate and keep records of the carbon monoxide emissions from the coke dryer (E012N)
- iii. The owner or operator shall monitor and record the temperature to ensure that the input fuel-gas streams have been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame if CO is present.
- iv. The owner or operator shall keep records of the amount of furnace off-gas and natural gas burned on a monthly basis in the coke dryer and the hours of operation for each fuel each month.

b. NO_x

There are no monitoring and record keeping requirements for this pollutant.⁶

c. Opacity

- i. The owner or operator shall conduct a weekly one-minute visible emissions survey of Emission Points E016 – E024, E009N, E010N, E011N, E012N, E013N, E014N, and E015, during normal operation and daylight hours. The opacity surveys can be performed on the building exhaust points if the process is inside an enclosure.
- ii. For emission points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to reduce the

⁵ Carbide submitted an SO₂ demonstration on April 09, 2021 showing that the SO₂ concentration from Emission Point E012N is 11.9 grains SO₂/100 dscf.

⁶ Carbide submitted a NO_x demonstration on April 9, 2021 showing that the maximum NO₂ emissions from this operation is 54.23 ppm.

visible emission frequency to monthly.

- iii. At emission points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 or Method 22 observation, as appropriate, in accordance with 40 CFR Part 60, Appendix A, within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, pursuant to Regulation 1.07, and take all practicable steps to eliminate the exceedance. In addition, if the visible emission survey frequency had been reduced to monthly, weekly survey frequency must be resumed until the 12-week criterion is again met.
- iv. The owner or operator shall keep records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include:
 - (1) The date of the survey,
 - (2) The name of the person conducting the survey,
 - (3) Whether or not visible emissions were observed, and
 - (4) What, if any, corrective action was performed.

d. PM/PM₁₀/PM_{2.5}

- i. The owner or operator shall keep records of the amount of wet coke that is processed during each consecutive 12-month period.
- ii. At the coke storage pile (E008) and the roads and paths between this point and E009N that are used for the transport of the coke, the owner or operator shall perform daily observations for the presence of dust clouds from any cause, including winds and vehicle traffic and record any findings. If dust is visible, the owner or operator shall take appropriate measures, such as water spay or chemical suppressants, to eliminate the dust to the extent that this is possible without creating safety hazards.
- iii. The owner or operator shall calculate the rate of PM/PM₁₀/PM_{2.5} emissions from the affected emission point(s), using a controlled emission factor of 0.6 lb PM/ton_{coke}⁷ for Emission Point E012N and 0.12 lb PM/ton_{coke}⁸, 0.06 lb PM₁₀/ton_{coke}⁹, and 0.018 lb PM_{2.5}/ton_{coke}⁹ for all material handling Emission Points, unless a different emission factor has been approved by

⁷ This is based on the manufacturer specification of an uncontrolled PM emissions rate of 2400 lb/hr, the dryer design rate of 20 ton/hr of wet coke, and a control efficiency of 99.5%.

⁸ The value specified here are from AP-42, Chapter AP-42 11.24-2, Material Handling & Transfer.

⁹ The values specified here are from a material analysis.

APCD.

- iv. The owner or operator shall, monthly, maintain records, including calculations, which show the total PM, PM₁₀ and PM_{2.5} emissions during each consecutive 12-month period.
- v. The owner or operator shall maintain records of any periods when a process was operating and an associated control device was not operating, or a declaration that the control device operated at all times that day when the process was operating. For each period when the control was not operating or was bypassed the record must include:
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in pounds per hour;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- vi. The owner or operator shall perform the following inspections:
 - (1) Daily:
 - Verify that the fans associated with the equipment are operating;
 - (2) Monthly:
 - (a) Verify that dampers are working properly;
 - (b) Verify the bag cleaning mechanisms are working properly;
 - (c) Verify baghouse bags are clean and not filled with dust;
 - (d) Inspect the bags for excessive wear or damage, and replace if necessary;
 - (e) Inspect exhaust stacks for signs of dust accumulation; and
 - (f) Inspect the mechanical integrity of the baghouses for excessive wear or damage.
- vii. For Baghouse C1, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is maintained between 4 and 8 in. water column.
- viii. For Baghouse C2, the owner or operator shall monitor and record the pressure drop at least once during each operating day to ensure it is

maintained between 4 and 10 in. water column.

- ix. For any period of operating outside the established pressure drop range for Baghouse C1 or C2, the owner or operator shall maintain the following records:
- (1) The date,
 - (2) The observed pressure drop, and
 - (3) Corrective action taken to minimize the extent of the excursion, and measures implemented to prevent reoccurrence.

e. SO₂

There are no monitoring and record keeping requirements for this pollutant.

S3. Reporting

[Regulation 2.03, section 6.1]

The owner or operator shall submit semi-annual compliance reports that include the information in this section. All reports shall include the company name, plant ID number, and the beginning and ending date of the reporting period. The compliance reports shall clearly identify any deviation from a permit requirement or a declaration that there were no such deviations. The compliance reports shall be postmarked within 60 days following the end of each reporting period. All compliance reports shall include the following certification statement per Regulation 2.16, section 3.5.11.

- “Based on information and belief formed after reasonable inquiry, I certify that the statements and information in this document are true, accurate, and complete”.
- Signature and title of the responsible official of the company.

The compliance reports are due on or before the following dates of each calendar year:

<u>Reporting Period</u>	<u>Report Due Date</u>
January 1 through June 30	August 29
July 1 through December 31	March 1 of the following year

a. CO

- i. The owner or operator shall submit to the District written notification of the following: [Regulation 7.01, section 5.1]

- (1) The date on which construction commenced, postmarked no later than 30 days after that date,
 - (2) The anticipated date of initial startup, postmarked not more than 60 days nor less than 30 days before that date, and
 - (3) The actual date of initial startup, postmarked within 15 days after that date.
 - ii. The semi-annual report shall contain the following information.
 - (1) Emission Unit and Emission Point identification;
 - (2) Identification of all periods if the exhaust from the coke dryer (E012) contains CO, unless the input fuel-gas stream has been burned at a minimum of 1,300 °F for at least 0.5 seconds in a direct flame;
 - (3) Description of any corrective action taken to correct abnormal operating conditions, or a negative declaration if no corrective action was taken.
- b. NO_x**

There are no reporting requirements for this pollutant.
- c. Opacity**
 - i. Emission Unit and Emission Point identification;
 - ii. The date, time, and results for each visible emission survey during which visible emissions were detected, or a negative declaration if no visible emission were observed;
 - iii. The date, time, and results of each Method 9 or Method 22 observation conducted, or a negative declaration if no or observations were required;
 - iv. Description of any corrective action taken.
- d. PM/PM₁₀/PM_{2.5}**
 - i. Emission Unit and Emission Point identification;
 - ii. Amount of wet coke that is processed and emissions during each consecutive 12-month period.
 - iii. Identification of all periods of exceedance of the annual hourly PM emissions rate standards established in U2 PM Standards, including calculation of the emission rate and the quantity of excess emissions during such periods, or a negative declaration if there were no such periods;

- iv. Identification of all periods during which a PM control device was bypassed during operation of the associated process equipment, including
 - (1) Date;
 - (2) Start time and stop time;
 - (3) Identification of the control device and process equipment;
 - (4) PM emissions during the event, in pounds per hour;
 - (5) Summary of the cause or reason for each event;
 - (6) Corrective action taken to minimize the extent or duration of the event; and
 - (7) Measures implemented to prevent reoccurrence of the situation that resulted in the event.
- v. Identification of any periods during which required inspections (Specific Condition S2.d.vi.) were not completed;
- vi. Description of any corrective action taken to correct abnormal operating conditions, including pressure drop, or a negative declaration if no corrective action was taken.

e. SO₂

There are no reporting requirements for this pollutant.

S4. Testing

[Regulation 2.03, section 6.1]

a. PM

- i. Within 180 days of initial startup, the owner or operator shall perform a performance test utilizing EPA Reference Methods 5, 201A, and 202 on the inlet and outlet of Baghouse C2 and the outlet of Fluidized Bed Coke Dryer 012N¹⁰, to determine the emission rate and control efficiency. Failure to perform the test, at maximum capacity, allowable/permitted capacity, or at a level of capacity which results in the greatest emissions may necessitate a re-test or necessitate a revision of the allowable/permitted capacity of the process equipment depending upon the difference between the testing results and the limit.
- ii. The owner or operator shall submit a written compliance test plan that includes the EPA test methods that will be used for PM compliance testing,

¹⁰ However, due to the configuration of the existing exhaust ductwork which Carbide is planning to reuse with the new coke dryer, sampling the outlet of the dryer at a location prescribed by the applicable performance testing methods will be equivalent to sampling the inlet of the baghouse. Therefore, Carbide will only need to test the inlet and outlet of Baghouse C2

the process operating parameters (e.g. material throughput, in lbs, material type, etc.) that will be monitored during the compliance test, and the control device performance indicators (e.g. pressure drop) that will be monitored during the compliance test. (See Appendix A.) The compliance test plan shall be furnished to the District at least 30 days before the actual date of the compliance test.

- iii. The owner or operator shall provide the District at least 10 days prior notice of any compliance test to afford the District the opportunity to have an observer present.
- iv. The owner or operator shall furnish the District with a written report of the results of the compliance test within 60 days following the actual date of completion of the compliance test event.

Attachment A - Protocol Checklist for a Performance Test

A complete protocol must include the following information

1. Facility name, location, and Plant ID number.
2. Responsible Official and environmental contact names.
3. Permit numbers that are requiring the test to be conducted.
4. Test methods to be used (*i.e.* EPA Method 1, 2, 3, 4, and 5).
5. Alternative test methods or description of modifications to the test methods to be used.
6. Purpose of the test including equipment and pollutant to be tested. (The purpose may be described in the permit that requires the test to be conducted or it may be to show compliance with a federal regulation or emission standard.)
7. Tentative test dates. (These may change but final notice is required at least 10 days in advance of the actual test dates in order to arrange for observation.)
8. Maximum rated production capacity of the system.
9. Production-rate goal planned during the performance test for demonstration of compliance (if appropriate, based on limits) and justification of the planned production rate, if less than the maximum rate.
10. Method to be used for determining rate of production during the performance test.
11. Method to be used for determining rate of production during subsequent operations of the process equipment to demonstrate compliance.
12. Description of normal operation cycles, if applicable.
13. Discussion of operating conditions that tend to cause worse case emissions. This is especially important to clarify if worst case emissions do not result from the maximum production rate.
14. Process flow diagram.
15. The type and manufacturer of the control equipment, if any.
16. The process and/or control equipment parameters to be monitored and recorded during the performance test. These parameters may include pressure drops, flow rates, pH, temperature, *etc.* The values achieved during the test may be required during subsequent operations to describe the operating parameters that are indicative of good operating performance.
17. How quality assurance and accuracy of the data will be maintained, including sample identification and chain-of-custody procedures, audit sample provider, and number of audit samples to be used, if applicable.
18. Diameter of the pipe, duct, stack, or flue to be tested.
19. Distances from the testing sample ports to the nearest upstream and downstream flow disturbances such as bends, valves, constrictions, expansions, and exit points for outlet and additionally for inlet.
20. The number of traverse points to be tested for the outlet and the inlet if required, using Method 1 in Appendix A-1 to 40 CFR Part 60.

The Stack Test Review fee must be submitted with each stack test protocol.

The current fee is listed on the APCD website (louisvilleky.gov/APCD).