OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM

January 16, 2019

TO: Files

THROUGH: Legal

THROUGH: Rick Groshong, Environmental Programs Manager
Compliance and Enforcement Group

THROUGH: Preston Loving, Environmental Programs Manager
Compliance Section

THROUGH: Peer Review

FROM: Heather Sessing, Environmental Programs Specialist
Compliance Section

cc: Jim Bennett
EHS Superintendent
Continental Carbon Company
1006 East Oakland Avenue
Ponca City, OK 74601
(580) 763-8135

SUBJECT: Full Compliance Evaluation at **Continental Carbon Company**
1006 East Oakland Avenue
Ponca City, Kay County, Oklahoma
AIRS ID NUMBER: 071-00004
FCE ID NUMBER: 08348

Introduction

An Air Quality Division Full Compliance Evaluation ("FCE") was conducted at Continental Carbon Company ("CCC") – Ponca City Plant ("Facility") on June 25, 2018, from 1000 to 1530 hours. The inspection was unannounced. Heather Sessing, Environmental Programs Specialist, David Schutz, Permit Engineer, and Preston Loving, Environmental Programs Manager, for the Air Quality Division of the Department of Environmental Quality ("DEQ"), conducted the evaluation. Jim Bennett, EH&S Superintendent, represented CCC. Proper credentials were presented upon arrival at the Facility. Personal protective equipment needed was ear and eye protection, fire resistant clothing, steel-toed boots, and a hard hat. The FCE was conducted under normal operating conditions.

History/Process Description

The Facility is a carbon black manufacturing plant (Standard Industrial Classification Code 2895) currently operating under Air Quality Permit No. 2004-302-TVR (M-2) **(Attachment 1)**. Carbon black is produced by burning residual oil pipelined from Phillips 66 Ponca City petroleum refinery. The oil is burned in kilns and the soot (carbon black product) is separated from the waste stream using baghouses. The waste gases then exit the process through one of three thermal oxidizers ("TOs") on-site. For a more detailed process description, refer to the memorandum of Permit No. 2004-302-TVR (M-2). Permits issued to the Facility in last five years are listed in the table below.

2004-302-TVR (M-1)	Minor modification to permit for a like kind replacement of a boiler.	September 17, 2015
2004-302-TVR (M-2)	Minor modification to permit for a like kind replacement of a boiler. This is the current operating permit.	March 29, 2016

Emissions/Source Classification

The Facility is classified as a Prevention of Significant Deterioration ("PSD") major source of emissions for oxides of sulfur ("SO_x"), carbon monoxide ("CO"), oxides of nitrogen ("NO_x"), total particulate matter ("PM"), and volatile organic compounds ("VOC") with the potential to emit 16,555.20 tons per year ("TPY"), 4,941.31 TPY, 2,484.76 TPY, 652.3 TPY, and 230.06 TPY, respectively. The Facility is a major source of total reduced sulfur and total hazardous air pollutants ("HAP") with the potential to emit 132.88 TPY and 134.33 TPY, respectively. Facility emissions also include hydrogen sulfide ("H_2S"), carbon disulfide ("CS_2"), carbonyl sulfide ("COS"), and hydrogen cyanide ("HCN"). The Facility's potential to emit H_2S is 89.99 TPY.

Three years of emission inventory plant summaries were reviewed for this evaluation and a summary of emissions in TPY for the years 2015, 2016, and 2017, with the resulting percent changes, are provided in the table below **(Attachment 2).**

Pollutant	**2015**	**% Change**	**2016**	**% Change**	**2017**
NOx	878.92	-4.18	842.15	10.54	930.88
CO	447.10	-33.24	298.49	13.62	339.15
VOC	27.34	-22.05	21.31	6.69	22.74
SOx	153.87	-2.98	149.28	9.15	162.94
$PM_{10}/PM_{2.5}$	2920.64	-7.13	2712.51	-3.89	2606.95
H_2S	3.31	-40.05	1.99	11.03	2.21
CS_2	1.64	-40.24	0.98	11.22	1.09
COS	0.04	0.00	0.04	75.00	0.07
HCN	0.09	-11.11	0.08	75.00	0.14

The greater than 30% decrease in CO, H_2S, and CS_2 emissions between 2015 and 2016 was due to decreased production. The greater than 30% emissions change in COS and HCN between

2016 and 2017 resulted in less than a 1 TPY increase. The equipment on-site was as listed in the emissions inventory.

State/Federal Regulatory Applicability

OAC 252:100-19 (Particulate Matter)

This subchapter specifies a PM emission limitation of 0.6 pounds per million British thermal units ("lb/MMBTU") from existing fuel-burning equipment with a rated heat input of 10 million British thermal units per hour ("MMBTUH") or less. AP-42 (7/98), Table 1.4-2, lists the total PM emission for the combustion of natural gas to be 0.0076 lb/MMBTU. **Permit No. 2004-302-TVR (M-2) requires the boilers to be fueled by natural gas to ensure compliance with this subchapter. As required, CCC submitted a natural gas bill showing pipeline-grade natural gas is used (Attachment A - confidential).**

OAC 252:100-31 (Sulfur Compounds)

Part 5 limits sulfur dioxide ("SO_2"), emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels, the SO_2 limit is 0.2 lb/MMBTU heat input. **The section of the reactor in Unit 4 which combusts natural gas to heat the feedstock to produce carbon black is subject to this standard. Permit No. 2004-302-TVR (M-2) requires the fuel-burning section of the reactor of Unit 4 to be fired with commercial grade natural gas to comply with this subchapter. As required, CCC submitted a natural gas bill showing pipeline-grade natural gas is used (Attachment A - confidential).**

OAC 252:100-37 (Volatile Organic Compounds)

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 pounds per square inch absolute ("psia") to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. **The Facility does have a 300-gallon gasoline tank on-site; however, it is less than the minimum capacity requirement of 400 gallons addressed by this subchapter. The Facility also has a 500-gallon diesel tank, but the vapor pressure for diesel is lower than 1.5 psia. Based on information obtained during the evaluation, there are currently no tanks on-site that are subject to the requirements of this subchapter.**

Federal Regulations

New Source Performance Standards ("NSPS"), 40 Code of Federal Regulations ("C.F.R.") Part 60

Subparts D, Da, Db, and Dc, (Steam Generating Units) - This Subpart affects steam generating units after August 17, 1971. **The boilers at this Facility are not affected units because they are not steam generating units and they have a heat capacity less than the 10 MMBTUH applicability thresholds of these Subparts.**

Subparts K, Ka, Kb, VOL Storage Vessels. **The carbon black oil tanks at this site are not subject because the tanks were constructed prior to the effective date of Subpart K (June 11, 1973).**

Subpart JJJJ, (SI Internal Combustion Engines) - This Subpart affects stationary SI internal combustion engines ordered (constructed) after June 12, 2006, that are manufactured after certain

dates, and for all SI engines modified or reconstructed after June 12, 2006, regardless of size. **The Facility has four natural gas-fired emergency generators. Three of these units (63 horsepower ("hp"), 63-hp, and 110-hp) have construction dates that predate June 12, 2006. Emergency generator Pond 1 was constructed after June 12, 2006 but prior to January 1, 2009; therefore, based on this information, it appears that all four units are not subject to this subpart.**

National Emission Standards for Hazardous Air Pollutants ("NESHAP"), 40 C.F.R. Part 63 Maximum Achievable Control Technology ("MACT")
Subpart SS, (National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System of a Process) – MACT Subpart YY, outlined below, and specifically Table 8 to 40 C.F.R. § 63.1103(f) of MACT Subpart YY, references MACT Subpart SS and requires major source carbon black production facilities opting to reduce emissions of a total HAP by 98 weight-percent to vent emissions through a closed vent system or to any combination of control devices meeting the requirements of MACT Subpart SS §63.982(a)(2).

The Facility uses three TOs to control HAP emissions from the four carbon black reactors. An analysis of compliance with the applicable requirements of this subpart is included below.

40 C.F.R. § 63.983
This section establishes requirements for closed vent systems.

40 C.F.R. § 63.983(a) - (1) The Facility operates TOs as control devices to collect the regulated material vapors from the emission point; (2) the Facility operates the TOs at all times when emissions are vented to them; and (3) the closed vent system, which includes the TOs, does not have bypass lines that could divert a vent stream to the atmosphere; however, there is an emergency line. There is a flow meter that can measure the amount of gas during an emergency event and the line is secured in the non-diverting position with a pressure release driven fiberglass shield. Mr. Bennett informed the DEQ that if the emergency line is used, engineering calculations are used to quantify emissions. Based on this information, the Facility appears to be in compliance with this requirement.

40 C.F.R. § 63.983(b) – CCC conducts the annual Leak Detection and Repair ("LDAR") every January. Records for 2016-2018 monitoring were provided upon request. Based on these records, it appears the Facility is meeting the LDAR requirements of this Subpart (Attachment B - confidential).

40 C.F.R. § 63.983(c) – The Facility completed an initial inspection of the closed vent system in June 2005. Compliance with the initial inspection requirements was evaluated in a previous full compliance evaluation.

40 C.F.R. § 63.983(d) – The LDAR records indicated that no leaks occurred in 2016-2018 (Attachment B- confidential).

40 C.F.R. § 63.988
This section establishes requirement for incinerators, boilers, and process heaters.

40 C.F.R. § 63.988(a) – The Facility utilizes three (3) TOs to meet a HAP emission reduction requirement of 98 weight percent.

40 C.F.R. § 63.988(b) – Initial performance tests were conducted in 2004. The results of the tests showed 0.00 parts per million of CS_2 and COS, thus, indicating compliance with the 98 weight-percent reduction in HAP emissions.

40 C.F.R. § 63.988(c) – Thermocouples are used to continuously measure the temperature of the TOs.

40 C.F.R. § 63.998 Record keeping requirements.

40 C.F.R. § 63.998(b) – records are maintained showing that the temperature of the TOs is measured every 15 minutes as required by 40 C.F.R. § 63.988(b)(i) (Attachment C – confidential).

40 C.F.R. § 63.998(d)(1) – Based on records received, it appears that LDAR records are maintained as required (Attachment B - confidential).

40 C.F.R. § 63.998(d)(3) – Records are maintained showing the date and duration of each startup, shutdown, and malfunction ("SSM") of the process equipment or air pollution control equipment (Attachment D - confidential). These records also include documentation that the SSM plan was followed during each of these events.

40 C.F.R. § 63.999 Notification and other reports requirements.

40 C.F.R. § 63.999(c)(1) – MACT periodic reports are submitted as required in the semiannual monitoring and deviation report ("SAR").

40 C.F.R. § 63.999(c)(2)(i) – The Facility is required to submit LDAR records with the MACT Subpart YY and SS semiannual reports if leaks were detected during the semiannual period. LDAR records from 2016-2018 were reviewed (Attachment B – confidential).

40 C.F.R. § 63.999(c)(3) – The periodic reports state that there have been no outages since the previous FCE.

40 C.F.R. § 63.999(c)(4) and (5) – The periodic report states that MACT Subpart YY regulates all compounds that contain or contact HAP that are associated with the carbon black production units. The main unit filter exhaust stream does not contact any of the storage vessels at the Facility; therefore, the storage vessels are not subject to the periodic reporting requirements specified in Subparts YY or SS.

40 C.F.R. § 63.999(c)(6) – The periodic report states that the main process filter vents are routed to a waste gas combustor that uses the streams as primary fuel. 40 C.F.R. § 63.988(c) states that process vent streams that are used as primary fuel are exempt from monitoring; therefore, this requirement currently does not apply. Startups, shutdowns, and malfunctions of the waste gas combustors are managed in accordance with the Facility's SSM plan.

Subpart YY, (Generic MACT Standards – Source Category: Carbon Black Production) - This Subpart was promulgated on July 29, 1999, and applies to new and existing carbon black production units located at a major source of HAP listed in Table 1 of 40 C.F.R. § 63.1100(a). **The Facility is a carbon black production facility and is a major source of HAP emissions; therefore, the Facility is subject to certain requirements of this Subpart. Applicability Determination No. 98-176-AD (M-5) was issued on March 30, 2010, stating that the Facility is subject to MACT Subpart YY for its carbon black production units. An analysis of compliance with the applicable requirements of this subpart is included below.**

40 C.F.R. § 63.1103(f)
This requirement states that the Facility is required to either: 1) reduce emission of HAP by using a flare that meets the requirements of MACT Subpart SS or 2) reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices that meet the requirements of MACT Subpart SS § 63.982(a)(2). **The Facility has opted to comply with the most stringent requirement and reduce emissions of total HAP by 98 weight-percent by venting emissions through a closed vent system to any combination of control devices meeting the requirements of 40 C.F.R. § 63.982(a)(2). In this case, the control devices used to meet the 98 weight-percent HAP reduction are three separate TOs.**

40 C.F.R. § 63.1104
This requirement establishes applicability assessment procedures and methods for process vents from continuous unit operations. **According to 40 C.F.R. § 63.1103(f)(3), the Facility is not required to perform applicability tests or other applicability assessment procedures if the Facility opts to comply with the most stringent requirements for applicable emission points to this Subpart. The Facility uses the most stringent measure to comply with the emission standards of this Subpart by using a control device to reduce HAP emissions to 98 weight-percent; therefore, the requirements of 40 C.F.R. § 63.1104 currently do not apply to the Facility.**

40 C.F.R. § 63.1108(b)(4)(ii)
This requirement states that compliance with the emission limitations of this Subpart may be based on results of performance tests conducted in accordance with the procedures specified in MACT Subpart SS § 63.997. **Performance tests were conducted in 2004 for all three TOs. The results of the tests showed 0.00 parts per million of CS_2 and COS, thus, indicating compliance with the 98 weight-percent reduction in HAP emissions.**

40 C.F.R. § 63.1109
This section outlines the recordkeeping requirements of this Subpart. **Based on review of records archived at the DEQ and through records obtained at the time of the evaluation, it appears that the Facility is maintaining the proper records, reports, and notifications required by this Subpart.**

40 C.F.R. § 63.1110
This section outlines the reporting requirements of the Subpart. **40 C.F.R. § 63.1110(a)(2) – The Facility submitted an initial notification on July 10, 2003.**

40 C.F.R. § 63.1110(a)(4) – The Facility submitted a notification of compliance status ("NCS") on August 20, 2009, after the Facility was informed during the June 10, 2010, FCE that DEQ had no record of an NCS.

40 C.F.R. § 63.1110(a)(5) – Based on review of records archived at the DEQ, the Facility submits periodic reports semiannually as required. The four most recent MACT reports were reviewed for compliance, covering the reporting period between the previous inspection and the current inspections.

40 C.F.R. § 63.1110(a)(7) – SSM reports are submitted as part of periodic reports referenced in 40 C.F.R. § 63.1110(a)(5) above (Attachment D – confidential).

40 C.F.R. § 63.1111
This section outlines the startup, shutdown, and malfunction plan requirements. **The Facility has developed a SSM plan as required by § 63.1111(a). The Facility submits an outline of its SSM plan and the required SSM reports as part of the semiannual periodic reports referenced in 40 C.F.R. § 63.1110(a)(5) and (a)(7) above.**

Subpart ZZZZ, (Stationary Reciprocating Internal Combustion Engines) This Subpart applies to reciprocating internal combustion engines ("RICE") located at major and area sources of HAP emissions. **The Facility has four SI RICE located on-site that are applicable to this Subpart. All four of these units (86-hp, 63-hp, 63-hp, and 110-hp) are considered existing stationary RICE according to 40 C.F.R. § 63.6590(a)(1)(ii) since their construction dates were prior to June 12, 2006. 40 C.F.R. § 63.6595(a)(1) states that existing SI stationary RICE with a site rating less than or equal to 500 brake hp located at a major source of HAP emissions must comply with the applicable requirements of this Subpart no later than October 19, 2013.**

Since the four engines discussed above are considered existing emergency stationary RICE, the Facility was not required to submit initial notifications as stated in 40 C.F.R. § 63.6645(a)(5). According to Table 2c of Subpart ZZZZ, emergency stationary SI RICE engines are required to change oil and filter every 500 hours of operation or annually, inspect sparkplugs every 1,000 hours of operation or annually, and inspect all hoses and belts every 500 hours of operation or annually. Records were requested from CCC to show compliance with NESHAP Subpart ZZZZ oil and filter change requirements, as well as sparkplug, belt, and hose inspection requirements. Records were received from Mr. Bennett showing that the generators were checked once per quarter by a servicing company (Attachment E - Confidential). According to these records, this servicing meets the requirements of Subpart ZZZZ, except it does not appear that an oil change/oil analysis was conducted on any of the engines during 2017, which is a violation of the work practice standards in NESHAP Subpart ZZZZ. Engine runtime hour records received from the Facility indicate the generators have not yet operated more than 500 hours since the previous FCE (Attachment E – Confidential). An area of concern is that the engine run hour records for 2017 and 2018 submitted in ACCs have the same start date, but different start hours for each engine between the two records. None of the engines operated more than 500 hours, but the Facility should ensure that records are properly kept.

Subpart DDDDD, (Industrial Boilers and Process Heaters) This Subpart regulates HAP emissions from industrial boilers and process heaters. **The two (2) 6.28-MMBTUH boilers are considered new affected industrial boilers; therefore, these two units are subject to the requirements of this Subpart. New boilers are required to comply with this subpart by April 1, 2013, or upon startup, whichever is later. Intial requirements are discussed in the previous FCE. Both units are greater than 5 MMBTUH, less than 10 MMBTUH, and burn natural gas, so they are required to conduct a tune-up every 2 years as specified in 40 C.F.R. § 63.7540 and must comply with these applicable work practice standards of this subpart upon startup. It appears that tune ups for the boilers occurred in both 2017 and 2018, and based on this information, the Facility is in compliance with this condition.**

Compliance Assurance Monitoring, 40 C.F.R. Part 64
Compliance Assurance Monitoring ("CAM"), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source that is required to obtain a Title V permit, if it meets all the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY.

The Facility meets the previous criteria for each TO, because the potential to emit, prior to any control device, is greater than 100 TPY for CO emissions. CAM requirements have been incorporated into Specific Condition 21 of Permit No. 2004-302-TVR (M-2), and compliance is evaluated in the *On-site Evaluation* section of this report.

Evaluation/Enforcement History
Two FCEs have been completed in the last five years at the Facility.

- FCE #6503 was completed on March 11, 2014, and three violations were discovered. Enforcement case #7395 was opened on May 27, 2014. The failed stack test was considered a high priority violation ("HPV") and an enforcement conference was held on October 13, 2014. Consent Order 15-014 was executed on March 24, 2015, and a cash payment of $5,250 was received on February 13, 2015. The case was closed on April 28, 2015.
- FCE #7401 was conducted on April 7, 2016, and five violations were found. Enforcement case #8456 was opened on September 16, 2016 to address the violations. On February 21, 2017, DEQ sent an Alternative Enforcement Letter to CCC, and a compliance plan was received on May 30, 2017. Additionally, DEQ sent a letter to CCC stating that both enforcement case #s 8456 and 8637 (discussed below) would be left open until controls were installed per the Federal Consent Decree entered in *United States v. Continental Carbon Company,* Case No. 5:15-cv-00290 (W.D. Okla). This case remains open.

DEQ inspectors have conducted on-site Partial Compliance Evaluations ("PCEs") in the last three years. The stack tests in 2016 were observed, and two complaint inspections were conducted in 2017. Please see Edoctus #s 1886974 and 1910759 for more details.

Four additional enforcement cases have been opened in the last three years for the Facility.

- Enforcement case #7877 was opened on May 5, 2015 as a result of Federal Consent Decree No. 5:15-cv-0029. Tracking of compliance progress continues and the case remains open.
- Enforcement case #7922 was opened on July 7, 2015 as a result of a self-disclosure regarding emission inventory. CCC submitted complete emission inventories on February 3, 2016, and the case was closed on February 8, 2016.
- Enforcement case #8213 was opened on March 7, 2016 as a result of a self-disclosure regarding failed stack tests. The failed stack tests were handled similarly to enforcement case #8456 with regards to the Federal Consent Decree. The case was closed on September 27, 2017.
- Enforcement case #8637 was opened on February 2, 2017, as a result of a self-disclosure for failed stack testing in 2016. The case remains open.

Annual Compliance Certifications/Semiannual Reports

The initial Title V permit was issued on April 21, 2000. The Facility's Annual Compliance Certification ("ACC") after 2013 is due no more than 30 days after July 31st each year, and the Semiannual Monitoring and Deviation Reports ("SARs") are due by no more than 30 days after January 31st and July 31st each year. ACCs and SARs received for the Facility since the last FCE are summarized in the table below

Document	Certification Period	Date Received	Deviations	Edoctus #
ACC	8/1/15 – 7/31/16	8/29/16	Yes – addressed in previous FCE	1738588
	8/1/16 – 7/31/17	8/30/17 & 9/18/17*	Yes – addressed in previous FCE and enforcement case #8637.	1888906

*Form was submitted timely by email to J. Brixey on August 30, 2017; however, the full submittal was delayed due to the effects of Hurricane Harvey. Because the form was submitted timely to DEQ, the ACC is considered to be submitted on-time.

Document	Certification Period	Date Received	Deviations	Edoctus #
SAR	2/1/16 – 7/31/16	8/29/16	No	1721860
	8/1/16 – 1/31/17	Not received		
	2/1/17 – 7/31/17	8/30/17 & 9/18/17*	Yes – previously addressed	1888907

	8/1/17 – 1/31/18	Form not received		1927638

The Facility failed to submit a SAR form for the time covering the period for August 1, 2016 through January 31, 2017 and August 1, 2017 through January 31, 2018, which is a violation of Permit No. 2004-302-TVR (M-2) Specific Condition 19.

Excess Emissions
Excess emission #s 55030, 55971, and 55825 are associated with failed stack testing since the previous inspection. Excess emission #55030 is being addressed under enforcement case #8637. The 2017 failed testing is not yet covered under enforcement. The failed test on TO #4 for particulate matter in 2017 is a violation of Permit No. 2004-302-TVR (M-2) Specific Condition 1. EUG 9. See Specific Condition 20 for details regarding this failed test.

On-site Evaluation
The Facility was evaluated on June 25, 2018, from 1000 to 1530 hours. The inspectors did not see any visible emissions coming from the Facility. A review of permit conditions and a walk through of the Facility was conducted.

The following specific conditions listed in **Permit No. 2004-302-TVR (M-2)** were evaluated.

1. Points of emissions and limitations for each point: [OAC 252:100-8-6(a)(1)]

EUG 1: Emission units (EU) Boiler #1 and Boiler #2.

The boilers shall only be fueled with commercial grade natural gas.
As required, CCC submitted a natural gas bill showing pipeline-grade natural gas is used (Attachment A - confidential).

EU	Point	Manufacturer	MMBTUH	Serial #	Const. Date
Boiler #1	EPN #1	Superior	6.28	18066	2015
Boiler #2	EPN #2	Superior	6.28	17817	2015

EU	NOx		CO		VOC		$PM_{10}/PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Boiler #1	0.63	2.76	0.53	2.32	0.03	0.13	0.05	0.22
Boiler #2	0.63	2.76	0.53	2.32	0.03	0.13	0.05	0.22

The boilers were observed on-site.

EUG 2: Main Bag Filters (MBF), **EUG 3:** Exhaust Bag Filters (EBF), **EUG 6:** Dryers, **EUG 8:** Reactors, and **EUG 9:** Waste Gas Combustors (WGC) as identified below are all exhausted through **EUG 5:** Thermal Oxidizers. Estimated emissions from the thermal oxidizers are listed below.

Summary of Emission Sources

EUG 2 Main Bag Filters (MBF)

EU	Point	Name
MBF #1	EPN #3 (N/C)	Unit No. 1
MBF #2	EPN #7 (N/C)	Unit No. 2
MBF #3	EPN #11 (N/C)	Unit No. 3
MBF #4	EPN #20 (N/C)	Unit No. 4

N/C – Normally Closed

The MBF compliance will be evaluated under Specific Condition 11.

EUG 5 Thermal Oxidizers (TO)

EU	Point	Name	MMBTUH	Const. Date
TO #1	EPN #25	Thermal Oxidizer No. 1	147	1997
TO #2	EPN #26	Thermal Oxidizer No. 2	87	1997
TO #4	EPN #22	Unit No. 4 Thermal Oxidizer	93	1990

The three TOs were observed at the time of the inspection. TO compliance will be evaluated under Specific Condition 21.

EUG 8 Reactors

EU	Point	Unit No.	Const. Date
RX #11	EPN #3, 25	Unit No. 1 - Reactor #11	1955
RX #12	EPN #3, 25	Unit No. 1 - Reactor #12	1955
RX #21	EPN #7, 25	Unit No. 2 - Reactor #21	1955
RX #31	EPN #11, 26	Unit No. 3 - Reactor #31	1959
RX #32	EPN #11, 26	Unit No. 3 - Reactor #32	1959
RX #4	EPN #22	Unit No. 4 - Reactor #4	1991

EUG 9 Waste Gas Combustors (WGC)

EU	Points	Unit No.	MMBTUH	Const. Date
WGC #11	EPN # 25	Unit No. 1	19.3	1954
WGC #12	EPN #25	Unit No. 1	19.3	1954
WGC #22	EPN # 25	Unit No. 2	19.3	1954
WGC #31	EPN #12, 13, 26	Unit No. 3	19.3	1959
WGC #32	EPN #12, 13, 26	Unit No. 3	19.3	1959
WGC #41	EPN #22	Unit No. 4	24.75	1991

Emission Limitations

Emission Unit	Permitted Emissions						
		NO_X	**CO**	**VOC**	**PM**	**$PM_{10}/PM_{2.5}$**	**SO_2**
TO #1	**lb/hr**	270	475	17	45.40	40.97	2,568
(Unit #1 & Unit #2)	**TPY**	1,135	1,995	69	190.68	172.07	8,089
TO #2	**lb/hr**	142	311	14	44.47	41.96	1,195
(Unit #3)	**TPY**	597	1,308	58	186.77	176.23	3,763
TO #4	**lb/hr**	178	389	18	54.34	37.60	1,494
(Unit #4)	**TPY**	746	1,634	73	228.23	157.92	4,704

Emission Unit	Permitted Emissions				
		TRS	**H_2S**	**CS_2**	**COS**
TO #1	**lb/hr**	20.30	14.39	5.41	0.05
Unit #1 & Unit #2	**TPY**	63.96	45.30	17.05	0.16
TO #2	**lb/hr**	9.93	6.31	3.55	0.07
Unit #3	**TPY**	31.28	19.86	11.18	0.24
TO #4	**lb/hr**	12.41	7.88	4.44	0.09
	TPY	39.09	24.83	13.97	0.29

TO compliance with emission limitation will be evaluated under Specific Condition 20.

EUG 4: Cleanup Bag Filters (CUBF) Emission limitations for EUs CBF #1, CBF #2, CBF #3, CBF #4, CBF #5.

EU	Point	Name
CBF #1	EPN #10	Unit No. 1
CBF #2	EPN #6	Unit No. 2
CBF #3	EPN #14	Unit No. 3
CBF #4	EPN #24	Unit No. 4
CBF #5	EPN #23	Shipping Dock
CBF #6	EPN #34	Shipping Dock
CBF #7	EPN #35	Shipping Dept. #2

Emission Unit	Permitted Emissions	
	Units	**$PM/PM_{10}/PM_{2.5}$**
CBF #1	**lb/hr**	1.00
	TPY	1.75
CBF #2	**lb/hr**	1.00

	TPY	1.75
CBF #3	**lb/hr**	1.00
	TPY	1.75
CBF #4	**lb/hr**	1.00
	TPY	1.75
CBF #5	**lb/hr**	1.00
	TPY	4.20
CBF #6	**lb/hr**	1.00
	TPY	4.20
CBF #7	**lb/hr**	1.00
	TPY	4.20

The Cleanup Bag Filters were performance tested in 2004 and found to be in compliance with the permit limits. Compliance with the emission rates are determined under a previous FCE.

EUG 7: Feedstock Oil Tanks are grandfathered. There is no lb/hr or TPY emission limits applied to these units under Title V but they are limited to the existing equipment as they are.

EU	**Point**	**Contents**	**Barrels**	**Gallons**
FS Tanks	EPN #18a	Carbon Black Oil	5,000	210,000
	EPN #18b	Carbon Black Oil	5,000	210,000
	EPN #18c	Carbon Black Oil	5,000	210,000
	EPN #18d	Carbon Black Oil	65,000	2,730,000
	EPN #18e	Carbon Black Oil	500	21,000
	EPN #18f	Carbon Black Oil	500	21,000

The tanks were observed on-site, and Mr. Bennett stated that two of the tanks are out of service.

EUG 10: Carbon Black Tanks emissions are considered insignificant based on existing equipment items and do not have a specific limitation.

EU	**Point**	**Contents**
CB Tanks	TK 11	Carbon Black
	TK 12	Carbon Black
	TK 13	Carbon Black
	TK 14-15	Carbon Black
	TK 16-17	Carbon Black
	TK 21-22	Carbon Black
	TK 23	Carbon Black
	TK 31	Carbon Black
	TK 32	Carbon Black
	TK 33-36	Carbon Black
	TK 41-44, OQ4	Carbon Black

	TK 45-49	Carbon Black
	TK OQ1	Carbon Black
	TK OQ2	Carbon Black
	TK OQ3	Carbon Black
	SB Tanks	Carbon Black

2. The facility shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)(1)]
Mr. Bennett stated that the Facility operates continuously.

3. Each boiler in EUG 1 shall have a permanent identification plate attached which shows the make, model number, and serial number. [OAC 252:100-45]
Both boilers have permanent identification plates, as required (Attachment F – confidential).

4. The sulfur content of carbon black feedstock oils processed at the facility shall not exceed 3.0% by weight on an annual average basis. No carbon black feedstock oil shall be processed which exceeds 4.0% sulfur content by weight. [OAC 252:100-8-6(a)(1)]
Records show there have been no instances when the sulfur content of the carbon black feedstock oils exceeded the limits (Attachment G – confidential).

5. At least once during every operating day, the permittee shall take a sample of the sulfur content of feedstock oils being processed and the resulting carbon black product to determine a weekly average sulfur content. The composite results from these measurements shall be used in conjunction with reactor feed rates to calculate an average hourly sulfur dioxide emissions rate. [OAC 252:100-8-6(a)(1)]
Mr. Bennett stated that sulfur content is measured daily. A weekly average for sulfur content is determined, and an average sulfur dioxide emissions rate is calculated (Attachment G – confidential).

6. The carbon black reactors associated with Units No. 1, 2, and 3 shall be fired with pipeline grade natural gas or feedstock oil meeting the conditions of Specific Condition 4. The section of the carbon black reactor, associated with Unit No. 4, which is used to provide heat to the reactor to convert the feedstock into carbon black, shall be fired with pipeline-grade natural gas. All supplemental fuel supplied to the waste gas combustors and thermal oxidizers shall also be pipeline-grade natural gas. [OAC 252:100-31]
As required, CCC submitted a natural gas bill showing pipeline-grade natural gas is used (Attachment A - confidential).

7. The bypass stacks on the MBF's and the Drying Drums shall be utilized only during start-up, shut-down, and malfunction of the facility. [OAC 252:100-8-6(a)(1)]
Mr. Bennett stated that the bypass stacks are only used during SSM events which are attached (Attachment D - confidential).

8. All off-gases from the carbon black reactors at the facility shall be oxidized in either the thermal oxidizers and/or the waste gas combustors. The waste gas combustors may be taken off-

line during normal operation, however, waste gas shall be routed to the thermal oxidizers during these times. [OAC 252:100-8-6(a)(1)]

Mr. Bennett stated that currently the TOs are the primary combustors but the waste gas combustors are also used.

9. Except for periods of start-up, shut-down, or malfunction of air pollution control equipment, the permittee shall operate and maintain the thermal oxidizers and waste gas combustors as follows: [OAC 252:100-8-6(a)(3)(A)]

a. Operate at a temperature of 1,500 °F or greater when waste gas is being injected into the equipment as detailed by the control circuitry.
The Facility continuously measures the temperature of the TOs and waste gas combustor (Attachment C – confidential).

b. The temperature shall be monitored and recorded continuously using a thermocouple (at least four times an hour and averaged over the hour with a minimum data availability of 90 percent).
Mr. Bennett stated that readings are taken every minute and averaged over the hour.

c. The residence time of the stack gases shall be at least 1 (one) second.
The previous FCE noted that the stack gases flow at approximately 100 feet per second and the stack is 150 feet high. Therefore, the residence time is approximately 1.5 seconds.

d. Proper operation of the thermocouple shall be verified annually by an instrument which is calibrated annually.
CCC submitted the calibration records as required (Attachment H – confidential).

e. The thermal oxidizers shall be operated in conjunction with the reactors while the reactors are producing carbon black. This requires oil to be injected into the reactors.
According to Mr. Bennett, the TOs and WGCs are operated when the reactors are producing carbon black. When the TOs are not operated during production, those events are reported as deviations and/or excess emissions. These events are also reported in the SSM reports

f. The thermal oxidizers shall only be fueled with pipeline quality natural gas.
As required, CCC submitted a natural gas bill showing pipeline-grade natural gas is used (Attachment A - confidential).

10. All air discharges from the dryer, bagging operation, screening operation, and associated conveying equipment shall be processed by a baghouse or an equivalent PM emissions control device with a design efficiency of 98% or more. The permittee shall maintain accessible monitoring equipment to verify the pressure drop across the baghouse.
[OAC 252:100-8-6(a)(3)(A&B)]

Mr. Bennett stated that the Facility uses a baghouse with at least 98% efficiency to control PM emissions. A pressure drop monitor is used to ensure proper function of the baghouse.

11. The permittee shall maintain and operate the particulate monitoring/sensing devices installed on the exhaust stream associated with each of the facility's main bag filter identified below:

EUG 2 Main Bag Filters (MBF)

EU	Point	Name
MBF #1	EPN #3 (N/C)	Unit No. 1
MBF #2	EPN #7 (N/C)	Unit No. 2
MBF #3	EPN #11 (N/C)	Unit No. 3
MBF #4	EPN #20 (N/C)	Unit No. 4

N/C – Normally Closed

a. The permittee shall operate the particulate monitoring/sensing devices continuously except during periods of device maintenance, calibration, testing, malfunction and/or failure. Individual monitoring/sensing devices shall not be required to be operate during periods when production within the identified unit is ceased (i.e., oil is not injected into the unit reactor). The continuous particulate monitoring/sensing devices shall be operated in the normal operating range recommended by the manufacturer.
According to Mr. Bennett, the particulate monitoring/sensing devices are operated continuously and within the normal operating range recommended by the manufacturer.

b. If a continuous particulate monitoring/sensing device signals that there has been an exceedance of a particulate level, immediate action shall be taken to determine and isolate the source until repairs can be made.
Mr. Bennett stated that an alarm goes off and the unit is shut down. The filter is then replaced.

c. The permittee shall keep particulate monitoring/sensing device replacements on hand for any equipment failures.
Mr. Bennett stated that the Facility keeps replacement sensors and bags on-site.

d. The permittee shall keep and maintain the Baghouse Recordkeeping Plan for each of the MBFs as set forth in Exhibit 3 of Consent Order 06-365 issued on November 29, 2006.
(1). Identity of the baghouse (by production unit and type),
(2). Type of bagfilters utilized and manufacturer specifications for each type of bagfilter,
(3). Date(s) on which maintenance is performed, type of maintenance, and reason for performing the maintenance, and
(4). General means of disposing of used bagfilters.
Such records shall be recorded in electronic format and/or in hard copy and shall be maintained at the facility for a minimum of two years following the date of recording and shall be provided to regulatory personnel upon request.
Mr. Bennett stated that the Facility follows the plan. The bag filters are replaced when they start leaking and the bags are sent to the landfill for disposal.

12. The permittee shall take all reasonable precautions to minimize emissions of fugitive dust and prevent visible fugitive dust emissions from crossing the boundary of the property on which those emissions originated. These actions shall include, but not be limited to: [OAC 252:100-29]

a. Maintain and repair Unit No. 4 Bagfilter System so as to prevent excessive temperatures.
Mr. Bennett stated that temperatures are monitored through the whole process. If an issue occurs, the unit is shut down to find issue, which is usually a hole in the bag.

b. Conduct product loading operations in such a manner so as to minimize, to the extent possible, any fugitive emissions of carbon black.
Mr. Bennett stated that the Facility makes sure nothing leaks and change bags when they reach their life expectancy.

c. Promptly clean any and all areas within the facility where carbon black has been spilled, blown, deposited, or accumulated so as to prevent the same from becoming wind-borne and/or air-borne.
Mr. Bennett stated that the areas are cleaned daily and the sweeper runs all day.

d. Conduct removal and replacement of bagfilters in such a manner that the replaced bagfilters, when sufficient space is available within the baghouse compartment, are placed into sealed containers (or wetted down when insufficient space is not available internally of the compartment) prior to removal of the bagfilter from said compartment.
Mr. Bennett noted that baghouse filters are removed within the baghouse compartment and placed into trash bags and sealed containers.

e. Institute a routine inspection program whereby all high speed processing equipment, including all large blowers, within the facility are inspected and lubricated according to a schedule of inspection.
Mr. Bennett stated that someone conducts a vibration check each day and high speed equipment is lubricated daily.

f. Implement the Inspection/Fugitive Dust Plan as set forth in Exhibit 2 of Consent Order 06-365 issued on November 29, 2006.
Compliance with the previously listed requirements of Specific Condition 12 ensures the Facility's compliance with this condition.

13. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) Subpart YY including but not limited to: [40 CFR 63.1100 through 63.1114]

a. §63.1100 Applicability.
b. §63.1101 Definitions.
c. §63.1102 Compliance schedule.
d. §63.1103 Source category-specific applicability, definitions, and requirements.
e. §63.1104 Process vents from continuous unit operations: applicability assessment procedures and methods.
f. §63.1107 Equipment leaks: applicability assessment procedures and methods.
g. §63.1108 Compliance with standards and operation and maintenance requirements.
h. §63.1109 Recordkeeping requirements.
i. §63.1110 Reporting requirements.
j. §63.1111 Startup, shutdown, and malfunction.

k. §63.1112 Extension of compliance, and performance test, monitoring, recordkeeping and reporting waivers and alternatives.
l. §63.1113 Procedures for approval of alternative means of emission limitation.
m. §63.1114 Implementation and enforcement.

See the *State/Federal Regulator Applicability* section for more information.

14. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) for Stationary Reciprocating Internal Combustion Engines (RICE), Subpart ZZZZ, for each affected engine, including but not limited to: [40 CFR 63.6580 through 63.6675]

What This Subpart Covers
a. § 63.6580 What is the purpose of subpart ZZZZ?
b. § 63.6585 Am I subject to this subpart?
c. § 63.6590 What parts of my plant does this subpart cover?
d. § 63.6595 When do I have to comply with this subpart?
Emission and Operating Limitations
e. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
General Compliance Requirements
f. § 63.6605 What are my general requirements for complying with this subpart?
Testing and Initial Compliance Requirements
g. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
h. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?
Continuous Compliance Requirements
i. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
Notifications, Reports, and Records
j. § 63.6650 What reports must I submit and when?
k. § 63.6655 What records must I keep?
l. § 63.6660 In what form and how long must I keep my records?
Other Requirements and Information
m. § 63.6665 What parts of the General Provisions apply to me?
n. § 63.6670 Who implements and enforces this subpart?
o. § 63.6675 What definitions apply to this subpart?

See the *State/Federal Regulator Applicability* section for more information.

15. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) for Industrial, Commercial and Institutional Boilers and Process Heaters, Subpart DDDDD, for each affected boiler, including but not limited to: [40 CFR 63.7480 through 63.7575]

a. §63.7480 What is the purpose of this subpart?
b. §63.7485 Am I subject to this subpart?

c. §63.7490 What is the affected source of this subpart?
d. §63.7491 Are any boilers or process heaters not subject to this subpart?
e. §63.7495 When do I have to comply with this subpart?
f. §63.7499 What are the subcategories of boilers and process heaters?
g. §63.7500 What emission limitations, work practice standards, and operating limits must I meet?
h. §63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.
i. §63.7505 What are my general requirements for complying with this subpart?
j. §63.7510 What are my initial compliance requirements and by what date must I conduct them?
k. §63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
l. §63.7520 What stack tests and procedures must I use?
m. §63.7521 What fuel analyses, fuel specification, and procedures must I use?
n. §63.7522 Can I use emissions averaging to comply with this subpart?
o. §63.7525 What are my monitoring, installation, operation, and maintenance requirements?
p. §63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?
q. §63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?
r. §63.7535 Is there a minimum amount of monitoring data I must obtain?
s. §63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?
t. §63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?
u. §63.7545 What notifications must I submit and when?
v. §63.7550 What reports must I submit and when?
w. §63.7555 What records must I keep?
x. §63.7560 In what form and how long must I keep my records?
y. §63.7565 What parts of the General Provisions apply to me?
z. §63.7570 Who implements and enforces this subpart?
aa. §63.7575 What definitions apply to this subpart?

See the *State/Federal Regulator Applicability* section for more information.

16. The permittee shall maintain records of operations as listed below. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6 (a)(3)(B)]

a. Continuously-recorded temperature in the thermal oxidizers and waste gas combustors as required by Specific Condition 9(b).
b. Records of annual calibrations of the thermocouple verification device and annual verification of the thermocouple as required by Specific Condition 9(d).
c. Operation and maintenance of the thermal oxidizers.

d. All occasions when operating temperatures of the thermal oxidizers and waste gas combustors fall outside the established temperature range.
e. Weekly records of average sulfur content by weight of oils processed.
f. Weekly records of oil feed to all units, fuel sulfur content of all feedstock, sulfur content of the products, and daily carbon black production in each unit. These records shall be used to calculate an average hourly SO_2 emission rate for each operating week.
g. Total natural gas usage for each boiler (natural gas consumed is metered and stored on Data Historian, hours are monitored and third-party services the boilers).
h. Total amount of Carbon Black Oil used (monthly and 12 month rolling total).
i. Operation, maintenance, and inspection logs for the grandfathered emission units in EUG1.
j. Records required by NESHAP Subparts YY, ZZZZ, and DDDDD.
k. Records required by Specific Condition No. 11.

Records except for the engine and boiler maintenance records are stored confidentially.

17. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations which qualify as Trivial Activities.

[OAC 252:100-8-6 (a)(3)(B)]

a. For fuel storage/dispensing equipment operated solely for facility owned vehicles: Records of the type and amount of fuel dispensed (annual) via purchasing records as dispensing stations do not have flow meters.
b. For fluid storage tanks with a capacity of less than 39,894 gallons and a true vapor pressure less than 1.5 psia: Records of the capacity of the tanks and the contents.
c. For activities (except for trivial activities) that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: The type of activity and the amount of emissions or a surrogate measure of the activity (annual).

Mr. Bennett stated there are no tanks that qualify under this condition.

18. Notwithstanding the issuance date of the original Title V permit (April 21, 2000), there is hereby established an alternative date of July 31st for Annual Compliance Certification and Semi-annual Reporting submittal purposes. Pursuant to such alternative date, the permittee shall submit to the Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit no later than 30 days after July 31st of each year, exept for 2013. For the year of 2013, the permittee shall submit to the Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit no later than 30 days after both April 21st and July 31st to ensure no annual compliance certification is submitted longer than a year.

[OAC 252:100-8-6 (c)(5)(A) & (D)]

Please see the *ACC/SAR* section above.

19. No later than 30 days after each six (6) month period, after the alternative date of July 31st, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly

identified in the report. As in Specific Condition No. 16, permittee shall assure that no semi-annual report is filed longer than 6 months. [OAC 252:100-8-6 (a)(3)(C)(i) and (ii)]
Please see the *ACC/SAR* section above.

20. Since Emission points TO #1, TO #2, and TO #3 each has emissions greater than 500 TPY, the permittee shall conduct performance testing on these stacks once a year and submit a written report of the results to the AQD.

A. Performance testing by the permittee shall use the following test methods specified in 40 CFR Part 60.
   - Method 1: Sample and Velocity Traverses for Stationary Sources.
   - Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate.
   - Method 3: Gas Analysis for Carbon Dioxide, Excess Air, and Dry Molecular Weight.
   - Method 4: Determination of Moisture in Stack Gases.
   - Method 5: Determination of PM Emissions from Stationary Sources.
   - Method 6C: Determination of SO_2 Emissions from Stationary Sources.
   - Method 7E: Determination of NOx Emissions from Stationary Sources.
   - Method 10: Determination of CO Emissions from Stationary Sources.
   - Method 25A: Determination of VOC Emissions from Stationary Sources.
   - Method 202: Determination of Condensable Particulate Matter.

B. A copy of the test plan shall be provided to AQD at least 30 days prior to each test date.

C. Performance testing shall be conducted while each reactor is operating within 10% of the rate at which operating permit authorization will be sought.

Test results from the annual stack test conducted on TO #4 on November 14, 2017, showed 56.11 lb/hr for PM10, which is over the 54.34 lb/hr PM limit established in Specific Condition EUG 9. Therefore TO #4 failed for PM in the 2017 test and considered a violation of Permit No. 2004-302-TVR (M-2) Specific Condition 1. EUG 9.

21. The thermal oxidizers (TOx) are subject to Compliance Assurance Monitoring (CAM) and shall comply with all applicable requirements and shall perform monitoring as approved below.

	Indicator No. 1
I. Indicator Measurement Approach	Operating temperature of the combustion chamber. **The Facility continuously monitors the temperature of the TO combustion chambers.**
	Combustion chamber temperature is measured continuously with at minimum a Type K thermocouple. **According to calibration records, the Facility uses a Type B thermocouple.**
II. Indicator Range	The indicator range for the combustion chamber temperature is between 1,700 °F and 2,100 °F with a minimum accuracy of ± 3%. **According to calibration records, the Facility's thermocouple temperature range is 212 – 2,400 °F.**
III. Performance Criteria A.Data Representativeness	The TOx shall consist of at minimum a Type K thermocouple which shall be maintained in accordance with the manufacturer's specifications.

B. Verification of Operational Status	**According to calibration records, the Facility keeps the Type B thermocouple in good working order.**
C.QA/QC Practices and Criteria	TOx in operation-verified by daily checks. Alarms are also in place to indicate any malfunction in proper operation of the unit. **The Facility conducts verified daily checks and that alarms are in place to indicate if a malfunction occurs.**
D. Monitoring Frequency	Checks and maintenance on the TOx will be conducted in accordance with the manufacturer's recommendations. A quality improvement plan (QIP) shall be developed and implemented for each thermal oxidizer if there are six excursions, within a six month period, from the established temperature range in Specific Condition 9 or from the established opacity limitation of 20 percent. Excursions do not include periods of startup or shutdown. The QIP shall comply with the requirements of § 64.8(b) through (e). **The Facility keeps an SSM plan. The Facility keeps a record of all SSM events.**
Data Collection Procedures	Temperature is measured continuously. **The Facility continuously monitors the temperature of the TO combustion chambers.**
Averaging Period	Temperature data are recorded continuously on Data Historian. Excursions trigger alarms up to and including shutdown of all operations. Corrective action, logging and reporting in semiannual report will be triggered if controlled shutdowns fail in the event of an excursion or during a Force Majeure event. **The Facility keeps a record of all SSM events.**
	None, not to exceed min. and max.

22. This permit supersedes Permit No. 2004-302-TVR (M-1), which is now cancelled.
There are no compliance requirements with this condition.

Exit Interview/Summary
Based on the information provided or obtained during this evaluation, two violations were noted.

- Specific Condition 20 requires stack testing on TO #1, TO #2, and TO #4 once a year. Test results from the annual stack test conducted on TO #4 on November 14, 2017, showed 56.11 lb/hr for PM10, which is over the 54.34 lb/hr PM limit established in Specific Condition EUG 9. Therefore TO #4 failed for PM in the 2017 test and considered a violation of Permit No. 2004-302-TVR (M-2) Specific Condition 1. EUG 9.
- The Facility failed to submit a SAR form for the time covering the period for August 1, 2016 through January 31, 2017 and August 1, 2017 through January 31, 2018, which is a violation of Permit No. 2004-302-TVR (M-2) Specific Condition 19.

One area of concern was noted:

- An area of concern is that the engine run hour records for 2017 and 2018 submitted in ACCs have the same start date, but different start hours for each engine between the two

records. None of the engines operated more than 500 hours, but the Facility should ensure that records are properly kept.

Attachments

1. Permit No. 2004-302-TVR (M-2)
2. 2015-2017 emissions inventory summary

Confidential attachments

A. Natural gas bill
B. LDAR records
C. TOX temperature records
D. SSM records
E. Engine run hours
F. Boiler plates
G. Sulfur content of oil and carbon black
H. Calibration records

Not confidential attachments

- Engine maintenance records
- Boiler inspections

ATTACHMENT 1

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM **March 29, 2016**

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager

THROUGH: Phil Martin, P.E., Engineering Manager, Existing Source Permits Section

THROUGH: Peer Review

FROM: Jian Yue, P.E., New Source Permits Section

SUBJECT: Evaluation of Permit Application No. **2004-302-TVR (M-2)**
Continental Carbon Corporation
Carbon Black Production Facility
Facility ID: 333
Section 10, T25N, R2E
Ponca City, Kay County, Oklahoma
Located 1 mile south of the Intersection of SH60 and SH177

SECTION I. INTRODUCTION

Continental Carbon requested a minor modification to their Title V renewal operating permit for the Ponca City Carbon Black Production facility (SIC code 2895) for the like kind replacement of Boiler #1. This facility is currently operating under Permit No. 2004-302-TVR (M-1) issued on September 17, 2015, which authorized the replacement of Boiler #2.

This facility is an existing PSD facility and the boiler replacement is a physical change, therefore, PSD applicability was reviewed. The first step is to determine if the project emission increases are significant (exceeding PSD significance levels), based on the "actual-to-potential" test for the replacement boiler and any possible associated emission increases. For the replacement boiler, emission increases are its potential emissions as listed below:

	NOx		CO		VOC	
EU	**lb/hr**	**TPY**	**lb/hr**	**TPY**	**lb/hr**	**TPY**
Boiler #1	0.63	2.76	0.53	2.32	0.03	0.15

The primary purposes of the steam boiler is to provide safe heat to facility water lines in winter to prevent freezing and to add heat to the trace coils which surround the mixing boxes in wet process. The heat for the mixing boxes is to keep them at 212 F° or less due to cooling created in the mix box by the drafting of air from the drum exhaust fan. By using multi-helix pin mixers the powdered carbon black is mechanically moved into the feed side of the mixer, becomes agitated and forms pills of density of 27-29 lb/ft^3 whereas powdered carbon black has a density of 2 lb/ft^3. This serves two purposes, one to control dust by making the "pill", and secondly makes transport and handling much simpler as a pill rather than a powder which creates fugitive dust problems.

Without steam to heat and keep the mix boxes warmed, there would be a dust problem as pills don't like to form when the material is cool. Boiler #1 is operated alternatively with Boiler #2, the only time that both boilers would be "off line" would be during a total plant power failure, in which case, the plant would be shut down. Therefore, no increased up time is expected with the replacement and no associated emissions are expected from this replacement.

Since emissions from the replacement boiler are less than 5 TPY for each regulated pollutants and no associated emissions are expected, this boiler replacement is not subject to further PSD review and qualifies for a Tier I minor modification.

SECTION II. PROCESS DESCRIPTION

Furnace carbon black is a large volume commodity chemical used primarily in the tire and rubber industry. Carbon black is produced from a high molecular weight, low vapor pressure, highly aromatic liquid hydrocarbon feedstock and other high carbon, low sulfur hydrocarbon products of commerce. This material is a by-product of the catalytic cracking of gas oil in a crude oil petroleum refinery and other suitable sources of feedstocks. A large portion of the feedstock for the permittee's plant is supplied by the nearby ConocoPhillips Ponca City refinery. This material is shipped to the site via pipeline. The remainder of the feedstock is purchased from other refineries and is delivered to Ponca City by tank truck or rail.

Feedstock oil from crude oil refineries is received into a 65,000-barrel insulated cone roof tank. Fresh oil, received by pipeline from the nearby Conoco refinery or other delivery is blended with the oil in inventory upon receipt. Material from this tank is circulated through a heater on each production unit in service and returned to the tank through an internal mixing nozzle which provides for uniform feed quality. The oil from this tank is transferred to the individual unit charge tanks or directly to the operating units, as required.

During cold reactor start-up operations, the reactor is initially heated by combustion of natural gas using a rose-bud burner tip to light the reactor's main natural gas ring burner, then slowly bring up the operating temperature on a DCS controlled schedule to avoid spaulding or steam bursting from entrapped moisture in the brick and refractory. During cold start-up, the exterior burner emissions are released via the one online Main Bag Filter (MBF) compartment and the MBF Vent Stack (N/C). Once the reactor is sufficiently warm, the reactor ring burner is utilized for approximately four to twenty-four hours as the reactor temperature continues to increase to operating temperatures. During this time, no feedstock oil is injected into the reactor; therefore, only warm carbon dioxide, water, air and products of natural gas combustion are within the reactor. When the reactors reach appropriate temperature, the feedstock oil flows to the reactor burners from the outlet of the oil preheater where the oil is partially combusted at 2,800 °F to 3500 °F. During the period prior to feedstock oil injection and the start-up of production, the thermal oxidizer (TOx) is in a warm-up period to 1500 °F on natural gas only. At the same time, valves are opened to the thermal oxidizer and closed to the main bag filter vent stack. Uncontrolled emissions due to oil charge into the reactor will not reach the atmosphere through the main bag filter stacks on Units 1, 2, 3, and 4 with the minimal amount of time between the closing of the control knife gate valves cycling. However, due to unit configuration and equipment operation, uncontrolled emissions due to the initial venting of waste gas from the

Reactors main bag filter stack during system start-up may occur briefly prior to the complete manual opening of the thermal oxidizer control device valve and closing of the main bag filter stack as the byproduct gases have to reach sufficient Btu value for the induction and sustained combustion of the byproduct gases in the TOx. There are no emissions associated with shutdown of a reactor except under Force Majeure conditions such as listed in the SSMP (i.e., power failures or loss of control equipment due to the safety shutdown systems on the associated TOx).

During this incomplete or partial combustion of oils and production of carbon black, potassium carbonate (K_2CO_3) is injected at the reactor face plate in parts per million quantities as a product structure control additive. Also during this process, carbon black and other products of incomplete combustion, including reduced sulfur compounds, are formed.

During reactor maintenance, castable and/or brick refractory may be replaced in one or more of the sections of each reactor. The normal change –out time is 8 to 10 hours, and then the unit is heated back to temperature in accordance to the manufacturers' recommendations.

The carbon-laden gases from the reactor are cooled to about 1,000-1,500°F by water quenching in the "quench" section of the reactor. These quenched flue gases then pass through the "residence section" and then into the oil- and air-pre-heaters, as previously described. The partially cooled flue gases (500°F) then go through the main bag filters (MBFs) for carbon black recovery. The MBFs collect 99.9 percent of the carbon black from the gases. No carbon black production occurs during warm-up or emergencies when there is no oil in the reactor, hence the combustion gases are not carbon black-laden, nor do the gases have significant concentrations of VOC, CO, H_2S, CS_2, HCN, SO_2 and COS at these times.

While in production, about 20 percent of the filtered gases from the MBFs go to the waste gas combustor (WGC) and then to the rotary dryers for drying the pelletized carbon black. The filtered waste gas has a Btu content of about 60-80 Btu/Scf. While low in Btu content, the gas is easily combusted without supplemental fuel. The combustion efficiency in the WGCs is 98%. The combustion/dryer system on each unit uses the waste gases from its respective MBFs as the primary source of fuel. The combusted gases go around the outside of the rotating drying drum, then through the inside of the rotating drum, countercurrent to the carbon black flow. The gases, plus water vapor from the dried pellets and any airborne particulate matter due to carbon black movement, then go to the associated thermal oxidizer for the unit, where the gases undergo a second high temperature combustion process. All old stacks associated with the dryers were removed before 2004. The surplus waste gas (about 80 percent of the total reactor wasted gas) not used in the waste gas combustors goes to the respective thermal oxidizers. The combustion zone temperature for the thermal oxidizers ranges from 1,500°F to 2,100°F, depending on the specific product being made.

The carbon black is collected in the MBFs on all units and is pneumatically conveyed to accumulator cyclones or associated Process Bag Filter (PBF) which separates the conveying gases from the carbon black. The conveying gases exit the cyclone and return to the inlet of the MBFs. The pneumatic conveying system is a closed-loop system. The system is heated and must remain void of oxygen for safe operation. No air leakage is permitted. The deposits of

carbon black, from the cyclones (or PBF), flow by gravity through air locks into the unit's accumulator tank.

The carbon black then enters a stage called the "Wet Process," where the loose, fine carbon black is consolidated into pellets. Particulate matter scavenged from process conveying equipment that is part of the dust management system is collected in the cleanup bag filter (CUBF) that cold air exhausts through the CUBF stack while collected product empties into the pneumatic line. Carbon black flows through a pulverizer into the accumulator tank and then into the pelletizer, where the carbon black is mixed with an equal weight of water and wetting agents and formed into small pellets. These wet pellets drop through a chute into one end of a rotary drying drum.

The dried carbon black pellets leaving the dryer drum are lifted by a bucket elevator system to the top of closed storage tanks. Pellets are discharged from the bucket elevator across screen separators. These separators discharge the product carbon black pellets into closed screw systems, leading into the storage tanks. Potential emissions from conveying equipment are controlled by the unit's CUBF.

The carbon black storage tanks are vented through a single stack fabric particulate filter. Carbon black is gravity-loaded from the storage tanks into hopper cars, specialty bulk containers for bulk or semi-bulk shipments, or is bagged by existing valve bag packers for shipment in boxcars or trailers. Existing shipping dock cleanup bag filters service all 4 bulk loading sites. With the addition of the new clean-up bag filter (applied in application 98-176-TV(M-3)(PSD)) now, the existing system serves units 1 & 2, and the newer system serves units 3 & 4. The new system is a duplicate of the existing system.

Scheduled maintenance of all bag filters is performed periodically. Procedures are in place at the facility to minimize fugitive carbon black released during the change out in each bag compartment; however, it is assumed that an insignificant amount of carbon black is released to the atmosphere during these operations.

SECTION III. EQUIPMENT

EUG 1 Gas-Fired Boilers

EU	Point	Manufacturer	MMBTUH	Serial #	Const. Date
Boiler #1	EPN #1	Superior	6.28	18066	2015
Boiler #2	EPN #2	Superior	6.28	17817	2015

EUG 2 Main Bag Filters (MBF)

EU	Point	Name
MBF #1	EPN #3 (N/C)	Unit No. 1
MBF #2	EPN #7 (N/C)	Unit No. 2
MBF #3	EPN #11 (N/C)	Unit No. 3
MBF #4	EPN #20 (N/C)	Unit No. 4

N/C – Normally Closed

EUG 3 Exhaust Bag Filters (EBF) Vent Stacks Removed from Service.

EUG 4 Cleanup Bag Filters (CUBF)

EU	Point	Name
CBF #1	EPN #10	Unit No. 1
CBF #2	EPN #6	Unit No. 2
CBF #3	EPN #14	Unit No. 3
CBF #4	EPN #24	Unit No. 4
CBF #5	EPN #23	Shipping Dock
CBF #6	EPN #34	Shipping Dock
CBF #7	EPN#35	Shipping Dept. #2

EUG 5 Thermal Oxidizers (TO)

EU	Point	Name	MMBTUH	Const. Date
TO #1	EPN #25	Thermal Oxidizer No. 1 (for Production Units 1 & 2)	147	1997
TO #2	EPN #26	Thermal Oxidizer No. 2 (for Production Unit #3)	87	1997
TO #4	EPN #22	Unit No. 4 Thermal Oxidizer	93	1990

EUG 6 (Dryers) Waste Gas Combustors

These dryers no longer have stacks to vent outside. All emissions from these dryers are routed to each associated thermal oxidizer.

EUG 7 Feedstock Oil Tanks

EU	Point	Contents	Barrels	Gallons	Const. Date
FS Tanks	EPN #18a	Carbon Black Oil	5,000	210,000	1954
	EPN #18b	Carbon Black Oil	5,000	210,000	1954
	EPN #18c	Carbon Black Oil	5,000	210,000	1954
	EPN #18d	Carbon Black Oil	65,000	2,730,000	1966
	EPN #18e	Carbon Black Oil	500	21,000	1954
	EPN #18f	Carbon Black Oil	500	21,000	1954

EUG 8 Reactors

EU	Point	Unit No.	Const. Date
RX #11	EPN #3, 25	Unit No. 1 - Reactor #11	1955
RX #12	EPN #3, 25	Unit No. 1 - Reactor #12	1955
RX #21	EPN #7, 25	Unit No. 2 - Reactor #21	1955
RX #31	EPN #11, 13, 26	Unit No. 3 - Reactor #31	1959
RX #32	EPN #11, 13, 26	Unit No. 3 - Reactor #32	1959
RX #41	EPN #22	Unit No. 4 - Reactor #4	1991

EUG 9 Waste Gas Combustors (WGC)

EU	Points	Unit No.	MMBTUH	Const. Date
WGC #11	EPN #25	Unit No. 1	19.3	1954
WGC #12	EPN #25	Unit No. 1	19.3	1954
WGC #22	EPN #25	Unit No. 2	19.3	1954
WGC #31	EPN #13, 26	Unit No. 3	19.3	1959
WGC #32	EPN #13, 26	Unit No. 3	19.3	1959
WGC #4	EPN #22	Unit No. 4	24.75	1991

EUG 10 Carbon Black Tanks

EU	Point	Contents
CB Tanks	TK 11	Carbon Black
	TK 12	Carbon Black
	TK 13	Carbon Black
	TK 14-15	Carbon Black
	TK 16-17	Carbon Black
	TK 21-22	Carbon Black
	TK 23	Carbon Black
	TK 31	Carbon Black
	TK 32	Carbon Black
	TK 33-36	Carbon Black
	TK 41-44, OQ4	Carbon Black
	TK 45-49	Carbon Black
	TK OQ1	Carbon Black
	TK OQ2	Carbon Black
	TK OQ3	Carbon Black
	SB Tanks	Carbon Black

EUG 11 Natural Gas Fired Emergency Generators

Generators	Model	Serial #	HP	Manufactured Date
Unit 1&2	4569080100/4.3 L Chevy	2079790	63	10/26/2004
Unit 3	Generac 4129890100/4.3 L Chevy	2077604	63	6/10/2004
Unit 4	5373280100/7.1 L Ford	2083539	110	7/1/2005
Pond 1	QT05554KW SNA/Ford Windsor LVL 351	4886956	86	9/1/2007

Stack Parameters

EPN	Height (feet)	Diameter (inches)	Flow (ACFM)	Velocity (FPS)	Temperature (°F)
1	18	12	4,610	97.8	800
2	18	12	4,610	97.8	800
3 (N/C)	61	39	39,284	76.6	420
10	38	12	5,000	106.1	70
6	38	12	5,000	106.1	70
14	21	12	5,000	106.1	70
18	Tanks				
19	22	12	124	2.6	800
21 (N/C)	10	36	0	0	900
22	213	84	369,200	159.9	1,700
24	35	12	5,000	106.1	70
23	30	12	5,000	106.1	70
25	150	138 OD	606,000	109.0	1,700
26	150	114 OD	381,000	104.0	1,700
CBF #7,					
29 (N/C)	20	24	0	0	420
30 (N/C)	4	14	0	0	400
34	30	12	5,000	106.1	70

(N/C) – Normally Closed and routed to Thermal Oxidizer #1/#2 (EPN 25) or Thermal Oxidizer #3 (EPN 26).

SECTION IV. EMISSIONS

Regular Operation Emissions

Emission estimates for the boilers fired with natural gas are based on emission factors for uncontrolled small boilers (<100 MMBTUH) in AP-42 (7/98), Table 1.4-1, and firing rate of 6,276 scf/hr.

The annual emissions from the reactors and associated equipment are based upon the carbon black production design capacity of all four units and seven reactors:

Unit No.	Carbon Black Production Design Capacity (million lb/yr)
1	80
2	100
3	80
4	100
Total	**360**

SO_2 emissions from combustion of the feedstock in the reactors, to produce carbon black, have been estimated using an estimated 30% retention of sulfur in the carbon black (the balance of the sulfur - 70% becomes SO_2), as determined from previous stack tests, reactor yield, capacity, and sulfur content of the feedstock. SO_2 emissions from combustion of the feedstock in the reactors of units 1, 2, and 3, to fire the reactors, have been estimated using AP-42 (1/95), Section 1.3 and a maximum sulfur content of 3.0% by weight.

PM emissions from thermal oxidizers are based on stack tests conducted by METCO Environmental on May 1, 2, and 5, 2007 and a safety factor of 35%. Other PM emissions have been estimated assuming a 99.9% control efficiency for the baghouses.

NO_X emissions from the reactors are based upon stack testing, reactor yield, and waste gas distribution. NO_X emissions from the thermal oxidizers are based on NO_X production in the reactors and combustion of the waste gas generated based on stack testing.

Reactor VOC emissions are based on distribution of the waste gases, stack testing of the waste gases, and are proportional to the capacity of the reactors. Emissions from the waste gas combustors are based on the BTU content of the waste gas and AP-42 (7/98), Chapter 1.4, Tables 1.4-1 and 2. Estimated emissions for the tanks are based on AP-42 (1/95), Chapter 7.1.

Fugitive VOC emissions are assumed to be insignificant because the only organic compound handled besides carbon black is the feedstock oil which has a very low vapor pressure and there are not many components at the facility.

Emissions from the gas-fired emission generators are estimated using emission factors in AP-42 (7/00), Table 3.2-3 and 500 hours per year operation.

TOTAL POTENTIAL CRITERIA POLLUTANT EMISSIONS

EU	NO_x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Boiler #1	0.63	2.76	0.53	2.32	0.03	0.15
Boiler #2	0.63	2.76	0.53	2.32	0.03	0.15
CBF #1	----	----	----	----	----	----
CBF #2	----	----	----	----	----	----
CBF #3	----	----	----	----	----	----
CBF #4	----	----	----	----	----	----
CBF #5	----	----	----	----	----	----
CBF#6	----	----	----	----	----	----
CBF#7						
TO #1	270.05	1,134.22	474.42	1,994.97	16.43	69.09
TO #2	142.07	596.70	310.94	1,307.22	13.88	58.34
TO #4	177.60	745.92	388.68	1,634.03	17.35	72.92
CB Tanks	----	----	----	----	----	----
FS Tanks	----	----	----	----	6.90	29.12
Pre-heater	0.60	2.52	0.12	0.50	0.03	0.13
Emergency Generators	1.81	0.10	3.06	0.17	0.03	0.002
TOTAL	**593.33**	**2,484.76**	**1,178.22**	**4,941.31**	**54.72**	**230.06**

TOTAL POTENTIAL CRITERIA POLLUTANT EMISSIONS

EU	SO_2		PM		$PM_{10}/PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Boiler #1	0.01	0.02	0.05	0.21	0.05	0.21
Boiler #2	0.01	0.02	0.05	0.21	0.05	0.21
CBF #1	----	----	1.00	1.75	1.00	1.75
CBF #2	----	----	1.00	1.75	1.00	1.75
CBF #3	----	----	1.00	1.75	1.00	1.75
CBF #4	----	----	1.00	1.75	1.00	1.75
CBF #5	----	----	1.00	4.20	1.00	4.20
CBF#6	----	----	1.00	4.20	1.00	4.20
CBF#7	----	----	1.00	4.20	1.00	4.20
TO #1	2,567.74	8,088.62	45.40	190.68	40.97	172.07
TO #2	1,194.48	3,762.89	44.47	186.77	41.96	176.23
TO #4	1,493.23	4,703.67	54.34	228.23	37.60	157.92
CB Tanks	----	----	6.27	26.49	6.27	26.49
FS Tanks	----	----	0	0	0	0
Pre-heater	0.01	0.01	0.03	0.11	0.03	0.11
Emergency Generators	----	----	----	----	----	----
TOTAL	**5,255.48**	**16,555.2**	**157.61**	**652.30**	**133.93**	**552.84**

POTENTIAL NON-CRITERIA AIR POLLUTANTS

EU	TRS		H_2S		CS_2		COS	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TO 1	20.30	63.96	14.39	45.30	5.41	17.05	0.05	0.16
TO 2	9.93	31.28	6.31	19.86	3.55	11.18	0.07	0.24
TO 4	12.41	39.09	7.88	24.83	4.44	13.97	0.09	0.29
TOTAL	**42.19**	**132.88**	**28.58**	**89.99**	**13.40**	**42.20**	**0.21**	**2.14**

Start-up, Shut-down, and Maintenance Emissions

1. Reactor Preheat Emissions

During cold reactor start-up operations, the reactor is initially heated by combustion of natural gas using a rose-bud burner tip to light the reactor's main natural gas ring burner, then slowly bring up the operating temperature on a DCS controlled schedule to avoid spaulding or steam bursting from entrapped moisture in the brick and refractory. During cold start-up, the reactor ring burner emissions are vented through the main bag filter stack. The applicant estimated 210 start-ups per year. This number is based on a conservative estimation of cold start-ups at the facility following reactor down time from historical records. It was estimated ring burners operate for an average of 16 hours per start-up and consume approximately 0.048 mmscf of natural gas per start-up (50 ft^3/min). Emissions are calculated based on the time, natural gas usage, and emission factors from AP-42 (7/98), Section 1.4.

Sources	NOx	CO	VOC	PM_{10}	SO_2
	TPY	TPY	TPY	TPY	TPY
Reactors (7)	0.50	0.42	0.03	0.04	0.003

2. Unit No. 4 Reactors Start-up

Units 1-4 currently have system configurations and equipment design that allows the opening of the associated thermal oxidizer vent and simultaneous closing of the main bag filter vent during start-up without venting any waste gas as oil is introduced to the reactors. Valves are pneumatically manipulated, during start-up, to introduce reactor emissions to the thermal oxidizer, it is possible that a small amount of reactor waste gas is vented through the main bag filter vent to the atmosphere. The waste gas emissions have a reactor yield similar to when the reactor is operating at less than normal reactor levels of feedstock oil. Assuming normal feedstock levels in the reactor allows for conservatively high emission estimations. Actual operational scenarios will likely have very low levels of feedstock oil in the reactor prior to normal operation of the thermal oxidizer. Regular emissions are based on stack test conducted in 1989, and 2004. In 2007, the ODEQ committed to increase of PM emissions based on Yr. 2007 base case and adding 35% for what was to represent the back-half of the EPA Reference Method 5 sampling train. Previous emissions were scaled to accommodate the increased production over the years as well as adjustment for feedstock sulfur content. Start-up emissions are based on number of startups and the duration of each startup discussed above.

Pollutants	Reactor 4 Yield 100 MMlbs/yr Tread	Start-up Emissions
	lb/hr	TPY
VOC	868.10	0.22
CO	19,452.75	4.86
H_2S	295.58	0.07
CS_2	166.37	0.04
COS	3.51	0.001
SO_2	8.98	0.002
NOx	68.67	0.02

3. Bag Filter Replacement

During bag filter maintenance, bag filters are replaced by compartment. There are 56 bag filter compartments at the site. Each compartment will normally not be replaced more than 2 times per year though due to poor seams stitching, fabric failure, cuff failure, the rate of changes can occur more often. Procedures are in place to minimize fugitive carbon black from escaping to the atmosphere; however, for purposes of permitting, a conservative estimate of 15 lbs of carbon black is estimated to be lost during bag filter replacement at each compartment. PM_{10} emissions are calculated as 0.84 TPY(PM_{10}(TPY)=56 compartment/replacement x 2 replacements/yr x 15 lb PM_{10}/compartment x ton/2000lb). The facility uses a procedure to minimize fugitive emissions. Filter bags are placed in garbage bags inside the compartment (space permitting) prior to being removed from the compartment. Watering of compartment filters is also used to control dusts if the bags are unable to be bagged internally to lower fugitives as well.

4. Maintenance Painting

Periodically, the facility is painted as a general maintenance practice. Surface coating is performed using rollers, brushes or pads, and compressed air spray equipment. A maximum of 200 gallons per year or 50 gallons per day is utilized. Surface coating for maintenance purposes such as roll/brush/pad coating, painting with aerosol cans, spray airless, and conventional spray painting are considered trivial activities per Appendix J OAC 252: 100.

5. Summary of Startup and Maintenance Emissions

Sources	NOx	CO	VOC	PM_{10}	SO_2
	TPY	TPY	TPY	TPY	TPY
Reactors (7) Preheat Emissions	0.50	0.42	0.03	0.04	0.003
Unit 4 Reactor Startup Emissions	0.02	4.86	0.22	-	0.002
Reactor Refractory Curing	0.25	0.21	0.01	0.02	0.002
Bag Filter Replacement	-	-	-	0.84	-
Total	**0.77**	**5.49**	**0.26**	**0.90**	**0.007**

Since the startup emissions are less than regular operation emissions as listed in the latter section, it is not necessary to include them in specific conditions. They are addressed here for reference purposes.

Green House Gas Emissions

Continental Carbon has provided CO_2e emission estimates for this facility. Based on a review of these estimates, it has been determined that this facility is a major stationary source for greenhouse gas emissions.

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Appropriate recordkeeping of activities indicated below with "*" is specified in the Specific Conditions.

1. * Emissions from fuel storage/dispensing equipment operated solely for facility owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period. The facility has four diesel tanks and one gasoline tank that are used to store and dispense fuel to equipment operated solely for facility owned vehicles. Average monthly throughput does not exceed 2,175 gallons/day.

2. * Emissions from storage tanks constructed with a capacity less than 39,894 gallons which store VOC with a vapor pressure less than 1.5 psia at maximum storage temperature. The facility currently has two 21,000 gallon tanks used to store oil used to make carbon black and others may be used in the future. These tanks were last used in 1984.

3. Cold degreasing operations utilizing solvents that are denser than air. There are two parts washers located at the facility which use a solvent (Safety Kleen) that is denser than air.

4. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant. Each of the carbon black storage tanks emissions (vents are equipped with fabric filters to prevent fugitives, reactor preheat and startup emissions, reactor refractory curing, each of the four emergency generators, and bag filter replacement emissions are less than 5 TPY of respective pollutants. Other activities may be identified in the future.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]

Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This Subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emission Inventory, and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories have been submitted and fees paid for the past years.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the "Insignificant Activities" or "Trivial Activities" thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule

Emissions limitations have been incorporated from the previously issued permits and updated to reflect current operations.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for affirmative defense, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter) [Applicable]
252:100-19-4, Allowable particulate matter emission rates from fuel-burning units. This section specifies a particulate matter (PM) emissions limitation of 0.6 lb/MMBTU from existing fuel-

burning equipment with a rated heat input of 10 MMBTUH or less. AP-42 (7/98), Table 1.4-2, lists the total PM emissions for natural gas to be 7.6 lb/MMft^3 or about 0.0076 lb/MMBTU. The permit requires the use of natural gas for the boilers and the sections of the reactors which combust natural gas to heat the feedstock to produce carbon black to ensure compliance with Subchapter 19.
252:100-19-12, Allowable particulate matter emission rates from directly fired fuel-burning units and industrial processes. For process rates up to 60,000 lb/hr (30 TPH), the emission rate in pounds per hour (E) is not to exceed the rate calculated using the process weight rate in tons per hour (P) and the formula in Appendix G ($E = 4.10*P^{(0.67)}$). For process rates greater than 60,000 lb/hr (30 TPH), the emission rate in pounds per hour (E) is not to exceed the rate calculated using the process weight rate in tons per hour (P) and the formula in Appendix G ($E = 55.0*P^{(0.11)}-40$).

The emission point from the thermal oxidizer combines emissions from thermal oxidizer, reactor section used to convert the feedstock into carbon black, main bag filters, and waste gas combustor. Therefore, Total allowable PM is the sum of the allowable for each directly fired fuel-burning unit and industrial process.

The following table indicates that permitted emissions are in compliance with allowable emissions.

Point	Controlled Processes	Weight Rate	Allowable PM Emissions	Permitted PM Emissions
		TPH	lb/hr	lb/hr
EPN #25	Reactors 1&2	11.3	20.76	45.4
	MBF #1 & #2	11.3	20.76	
	WGC #11, #12, & #22	11.3	20.76	
	TO #1	11.3	20.76	
	Total		83.04	
EPN #26	Reactor 3	5.0	12.0	44.47
	MBF #3	5.0	12.0	
	WGC #31 & #32	5.0	12.0	
	TO #2	5.0	12.0	
	Total		48	
EPN #22	Reactor 4	6.3	14.0	54.34
	MBF #4	6.3	14.0	
	WGC #4	6.3	14.0	
	TO #3	6.3	14.0	
	Total		56	

OAC 252:100-25 (Visible Emissions and Particulate Matter) [Applicable]
No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity.

The boilers burn natural gas. When burning natural gas, there is very little possibility of the opacity standards being exceeded.

The use of PM sensors has removed the need to perform daily Method 22's, as previously required and removed from the permit by Consent Order #06-365. If visible emissions are detected, the permit will require opacity readings to be conducted using Method 9. The permit will also include reduced visible emission observation requirements if no visible emissions are detected or if visible emissions observations using Method 9 are below the 20 % opacity limitation.

OAC 252:100-29 (Fugitive Dust) [Applicable]
No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards.

Continental Carbon is currently required to do the following so as to minimize fugitive emissions of carbon black: 1) maintain and repair Unit No. 4 bagfilter system to prevent excessive temperatures (this is no longer a concern due to plant operation changes on controls), 2) conduct product loading operations in such a manner to minimize any fugitive emissions of carbon black, 3) promptly clean any and all areas within the facility where carbon black has been spilled, blown, deposited, or accumulated, 4) place bagfilters into sealed containers, when possible, prior to removal or replacement of bagfilters from their compartments, and 5) conduct a routine inspection program wherein all high speed processing equipment within the facility is inspected and lubricated. Further, Continental Carbon has installed a pulse jet bagfilter system within the shipping department loading area at the facility to further control the release of fugitive carbon black emissions.

OAC 252:100-31 (Sulfur Compounds) [Applicable]
Part 2 (b) specifies that emissions of hydrogen sulfide from any new or existing source shall not result in a 24-hour average ambient air concentration of H_2S at any given point of 0.2 ppm or greater. Screen3 modeling resulted in a concentration of 0.0001 ppm H_2S.
Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input. The section of the reactor in Unit 4 which combusts natural gas to heat the feedstock to produce carbon black is subject to this standard. The AP-42 (7/98), Chapter 1.4, Table 1.4-2 emission factor of 0.6 pound of SO_2 per million cubic feet equates to approximately 0.0006 lb/MMBTU which is in compliance with this subchapter. The permit requires the fuel-burning section of the reactor of Unit 4 to be fired with commercial grade natural gas.

OAC 252:100-37 (Volatile Organic Compounds) [Part 7 is Applicable]
Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. All of the tanks store liquids with vapor pressures less than 1.5 psia except for the gasoline tank which has a capacity of 300 gallons.

Part 3 requires VOC loading facilities with a throughput equal to or less than 40,000 gallons per day to be equipped with a system for submerged filling of tank trucks or trailers if the capacity of the vehicle is greater than 200 gallons. This facility does not have the physical equipment (loading arm and pump) to conduct this type of loading and is not subject to this requirement.
Part 5 limits the VOC content of coatings. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment which is exempt.
Part 7 requires fuel-burning equipment to be operated and maintained so as to minimize emissions. Temperature and available air must be sufficient to provide essentially complete combustion.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained unless a modification is approved by the Director. Since no AOC has been designated anywhere in the state, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-7	Permits for Minor Facilities	not in source category
OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-33	Nitrogen Dioxides	not in source category
OAC 252:100-35	Carbon Monoxide	not in source category
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Landfills	not in source category

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]

Total potential emissions for NO_X, CO, PM and SO_2 are greater than the threshold level of 100 TPY for carbon black manufacturing. Any future emission increases must be evaluated for PSD if they exceed a significance level (40 TPY NO_X, 100 TPY CO, and 40 TPY VOC).

NSPS, 40 CFR Part 60 [Not Applicable]

Subpart A, General Control Device Standards. The standards contained within Section 60.18 for control devices are not applicable to the thermal oxidizers since they receive no emissions from any equipment subject to NSPS.

Subparts D, Da, Electric Utility Steam Generating Units. The boilers at this facility are not affected units because they are not electric utility steam generating units as defined by Subparts D and Da.

Subparts Db, Dc, Industrial-Commercial-Institutional Steam Generating Units. The boilers at this facility are not affected units because they have heat capacities less than 10 MMBTUH, applicability thresholds of these Subparts.

Subparts E, Ea, and O, Incinerators, Municipal Waste Combustors, and Sewage Treatment Plants. This facility does not combust solid waste, tires, fuel derived from tires, or sewage sludge.

Subparts K, Ka, Kb, VOL Storage Vessels. The carbon black oil tanks at this site are not subject because the were constructed prior to the effective date of Subpart K (June 11, 1973).

Subpart BBB, Rubber Tire Manufacturing Industry. This facility manufactures carbon black and is not a tire manufacturer.

Subpart IIII (Stationary Compression Ignition Internal Combustion Engines) affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator. No applicable equipment were identified at the site.

Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI-ICE). This subpart was published in the Federal Register on January 18, 2008. It promulgates emission standards for new SI engines ordered after June 12, 2006, that are manufactured after certain dates, and for SI engines modified or reconstructed after June 12, 2006. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based

on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. Engine manufacturers are required to certify certain engines to meet the emission standards and may voluntarily certify other engines. An initial notification is required only for owners and operators of engines greater than 500 HP that are non-certified. Emergency engines will be required to be equipped with a non-resettable hour meter and are limited to 100 hours per year of operation excluding use in an emergency (the length of operation and the reason the engine was in operation must be recorded).
There are four emergency generators at the facility and the following table lists their horse powers and manufactured dates.

Generators	Model	Serial #	HP	Manufactured Date
Unit 1&2	4569080100/4.3 L Chevy	2079790	63	10/26/2004
Unit 3	Generac 4129890100/4.3 L Chevy	2077604	63	6/10/2004
Unit 4	5373280100/7.1 L Ford	2083539	110	7/1/2005
Pond 1	QT05554KW SNA/Ford Windsor LVL 351	4886956	86	9/1/2007

Since each generator has a maximum engine power less than 500-hp and was manufactured before July 1, 2008, they are not subject to this subpart.

NESHAP, 40 CFR Part 61 [Not Applicable]
There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, benzene, coke oven emissions, mercury, radionuclides or vinyl chloride.
Subparts J, BB, Equipment Leaks of Benzene and Benzene Transfer operations. No benzene has been detected in any stream at the facility.

NESHAP, 40 CFR Part 63 [Subparts YY & ZZZZ Applicable]
Subpart YY, National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards. Pursuant to §63.1103(f), Part 63, Subpart YY is applicable to each new and existing carbon black production process unit located at a major source, as defined in section 112(a) of the ACT.

Carbon black production unit means the equipment assembled and connected by hard-piping or duct work to process raw materials to manufacture, store, and transport a carbon black product. For the purpose of this subpart, a carbon black production process unit includes reactors and associated operations; associated recovery devices; and any feed, intermediate and product storage vessels, product transfer racks, and connected ducts and piping. It also includes pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, instrumentation systems, and control devices or systems.

Table 8 to §63.1103(f) specifies the carbon black production control standards applicability for existing and new sources. The control standards are only applicable to a carbon black production main unit filter process vent. Main unit filter is defined in §63.1103(f)(2) as the filter that separates the carbon black from the tail gas. Process vent is defined in §63.1101 as the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream

from a unit operation within a source category subject to this subpart. The definition of process vent further excludes gas streams transferred for fuel value (i.e., net positive heating value), use, reuse, or sale for fuel value, use, or reuse.

The gas stream sent to the waste gas combustor qualifies for the exemption for gas streams transferred for fuel value and is not subject to the control requirements of Table 8 to §63.1103(f). The entry point to the thermal oxidizers meets the definition of a "process vent" and must meet the requirements in Table 8 of §63.1103(f)(3): reduce emissions of total HAP by 98 weight-percent or to a concentration of 20 parts per million by volume, whichever is less stringent, by venting emissions through a closed vent system to any combination of control devices meeting the requirements of §63.982(a)(2).

Performance testing of the facility's thermal oxidizers was conducted in 2004 as required by Permit No. 98-176-TV (PSD) (M-2). Such testing included the determination of H_2S, COS, and CS_2 pursuant to Method 15 of 40 CFR Part 60, Appendix A, as well as a determination of non-methane, non-ethane total gaseous organic concentrations using a flame ionization analyzer pursuant to Method 25A of 40 CFR Part 60, Appendix A. A copy of the stack test results (as well as the test methods employed) was previously submitted to DEQ by letter dated September 17, 2004. The results indicated emissions H_2S, COS, CS_2, and non-methane hydrocarbon from each thermal oxidizer were below 20 ppmv even if it is assumed that all NMHC are HAP. No process changes have been made since the testing that would impact the resulting emissions. The testing was conducted at maximum operating conditions, which in all instances represented operating conditions exceeding those associated with normal source operation.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects any existing, new, or reconstructed stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. Of the four emergency generators, Unit Pond 1 is a new unit (constructed after 6/12/2006), and the only requirement is to comply with NSPS Subpart JJJJ requirements. However, the unit was manufactured before July 1, 2008 and is not subject to NSPS Subpart JJJJ, thus there is no applicable requirements for this unit.
Units 1-4 fall under existing units (constructed before 6/12/2006) located at an area HAP source category and shall comply with applicable emission limitations and operating limitations no later than October 19, 2013. Initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart shall be conducted within 180 days after the compliance date. Specific requirements in §63.6603 are listed in the following table.

Engine Category	Requirements From Table 2d to Subpart ZZZZ of Part 63
Emergency stationary CI RICE and black start stationary CI RICE.	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Subpart DDDDD, Industrial, Commercial and Institutional Boilers and Process Heaters. On January 31, 2013, the EPA took final action on its reconsideration of certain issues in the emission standards for the control of HAP from industrial, commercial, and institutional boilers and process heaters at major sources of HAP. The compliance dates for the rule are January 31, 2016, for existing sources and, January 31, 2013, or upon startup, whichever is later, for new sources.

A boiler or process heater is new or reconstructed if construction or reconstruction of the boiler or process heater commenced on or after June 4, 2010.

Unit(s) designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels.

Boilers and process heaters in the units designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour must complete a tune-up every 2 years as specified in §63.7540. Units in the gas 1 subcategories will conduct these tune-ups as a work practice for all regulated emissions under Subpart DDDDD. Boilers and process heaters in the units designed to burn gas 1 fuels subcategory are not subject to the emission limits in Tables 1 and 2 or 11 through 13 of Subpart DDDDD, or the operating limits in Table 4 of Subpart DDDDD.

Existing boilers and process heaters located at a major source facility, not including limited use units must have a one-time energy assessment performed by a qualified energy assessor.

Boilers #1 and #2 at this facility are subject to this subpart as the units are designed to burn gas 1 fuels subcategory with a heat input capacity greater than 5 million Btu per hour and less than 10 million Btu per hour and shall comply with all applicable requirements.

CAM, 40 CFR Part 64 [Applicable]
Compliance Assurance Monitoring (CAM), as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY

The thermal oxidizers at the facility are used to control emissions of CO, PM, VOCs, and other toxic sulfur compounds. The CAM plan for the thermal oxidizers requires continuous monitoring and recording of the temperature of the combustion chamber of the thermal oxidizers, during operation of the furnaces, with a tungsten matrix. The temperature of the combustion chamber, measured at the outlet of the combustion chamber, of the thermal oxidizer is to be maintained between 1,700 °F and 2,100 °F with a minimum accuracy of ± 3% and safety required minimum internal heat value of 1,500 °F derived by burning of natural gas for actual introduction of the byproduct gases in order to sustain combustion. The permit requires these conditions to be met, annual calibration of the thermocouple, and a daily visible emission observation of the stack. The permit will also require a quality improvement plan (QIP) to be developed and implemented if there are six excursions, within six months, from the established temperature range or visible emission limitation for any of the thermal oxidizers.

The waste gas combustors (driers) are also used to control emissions from the carbon black furnaces. However, emissions from the driers are exhausted through the thermal oxidizers and PM emissions from the individual driers are below 100 TPY. Therefore, no CAM requirements are applicable to these emission units but the permit will require that the driers temperature be monitored and recorded and that they are also maintained between 1,700 °F and 2,100 °F and safety required minimum internal heat value of 1500 °F derived by burning of natural gas for actual introduction of the byproduct gases in order to sustain combustion.

The baghouses at the facility used to capture the products are used to control PM emissions (except for the Shipping Department CUBFs and any portable vacuum systems for cleaning of the facility). However, emissions from the baghouses are exhausted through the thermal oxidizers and PM emissions from the individual baghouses are below 100 TPY. Therefore, no CAM requirements are applicable to these control devices at this time.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
This source does not store more than the applicable threshold of any of the regulated substances. Therefore, this facility is not subject to this standard. More information on this federal program is available at the web site: *http://www.epa.gov/ceppo/.*

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart A and F Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.
This facility does not utilize any Class I & II substances.

SECTION VIII. COMPLIANCE

Tier Classification and Public Review

This application has been determined to be a Tier I based on the request for a minor modification to a Part 70 operating permit.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the real property.

The proposed permit was sent to EPA for a 45-day review. No comments were received from the EPA

Inspection

On March 11, 2014, Alex McCumber and Preston Loving of Air Quality performed a compliance inspection and Janet Handwerk, Corporate Environmental Health and Safety Specialist, along with Todd Miller, Director – Safety, Health, and Environmental Affairs, joined the inspection via speaker phone, representing Continental Carbon. The inspection indicated some recordkeeping and reporting violations, but there are no active enforcement cases currently established for the facility

Fees Paid

Minor modification permit fee of $3,000.

SECTION IX. SUMMARY

The facility was constructed and operated as described in the permit application. Ambient air quality standards are not threatened at this site. There is no active Air Quality compliance or enforcement issues concerning this facility. Issuance of the operating permit is recommended.

PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS

Continental Carbon Corporation **Permit Number 2004-302-TVR (M-2)**
Carbon Black Production Facility

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on December 9, 2015. The Evaluation Memorandum dated March 29, 2016, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and limitations for each point: [OAC 252:100-8-6(a)(1)]

EUG 1: Emission units (EU) Boiler #1 and Boiler #2.

The boilers shall only be fueled with commercial grade natural gas.

EU	Point	Manufacturer	MMBTUH	Serial #	Const. Date
Boiler #1	EPN #1	Superior	6.28	18066	2015
Boiler #2	EPN #2	Superior	6.28	17817	2015

EU	NOx		CO		VOC		$PM_{10}/PM_{2.5}$	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Boiler #1	0.63	2.76	0.53	2.32	0.03	0.13	0.05	0.22
Boiler #2	0.63	2.76	0.53	2.32	0.03	0.13	0.05	0.22

EUG 2: Main Bag Filters (MBF), **EUG 3:** Exhaust Bag Filters (EBF), **EUG 6:** Dryers, **EUG 8:** Reactors, and **EUG 9:** Waste Gas Combustors (WGC) as identified below are all exhausted through **EUG 5:** Thermal Oxidizers. Estimated emissions from the thermal oxidizers are listed below.

Summary of Emission Sources

EUG 2 Main Bag Filters (MBF)

EU	Point	Name
MBF #1	EPN #3 (N/C)	Unit No. 1
MBF #2	EPN #7 (N/C)	Unit No. 2
MBF #3	EPN #11 (N/C)	Unit No. 3
MBF #4	EPN #20 (N/C)	Unit No. 4

N/C – Normally Closed

EUG 5 Thermal Oxidizers (TO)

EU	Point	Name	MMBTUH	Const. Date
TO #1	EPN #25	Thermal Oxidizer No. 1	147	1997
TO #2	EPN #26	Thermal Oxidizer No. 2	87	1997
TO #4	EPN #22	Unit No. 4 Thermal Oxidizer	93	1990

EUG 8 Reactors

EU	Point	Unit No.	Const. Date
RX #11	EPN #3, 25	Unit No. 1 - Reactor #11	1955
RX #12	EPN #3, 25	Unit No. 1 - Reactor #12	1955
RX #21	EPN #7, 25	Unit No. 2 - Reactor #21	1955
RX #31	EPN #11, 26	Unit No. 3 - Reactor #31	1959
RX #32	EPN #11, 26	Unit No. 3 - Reactor #32	1959
RX #4	EPN #22	Unit No. 4 - Reactor #4	1991

EUG 9 Waste Gas Combustors (WGC)

EU	Points	Unit No.	MMBTUH	Const. Date
WGC #11	EPN # 25	Unit No. 1	19.3	1954
WGC #12	EPN #25	Unit No. 1	19.3	1954
WGC #22	EPN # 25	Unit No. 2	19.3	1954
WGC #31	EPN #12, 13, 26	Unit No. 3	19.3	1959
WGC #32	EPN #12, 13, 26	Unit No. 3	19.3	1959
WGC #41	EPN #22	Unit No. 4	24.75	1991

Emission Limitations

Emission Unit		Permitted Emissions					
		NO_X	CO	VOC	PM	$PM_{10}/PM_{2.5}$	SO_2
TO #1	lb/hr	270	475	17	45.40	40.97	2,568
(Unit #1 & Unit #2)	TPY	1,135	1,995	69	190.68	172.07	8,089
TO #2	lb/hr	142	311	14	44.47	41.96	1,195
(Unit #3)	TPY	597	1,308	58	186.77	176.23	3,763
TO #4	lb/hr	178	389	18	54.34	37.60	1,494
(Unit #4)	TPY	746	1,634	73	228.23	157.92	4,704

Emission Unit	Permitted Emissions				
		TRS	H_2S	CS_2	COS
TO #1	lb/hr	20.30	14.39	5.41	0.05
Unit #1 & Unit #2	TPY	63.96	45.30	17.05	0.16
TO #2	lb/hr	9.93	6.31	3.55	0.07
Unit #3	TPY	31.28	19.86	11.18	0.24
TO #4	lb/hr	12.41	7.88	4.44	0.09
	TPY	39.09	24.83	13.97	0.29

EUG 4: Cleanup Bag Filters (CUBF) Emission limitations for EUs CBF #1, CBF #2, CBF #3, CBF #4, CBF #5.

EU	Point	Name
CBF #1	EPN #10	Unit No. 1
CBF #2	EPN #6	Unit No. 2
CBF #3	EPN #14	Unit No. 3
CBF #4	EPN #24	Unit No. 4
CBF #5	EPN #23	Shipping Dock
CBF #6	EPN #34	Shipping Dock
CBF #7	EPN #35	Shipping Dept. #2

Emission Unit	Permitted Emissions	
	Units	$PM/PM_{10}/PM_{2.5}$
CBF #1	lb/hr	1.00
	TPY	1.75
CBF #2	lb/hr	1.00
	TPY	1.75
CBF #3	lb/hr	1.00
	TPY	1.75
CBF #4	lb/hr	1.00
	TPY	1.75
CBF #5	lb/hr	1.00
	TPY	4.20
CBF #6	lb/hr	1.00
	TPY	4.20
CBF #7	lb/hr	1.00
	TPY	4.20

EUG 7: Feedstock Oil Tanks are grandfathered. There is no lb/hr or TPY emission limits applied to these units under Title V but they are limited to the existing equipment as they are.

EU	Point	Contents	Barrels	Gallons
FS Tanks	EPN #18a	Carbon Black Oil	5,000	210,000
	EPN #18b	Carbon Black Oil	5,000	210,000
	EPN #18c	Carbon Black Oil	5,000	210,000
	EPN #18d	Carbon Black Oil	65,000	2,730,000
	EPN #18e	Carbon Black Oil	500	21,000
	EPN #18f	Carbon Black Oil	500	21,000

EUG 10: Carbon Black Tanks emissions are considered insignificant based on existing equipment items and do not have a specific limitation.

EU	Point	Contents
CB Tanks	TK 11	Carbon Black
	TK 12	Carbon Black
	TK 13	Carbon Black
	TK 14-15	Carbon Black
	TK 16-17	Carbon Black
	TK 21-22	Carbon Black
	TK 23	Carbon Black
	TK 31	Carbon Black
	TK 32	Carbon Black
	TK 33-36	Carbon Black
	TK 41-44, OQ4	Carbon Black
	TK 45-49	Carbon Black
	TK OQ1	Carbon Black
	TK OQ2	Carbon Black
	TK OQ3	Carbon Black
	SB Tanks	Carbon Black

2. The facility shall be authorized to operate this facility continuously (24 hours per day, every day of the year). [OAC 252:100-8-6(a)(1)]

3. Each boiler in EUG 1 shall have a permanent identification plate attached which shows the make, model number, and serial number. [OAC 252:100-45]

4. The sulfur content of carbon black feedstock oils processed at the facility shall not exceed 3.0% by weight on an annual average basis. No carbon black feedstock oil shall be processed which exceeds 4.0% sulfur content by weight. [OAC 252:100-8-6(a)(1)]

5. At least once during every operating day, the permittee shall take a sample of the sulfur content of feedstock oils being processed and the resulting carbon black product to determine a weekly average sulfur content. The composite results from these measurements shall be used in conjunction with reactor feed rates to calculate an average hourly sulfur dioxide emissions rate. [OAC 252:100-8-6(a)(1)]

6. The carbon black reactors associated with Units No. 1, 2, and 3 shall be fired with pipeline grade natural gas or feedstock oil meeting the conditions of Specific Condition 4. The section of the carbon black reactor, associated with Unit No. 4, which is used to provide heat to the reactor to convert the feedstock into carbon black, shall be fired with pipeline-grade natural gas. All supplemental fuel supplied to the waste gas combustors and thermal oxidizers shall also be pipeline-grade natural gas. [OAC 252:100-31]

7. The bypass stacks on the MBF's and the Drying Drums shall be utilized only during start-up, shut-down, and malfunction of the facility. [OAC 252:100-8-6(a)(1)]

8. All off-gases from the carbon black reactors at the facility shall be oxidized in either the thermal oxidizers and/or the waste gas combustors. The waste gas combustors may be taken off-line during normal operation, however, waste gas shall be routed to the thermal oxidizers during these times. [OAC 252:100-8-6(a)(1)]

9. Except for periods of start-up, shut-down, or malfunction of air pollution control equipment, the permittee shall operate and maintain the thermal oxidizers and waste gas combustors as follows: [OAC 252:100-8-6(a)(3)(A)]

a. Operate at a temperature of 1,500 °F or greater when waste gas is being injected into the equipment as detailed by the control circuitry.
b. The temperature shall be monitored and recorded continuously using a thermocouple (at least four times an hour and averaged over the hour with a minimum data availability of 90 percent).
c. The residence time of the stack gases shall be at least 1 (one) second.
d. Proper operation of the thermocouple shall be verified annually by an instrument which is calibrated annually.
e. The thermal oxidizers shall be operated in conjunction with the reactors while the reactors are producing carbon black. This requires oil to be injected into the reactors.
f. The thermal oxidizers shall only be fueled with pipeline quality natural gas.

10. All air discharges from the dryer, bagging operation, screening operation, and associated conveying equipment shall be processed by a baghouse or an equivalent PM emissions control device with a design efficiency of 98% or more. The permittee shall maintain accessible monitoring equipment to verify the pressure drop across the baghouse. [OAC 252:100-8-6(a)(3)(A&B)]

11. The permittee shall maintain and operate the particulate monitoring/sensing devices installed on the exhaust stream associated with each of the facility's main bag filter identified below:

EUG 2 Main Bag Filters (MBF)

EU	Point	Name
MBF #1	EPN #3 (N/C)	Unit No. 1
MBF #2	EPN #7 (N/C)	Unit No. 2
MBF #3	EPN #11 (N/C)	Unit No. 3
MBF #4	EPN #20 (N/C)	Unit No. 4

N/C – Normally Closed

a. The permittee shall operate the particulate monitoring/sensing devices continuously except during periods of device maintenance, calibration, testing, malfunction and/or failure. Individual monitoring/sensing devices shall not be required to be operate during periods when production within the identified unit is ceased (i.e., oil is not injected into the unit reactor). The continuous particulate monitoring/sensing devices shall be operated in the normal operating range recommended by the manufacturer.
b. If a continuous particulate monitoring/sensing device signals that there has been an exceedance of a particulate level, immediate action shall be taken to determine and isolate the source until repairs can be made.
c. The permittee shall keep particulate monitoring/sensing device replacements on hand for any equipment failures.
d. The permittee shall keep and maintain the Baghouse Recordkeeping Plan for each of the MBFs as set forth in Exhibit 3 of Consent Order 06-365 issued on November 29, 2006.
(1). Identity of the baghouse (by production unit and type),
(2). Type of bagfilters utilized and manufacturer specifications for each type of bagfilter,
(3). Date(s) on which maintenance is performed, type of maintenance, and reason for performing the maintenance, and
(4). General means of disposing of used bagfilters.
Such records shall be recorded in electronic format and/or in hard copy and shall be maintained at the facility for a minimum of two years following the date of recording and shall be provided to regulatory personnel upon request.

12. The permittee shall take all reasonable precautions to minimize emissions of fugitive dust and prevent visible fugitive dust emissions from crossing the boundary of the property on which those emissions originated. These actions shall include, but not be limited to: [OAC 252:100-29]

a. Maintain and repair Unit No. 4 Bagfilter System so as to prevent excessive temperatures.
b. Conduct product loading operations in such a manner so as to minimize, to the extent possible, any fugitive emissions of carbon black.
c. Promptly clean any and all areas within the facility where carbon black has been spilled, blown, deposited, or accumulated so as to prevent the same from becoming wind-borne and/or air-borne.

d. Conduct removal and replacement of bagfilters in such a manner that the replaced bagfilters, when sufficient space is available within the baghouse compartment, are placed into sealed containers (or wetted down when insufficient space is not available internally of the compartment) prior to removal of the bagfilter from said compartment.
e. Institute a routine inspection program whereby all high speed processing equipment, including all large blowers, within the facility are inspected and lubricated according to a schedule of inspection.
f. Implement the Inspection/Fugitive Dust Plan as set forth in Exhibit 2 of Consent Order 06-365 issued on November 29, 2006.

13. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) Subpart YY including but not limited to: [40 CFR 63.1100 through 63.1114]

a. §63.1100 Applicability.
b. §63.1101 Definitions.
c. §63.1102 Compliance schedule.
d. §63.1103 Source category-specific applicability, definitions, and requirements.
e. §63.1104 Process vents from continuous unit operations: applicability assessment procedures and methods.
f. §63.1107 Equipment leaks: applicability assessment procedures and methods.
g. §63.1108 Compliance with standards and operation and maintenance requirements.
h. §63.1109 Recordkeeping requirements.
i. §63.1110 Reporting requirements.
j. §63.1111 Startup, shutdown, and malfunction.
k. §63.1112 Extension of compliance, and performance test, monitoring, recordkeeping and reporting waivers and alternatives.
l. §63.1113 Procedures for approval of alternative means of emission limitation.
m. §63.1114 Implementation and enforcement.

14. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) for Stationary Reciprocating Internal Combustion Engines (RICE), Subpart ZZZZ, for each affected engine, including but not limited to: [40 CFR 63.6580 through 63.6675]

<u>What This Subpart Covers</u>
a. § 63.6580 What is the purpose of subpart ZZZZ?
b. § 63.6585 Am I subject to this subpart?
c. § 63.6590 What parts of my plant does this subpart cover?
d. § 63.6595 When do I have to comply with this subpart?
<u>Emission and Operating Limitations</u>
e. § 63.6603 What emission limitations and operating limitations must I meet if I own or operate an existing stationary RICE located at an area source of HAP emissions?
<u>General Compliance Requirements</u>
f. § 63.6605 What are my general requirements for complying with this subpart?

Testing and Initial Compliance Requirements

g. § 63.6625 What are my monitoring, installation, operation, and maintenance requirements?
h. § 63.6630 How do I demonstrate initial compliance with the emission limitations and operating limitations?

Continuous Compliance Requirements

i. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?

Notifications, Reports, and Records

j. § 63.6650 What reports must I submit and when?
k. § 63.6655 What records must I keep?
l. § 63.6660 In what form and how long must I keep my records?

Other Requirements and Information

m. § 63.6665 What parts of the General Provisions apply to me?
n. § 63.6670 Who implements and enforces this subpart?
o. § 63.6675 What definitions apply to this subpart?

15. The permittee shall comply with all applicable requirements of the NESHAP (40 CFR Part 63) for Industrial, Commercial and Institutional Boilers and Process Heaters, Subpart DDDDD, for each affected boiler, including but not limited to: [40 CFR 63.7480 through 63.7575]

a. §63.7480 What is the purpose of this subpart?
b. §63.7485 Am I subject to this subpart?
c. §63.7490 What is the affected source of this subpart?
d. §63.7491 Are any boilers or process heaters not subject to this subpart?
e. §63.7495 When do I have to comply with this subpart?
f. §63.7499 What are the subcategories of boilers and process heaters?
g. §63.7500 What emission limitations, work practice standards, and operating limits must I meet?
h. §63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.
i. §63.7505 What are my general requirements for complying with this subpart?
j. §63.7510 What are my initial compliance requirements and by what date must I conduct them?
k. §63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
l. §63.7520 What stack tests and procedures must I use?
m. §63.7521 What fuel analyses, fuel specification, and procedures must I use?
n. §63.7522 Can I use emissions averaging to comply with this subpart?
o. §63.7525 What are my monitoring, installation, operation, and maintenance requirements?
p. §63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?
q. §63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?
r. §63.7535 Is there a minimum amount of monitoring data I must obtain?
s. §63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?

t. §63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?
u. §63.7545 What notifications must I submit and when?
v. §63.7550 What reports must I submit and when?
w. §63.7555 What records must I keep?
x. §63.7560 In what form and how long must I keep my records?
y. §63.7565 What parts of the General Provisions apply to me?
z. §63.7570 Who implements and enforces this subpart?
aa. §63.7575 What definitions apply to this subpart?

16. The permittee shall maintain records of operations as listed below. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6 (a)(3)(B)]

a. Continuously-recorded temperature in the thermal oxidizers and waste gas combustors as required by Specific Condition 9(b).
b. Records of annual calibrations of the thermocouple verification device and annual verification of the thermocouple as required by Specific Condition 9(d).
c. Operation and maintenance of the thermal oxidizers.
d. All occasions when operating temperatures of the thermal oxidizers and waste gas combustors fall outside the established temperature range.
e. Weekly records of average sulfur content by weight of oils processed.
f. Weekly records of oil feed to all units, fuel sulfur content of all feedstock, sulfur content of the products, and daily carbon black production in each unit. These records shall be used to calculate an average hourly SO_2 emission rate for each operating week.
g. Total natural gas usage for each boiler (natural gas consumed is metered and stored on Data Historian, hours are monitored and third-party services the boilers).
h. Total amount of Carbon Black Oil used (monthly and 12 month rolling total).
i. Operation, maintenance, and inspection logs for the grandfathered emission units in EUG1.
j. Records required by NESHAP Subparts YY, ZZZZ, and DDDDD.
k. Records required by Specific Condition No. 11.

17. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations which qualify as Trivial Activities. [OAC 252:100-8-6 (a)(3)(B)]

a. For fuel storage/dispensing equipment operated solely for facility owned vehicles: Records of the type and amount of fuel dispensed (annual) via purchasing records as dispensing stations do not have flow meters.
b. For fluid storage tanks with a capacity of less than 39,894 gallons and a true vapor pressure less than 1.5 psia: Records of the capacity of the tanks and the contents.
c. For activities (except for trivial activities) that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: The type of activity and the amount of emissions or a surrogate measure of the activity (annual).

18. Notwithstanding the issuance date of the original Title V permit (April 21, 2000), there is hereby established an alternative date of July 31st for Annual Compliance Certification and Semi-annual Reporting submittal purposes. Pursuant to such alternative date, the permittee shall submit to the Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit no later than 30 days after July 31st of each year, exept for 2013. For the year of 2013, the permittee shall submit to the Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit no later than 30 days after both April 21st and July 31st to ensure no annual compliance certification is submitted longer than a year.

[OAC 252:100-8-6 (c)(5)(A) & (D)]

19. No later than 30 days after each six (6) month period, after the alternative date of July 31st, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. As in Specific Condition No. 16, permittee shall assure that no semi-annual report is filed longer than 6 months. [OAC 252:100-8-6 (a)(3)(C)(i) and (ii)]

20. Since Emission points TO #1, TO #2, and TO #3 each has emissions greater than 500 TPY, the permittee shall conduct performance testing on these stacks once a year and submit a written report of the results to the AQD.

A. Performance testing by the permittee shall use the following test methods specified in 40 CFR Part 60.

Method 1:	Sample and Velocity Traverses for Stationary Sources.
Method 2:	Determination of Stack Gas Velocity and Volumetric Flow Rate.
Method 3:	Gas Analysis for Carbon Dioxide, Excess Air, and Dry Molecular Weight.
Method 4:	Determination of Moisture in Stack Gases.
Method 5:	Determination of PM Emissions from Stationary Sources.
Method 6C:	Determination of SO_2 Emissions from Stationary Sources.
Method 7E:	Determination of NOx Emissions from Stationary Sources.
Method 10:	Determination of CO Emissions from Stationary Sources.
Method 25A:	Determination of VOC Emissions from Stationary Sources.
Method 202:	Determination of Condensable Particulate Matter.

B. A copy of the test plan shall be provided to AQD at least 30 days prior to each test date.

C. Performance testing shall be conducted while each reactor is operating within 10% of the rate at which operating permit authorization will be sought.

21. The thermal oxidizers (TOx) are subject to Compliance Assurance Monitoring (CAM) and shall comply with all applicable requirements and shall perform monitoring as approved below.

	Indicator No. 1
I. Indicator	Operating temperature of the combustion chamber.
Measurement Approach	Combustion chamber temperature is measured continuously with at minimum a Type K thermocouple.
II. Indicator Range	The indicator range for the combustion chamber temperature is between 1,700 °F and 2,100 °F with a minimum accuracy of ± 3%.
III. Performance Criteria A.Data Representativeness	The TOx shall consist of at minimum a Type K thermocouple which shall be maintained in accordance with the manufacturer's specifications.
B. Verification of Operational Status	TOx in operation-verified by daily checks. Alarms are also in place to indicate any malfunction in proper operation of the unit.
C.QA/QC Practices and Criteria	Checks and maintenance on the TOx will be conducted in accordance with the manufacturer's recommendations. A quality improvement plan (QIP) shall be developed and implemented for each thermal oxidizer if there are six excursions, within a six month period, from the established temperature range in Specific Condition 9 or from the established opacity limitation of 20 percent. Excursions do not include periods of startup or shutdown. The QIP shall comply with the requirements of § 64.8(b) through (e).
D. Monitoring Frequency	Temperature is measured continuously.
Data Collection Procedures	Temperature data are recorded continuously on Data Historian. Excursions trigger alarms up to and including shutdown of all operations. Corrective action, logging and reporting in semiannual report will be triggered if controlled shutdowns fail in the event of an excursion or during a Force Majeure event.
Averaging Period	None, not to exceed min. and max.

22. This permit supersedes Permit No. 2004-302-TVR (M-1), which is now cancelled.

PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2004-302-TVR (M-2)

Continental Carbon Company,

having complied with the requirements of the law, is hereby granted permission to operate the Carbon Black Production Facility at Ponca City, Section 10, T25N, R2E, Kay County, Oklahoma , subject to standard conditions dated July 21, 2009 and specific conditions, both attached.

This permit shall expire five (5) years from the 12/13/2012, the issuance date of Permit No. 2004-302-TVR, except as authorized under Section VIII of the Standard Conditions.

Phillip Fielder, P.E. **Date**

Permits and Engineering Group Manager

ATTACHMENT 2

2017 TEAM ID **333**

CONTINENTAL CARBON CO
CARBON BLACK PRODUCTION FACILITY

Tuesday, June 19, 2018
Updated: 4/4/2018

Address: 1006 E OAKLAND AVE
PONCA CITY OK 74601

Status: Active
Class: Major
SIC: 2895

Directions:
1 MI S on Hwy 177 of Jct of Hwy 60 and Hwy 177.

Responsible Official
Contact: BURTON, PHILLIP
Phone: (580) 763-8111
Fax: (580) 763-8150

County: KAY
Sub: NE/4
Section: 10
Town: 25N
Range: 2E

Latitude: 36.66616
Longitude: -97.07163

EMISSIONS

Pollutant	Estimated (tons)	Cas No.
* Carbon Monoxide	339.151	630080
* Nitrogen Oxides - NOx	930.882	
* PM-10 (All Particulate Matter <10	162.935	
* PM-2.5 (All Particulate Matter <2.5	162.935	
* Sulfur Oxides - SOx	2606.953	
* Total VOC	22.737	
Carbon disulfide	1.086	75150
Carbonyl sulfide	0.043	463581
Cyanide and Cyanide compounds	0.094	
Hydrogen sulfide	2.205	7783064

POINTS

Seq.	Name	Status	LATITUDE	LONGITUDE
1	Boiler #1	Operating	36.66151	-97.06980
2	Boiler #2	Operating	36.66146	-97.06981
3	CLEAN-UP BAG FILTER #1	Operating	36.66135	-97.07057
4	CLEAN-UP BAG FILTER #2	Operating	36.66133	-97.07028
5	CLEAN-UP BAG FILTER #3	Operating	36.66128	-97.06929
6	CLEAN-UP BAG FILTER #4	Operating	36.66145	-97.06883
7	Shipping Dept Clean-up Bagfiller 1	Operating	36.66084	-97.06982
8	Thermal Oxidizer #1	Operating	36.66153	-97.07050
9	Thermal Oxidizer #2	Operating	36.66153	-97.07036
10	Thermal Oxidizer #3	Operating	36.66131	-97.06862
11	CB Storage Tanks	Operating	36.66199	-97.07041
12	Feed stock tank 65,000 Bbl	Operating	36.66068	-97.06893
14	Shipping Dept Clean-up Bagfiller 2	Operating	36.66133	-97.06980
15	Sealed Bin Clean Up Bag Filter 1	Operating	36.66616	-97.07163
16	Production Unit 1	Operating	36.66616	-97.07163
17	Production Unit 2	Operating	36.66616	-97.07163
18	Production Unit 3	Operating	36.66616	-97.07163
19	Production Unit 4	Operating	36.66616	-97.07163
20	Production Unit 1 - Transition Events	Operating	36.66616	-97.07163
21	Production Unit 2 - Transition Events	Operating	36.66616	-97.07163
22	Production Unit 3 - Transition Events	Operating	36.66616	-97.07163
23	Production Unit 4 - Transition Events	Operating	36.66616	-97.07163
24	EBF 4	Operating	36.66616	-97.07163
25	Sealed Bin Clean-Up Bagfilter #2	Operating	36.66616	-97.07163

26	Transloading Clean-Up Bagfilter	Operating	36.66616	-97.07163	
27	Dryer 11 Firebox	Operating	36.66616	-97.07163	
28	Dryer 12 Firebox	Operating	36.66616	-97.07163	
29	Dryer 21 Firebox	Operating	36.66616	-97.07163	
30	Dryer 31 Firebox	Operating	36.66616	-97.07163	
31	Dryer 32 Firebox	Operating	36.66616	-97.07163	
32	Dryer 41 Firebox	Operating	36.66616	-97.07163	
33	Reactor 11	Operating	36.66616	-97.07163	
34	Reactor 12	Operating	36.66616	-97.07163	
35	Reactor 21	Operating	36.66616	-97.07163	
36	Reactor 31	Operating	36.66616	-97.07163	
37	Reactor 32	Operating	36.66616	-97.07163	
38	Reactor 41	Operating	36.66616	-97.07163	
39	Waste Gas Combuster 11	Operating	36.66616	-97.07163	
40	Waste Gas Combustor 12	Operating	36.66616	-97.07163	
41	Waste Gas Combustor 21	Operating	36.66616	-97.07163	
42	Waste Gas Combustor 31	Operating	36.66616	-97.07163	
43	Waste Gas Combustor 32	Operating	36.66616	-97.07163	
44	Waste Gas Combustor 41	Operating	36.66616	-97.07163	
45	Emergency Generator 1 and 2	Operating	36.66616	-97.07163	
46	Emergency Generator 3	Operating	36.66616	-97.07163	
47	Emergency Generator 4	Operating	36.66616	-97.07163	

PROCESSES

Seq#	Description	Annual Rate	Hourly	Units	Hr/Yr	Hr/Day	Day/Wk	SCC	Conf.
1	External Combustion Boilers, Ind	16.36	0.002	Million standard cubic feet	8424	24	7	10200603	N
2	External Combustion Boilers, Ind	15.86	0.002	Million standard cubic feet	8496	24	7	10200603	N
3	Industrial Processes, Chemical M	33263.44	4.845	Tons	6865	24	7	30100504	N
4	Industrial Processes, Chemical M	26529.33	4.566	Tons	5810	24	7	30100504	N
5	Industrial Processes, Chemical M	35197.51	5.046	Tons	6976	24	7	30100504	N
6	Industrial Processes, Chemical M	47586.89	7.209	Tons	4602	24	7	30100504	N
7	Industrial Processes, Chemical M	159.76	0.054	Tons	2944	24	7	30100508	N
8	Industrial Processes, Chemical M	25.58	0.004	Million standard cubic feet	6865	24	7	30100502	N
9	Industrial Processes, Chemical M	13.95	0.003	Million standard cubic feet	6976	24	7	30100502	N
10	Industrial Processes, Chemical M	36.99	0.008	1000 Standard Cubic feet	6601	24	7	30100502	N
11	Industrial Processes, Chemical M	89515.60	10.219	Tons	8760	24	7	30100599	N
12	Chemical Evaporation, Petroleum	71367881.00	8147	Gallons	8760	24	7	40400301	N
12	Chemical Evaporation, Petroleum	71367881.00	8147.02	Gallons	8760	24	7	40400302	N
14	Industrial Processes, Chemical M	495.61	0.223	Tons	2218	24	7	30100508	N
15	Industrial Processes, Chemical M	33.32	0.011	Tons	2944	23	7	30100504	N
16	Industrial Processes, Chemical M	7400098.00	#######	Gallons	6865	24	7	30100502	N
17	Industrial Processes, Chemical M	5901964.00	1015.8	Gallons	5810	24	7	30100502	N
18	Industrial Processes, Chemical M	10586627.00	1603.72	Gallons	6601	24	7	30100502	N
19	Industrial Processes, Chemical M	10586627.00	1603.72	Gallons	6601	24	7	30100502	N
20	Industrial Processes, Chemical M	129204.00	1615.04	Pounds	13	1	7	30100504	N
21	Industrial Processes, Chemical M	123283.00	1522.01	Pounds	14	1	7	30100504	N
22	Industrial Processes, Chemical M	161463.00	1681.91	Pounds	16	1	7	30100504	N
23	Industrial Processes, Chemical M	173.39	2408.23	Pounds	12	1	7	30100504	N

24	Industrial Processes, Chemical M	47586.89	7.21	Tons	6601	24	7	30100504	N
25	Industrial Processes, Chemical M	33.32	0.015	Tons	2218	24	7	30100504	N
26	Industrial Processes, Chemical M	33.32	0.318	Tons	2512	24	7	30100504	N
27	Industrial Processes, Chemical M	0.60	0	Million standard cubic feet	6865	24	7	30100504	N
28	Industrial Processes, Chemical M	0.47	0	Million standard cubic feet	6865	24	7	30100504	N
29	Industrial Processes, Chemical M	0.48	0	Million standard cubic feet	5810	24	7	30100504	N
30	Industrial Processes, Chemical M	1.10	0	Million standard cubic feet	6976	24	7	30100504	N
31	Industrial Processes, Chemical M	2.42	0	Million standard cubic feet	6976	24	7	30100504	N
32	Industrial Processes, Chemical M	2.10	0.003	Million standard cubic feet	6601	24	7	30100504	N
33	Industrial Processes, Chemical M	148.18	0.023	Million standard cubic feet	6865	24	7	30100504	N
34	Industrial Processes, Chemical M	114.16	0.018	Million standard cubic feet	6865	24	7	30100504	N
35	Industrial Processes, Chemical M	47.58	0.011	Million standard cubic feet	5810	24	7	30100504	N
36	Industrial Processes, Chemical M	47.55	0.011	Million standard cubic feet	6976	24	7	30100504	N
37	Industrial Processes, Chemical M	171.36	0.041	Million standard cubic feet	6976	24	7	30100504	N
38	Industrial Processes, Chemical M	238.60	0.052	Million standard cubic feet	6601	24	7	30100504	N
39	Industrial Processes, Chemical M	0.61	1	Million standard cubic feet	6865	24	7	30100502	N
40	Industrial Processes, Chemical M	0.47	0	Million standard cubic feet	6865	24	7	30100502	N
41	Industrial Processes, Chemical M	0.48	0	Million standard cubic feet	5810	24	7	30100502	N
42	Industrial Processes, Chemical M	1.10	0	Million standard cubic feet	6976	24	7	30100502	N
43	Industrial Processes, Chemical M	2.42	0.001	Million standard cubic feet	6976	24	7	30100502	N
44	Industrial Processes, Chemical M	2.10	0.001	Million standard cubic feet	6601	24	7	30100502	N
45	Internal Combustion Engines, Ind	2016.00	63	Horsepower-hours	32	1	1	20200253	N
46	Internal Combustion Engines, Ind	2898.00	63	Horsepower-hours	46	1	1	20200253	N
47	Internal Combustion Engines, Ind	3520.00	110	Horsepower-hours	32	1	1	20200253	N

CONTROLS

Point#	Pollutant	Estimated	Allowed	Est. Method	Control 1	Eff1%	Control 2	Eff2%
1	* Nitrogen Oxides - NOx	0.818	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Carbon Monoxide	0.687	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-2.5 (All Particulate Matter <2.5	0.062	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-10 (All Particulate Matter <10	0.062	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Total VOC	0.045	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Sulfur Oxides - SOx	0.005	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Nitrogen Oxides - NOx	0.793	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Carbon Monoxide	0.666	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-2.5 (All Particulate Matter <2.5	0.06	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-10 (All Particulate Matter <10	0.06	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Total VOC	0.044	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Sulfur Oxides - SOx	0.005	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
3	* PM-2.5 (All Particulate Matter <2.5	0.398	0	Mass Balance	Fabric Filter / B	96	* Uncontrolled	0
3	* PM-10 (All Particulate Matter <10	0.398	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-10 (All Particulate Matter <10	0.083	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-2.5 (All Particulate Matter <2.5	0.083	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-2.5 (All Particulate Matter <2.5	0.056	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-10 (All Particulate Matter <10	0.056	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-10 (All Particulate Matter <10	0.281	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-2.5 (All Particulate Matter <2.5	0.281	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
7	* PM-10 (All Particulate Matter <10	0.16	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0

7	* PM-2.5 (All Particulate Matter <2.5	0.16	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
8	* Nitrogen Oxides - NOx	1.179	1134	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Carbon Monoxide	0.99	1995	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-2.5 (All Particulate Matter <2.5	0.09	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-10 (All Particulate Matter <10	0.09	96	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Total VOC	0.065	69	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Sulfur Oxides - SOx	0.007	8089	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Nitrogen Oxides - NOx	0.698	597	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Carbon Monoxide	0.586	1307	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-10 (All Particulate Matter <10	0.05	44	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-2.5 (All Particulate Matter <2.5	0.05	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Total VOC	0.04	58	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Sulfur Oxides - SOx	0.004	3763	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Carbon Monoxide	0.002	1634	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Nitrogen Oxides - NOx	0.002	746	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Total VOC	0	73	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-2.5 (All Particulate Matter <2.5	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-10 (All Particulate Matter <10	0	55	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Sulfur Oxides - SOx	0	4704	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
11	* PM-2.5 (All Particulate Matter <2.5	0.392	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
11	* PM-10 (All Particulate Matter <10	0.392	26.49	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
12	* Total VOC	1.1	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
12	* Total VOC	0.385	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
14	* PM-2.5 (All Particulate Matter <2.5	0.496	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
14	* PM-10 (All Particulate Matter <10	0.496	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-2.5 (All Particulate Matter <2.5	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-10 (All Particulate Matter <10	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Sulfur Oxides - SOx	643.336	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Nitrogen Oxides - NOx	192.753	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
16	* PM-10 (All Particulate Matter <10	29.26	96	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* PM-2.5 (All Particulate Matter <2.5	29.26	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Carbon Monoxide	3.68	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Total VOC	0.804	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Hydrogen sulfide	0.026	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Carbon disulfide	0.015	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Cyanide and Cyanide compounds	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
16	Carbonyl sulfide	0	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Sulfur Oxides - SOx	407.092	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Nitrogen Oxides - NOx	153.728	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
17	* PM-10 (All Particulate Matter <10	23.339	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* PM-2.5 (All Particulate Matter <2.5	23.339	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* Carbon Monoxide	3.482	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Total VOC	0.597	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Hydrogen sulfide	0.061	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Carbon disulfide	0.014	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Carbonyl sulfide	0.003	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Cyanide and Cyanide compounds	0.002	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
18	* Sulfur Oxides - SOx	711.306	3763	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Nitrogen Oxides - NOx	234.033	597	Mass Balance	* Uncontrolled	0	* Uncontrolled	0

18	* PM-10 (All Particulate Matter <10	40.574	44	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* PM-2.5 (All Particulate Matter <2.5	40.574	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* Carbon Monoxide	25.979	1307	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Total VOC	1.226	58	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Hydrogen sulfide	0.191	19.86	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Carbon disulfide	0.108	11.18	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Cyanide and Cyanide compounds	0.009	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
18	Carbonyl sulfide	0.002	0.24	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Sulfur Oxides - SOx	844.859	4704	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Nitrogen Oxides - NOx	262.711	746	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	* PM-10 (All Particulate Matter <10	59.93	55	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* PM-2.5 (All Particulate Matter <2.5	59.93	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* Carbon Monoxide	27.83	1634	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Total VOC	5.293	73	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Hydrogen sulfide	0.206	39.09	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Carbon disulfide	0.116	13.97	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Cyanide and Cyanide compounds	0.008	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	Carbonyl sulfide	0.002	0.29	Mass Balance	Recuperative T	98	* Uncontrolled	0
20	* Carbon Monoxide	49.684	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Total VOC	2.217	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Hydrogen sulfide	0.367	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbon disulfide	0.206	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Nitrogen Oxides - NOx	0.176	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-10 (All Particulate Matter <10	0.029	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-2.5 (All Particulate Matter <2.5	0.029	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Cyanide and Cyanide compounds	0.018	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Sulfur Oxides - SOx	0.011	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbonyl sulfide	0.004	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Carbon Monoxide	22.378	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Hydrogen sulfide	0.403	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Total VOC	0.35	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbon disulfide	0.092	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Sulfur Oxides - SOx	0.068	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Nitrogen Oxides - NOx	0.052	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-10 (All Particulate Matter <10	0.031	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-2.5 (All Particulate Matter <2.5	0.031	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbonyl sulfide	0.021	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Cyanide and Cyanide compounds	0.015	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Carbon Monoxide	62.087	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Total VOC	2.771	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Hydrogen sulfide	0.459	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbon disulfide	0.258	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Nitrogen Oxides - NOx	0.219	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-10 (All Particulate Matter <10	0.036	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-2.5 (All Particulate Matter <2.5	0.036	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Cyanide and Cyanide compounds	0.022	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Sulfur Oxides - SOx	0.014	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbonyl sulfide	0.005	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Carbon Monoxide	66.527	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0

23	* Total VOC	2.97	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Hydrogen sulfide	0.492	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Carbon disulfide	0.277	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Nitrogen Oxides - NOx	0.235	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* PM-10 (All Particulate Matter <10	0.039	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* PM-2.5 (All Particulate Matter <2.5	0.039	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Cyanide and Cyanide compounds	0.019	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Sulfur Oxides - SOx	0.015	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Carbonyl sulfide	0.006	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
24	* Carbon Monoxide	42.017	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* Nitrogen Oxides - NOx	27.891	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* Total VOC	2.594	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* PM-10 (All Particulate Matter <10	1.493	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* PM-2.5 (All Particulate Matter <2.5	1.493	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
25	* PM-2.5 (All Particulate Matter <2.5	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
25	* PM-10 (All Particulate Matter <10	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
26	* PM-2.5 (All Particulate Matter <2.5	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
26	* PM-10 (All Particulate Matter <10	0.033	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
27	* Nitrogen Oxides - NOx	1.927	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* PM-2.5 (All Particulate Matter <2.5	0.293	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* PM-10 (All Particulate Matter <10	0.293	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* Total VOC	0.007	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* Carbon Monoxide	0.007	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Nitrogen Oxides - NOx	1.927	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* PM-10 (All Particulate Matter <10	0.293	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* PM-2.5 (All Particulate Matter <2.5	0.293	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Total VOC	0.007	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Nitrogen Oxides - NOx	3.074	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* PM-10 (All Particulate Matter <10	0.467	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* PM-2.5 (All Particulate Matter <2.5	0.467	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Total VOC	0.011	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Carbon Monoxide	0.002	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Nitrogen Oxides - NOx	2.339	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* PM-2.5 (All Particulate Matter <2.5	0.406	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* PM-10 (All Particulate Matter <10	0.406	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Total VOC	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Nitrogen Oxides - NOx	2.339	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* PM-10 (All Particulate Matter <10	0.406	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* PM-2.5 (All Particulate Matter <2.5	0.406	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Total VOC	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Nitrogen Oxides - NOx	5.252	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* PM-2.5 (All Particulate Matter <2.5	1.168	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* PM-10 (All Particulate Matter <10	1.168	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Total VOC	0.081	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Carbon Monoxide	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
33	* Nitrogen Oxides - NOx	7.409	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

33	* Carbon Monoxide	6.223	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-2.5 (All Particulate Matter <2.5	0.563	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-10 (All Particulate Matter <10	0.563	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Total VOC	0.407	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Sulfur Oxides - SOx	0.044	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Nitrogen Oxides - NOx	5.708	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Carbon Monoxide	4.795	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-10 (All Particulate Matter <10	0.434	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-2.5 (All Particulate Matter <2.5	0.434	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Total VOC	0.314	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Sulfur Oxides - SOx	0.034	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Nitrogen Oxides - NOx	2.379	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Carbon Monoxide	1.998	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-10 (All Particulate Matter <10	0.181	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-2.5 (All Particulate Matter <2.5	0.181	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Total VOC	0.131	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Sulfur Oxides - SOx	0.014	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Nitrogen Oxides - NOx	2.377	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Carbon Monoxide	1.997	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-10 (All Particulate Matter <10	0.181	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-2.5 (All Particulate Matter <2.5	0.181	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Total VOC	0.131	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Sulfur Oxides - SOx	0.014	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Nitrogen Oxides - NOx	8.568	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Carbon Monoxide	7.197	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-2.5 (All Particulate Matter <2.5	0.651	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-10 (All Particulate Matter <10	0.651	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Total VOC	0.471	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Sulfur Oxides - SOx	0.051	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Nitrogen Oxides - NOx	11.93	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Carbon Monoxide	10.021	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-2.5 (All Particulate Matter <2.5	0.907	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-10 (All Particulate Matter <10	0.907	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Total VOC	0.656	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Sulfur Oxides - SOx	0.072	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Nitrogen Oxides - NOx	0.03	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Carbon Monoxide	0.025	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Total VOC	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Nitrogen Oxides - NOx	0.023	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Carbon Monoxide	0.02	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Nitrogen Oxides - NOx	0.024	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Carbon Monoxide	0.02	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

41	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Nitrogen Oxides - NOx	0.055	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Carbon Monoxide	0.046	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-10 (All Particulate Matter <10	0.004	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-2.5 (All Particulate Matter <2.5	0.004	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Total VOC	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Nitrogen Oxides - NOx	0.121	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Carbon Monoxide	0.102	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-10 (All Particulate Matter <10	0.009	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-2.5 (All Particulate Matter <2.5	0.009	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Total VOC	0.007	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Sulfur Oxides - SOx	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Nitrogen Oxides - NOx	0.105	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Carbon Monoxide	0.088	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-10 (All Particulate Matter <10	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-2.5 (All Particulate Matter <2.5	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Total VOC	0.006	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Sulfur Oxides - SOx	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Carbon Monoxide	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Nitrogen Oxides - NOx	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Carbon Monoxide	0.004	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Nitrogen Oxides - NOx	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Carbon Monoxide	0.005	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Nitrogen Oxides - NOx	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

STACKS

Point#	ID	Stack Description	Height(ft)	Dia.(ft)	Temp(F)	Flow	Plume Ht.(ft)
1	18213	Boiler #1 stack	18	1	800	4610	0
2	18214	Boiler #2 Stack	18	1	800	4610	0
3	18215	CLEAN UP BAG FILTER #1	38	1	70	5000	0
4	18216	CLEAN-UP BAG FILTER #2	38	1	70	5000	0
5	18217	CLEAN-UP BAG FILTER #3	21	1	70	5000	0
6	18218	CLEAN-UP BAG FILTER #4	35	1	70	5000	0
7	18219	Shipping Dept CUBF #1	30	1	72	5000	0
8	18220	Thermal Oxidizer#1 - TOx for Production Units 1 and 2	150	10.5	1700	606000	0
9	18221	TO #2 - The TOx for Production Unit #3	150	9.5	1700	381000	0
10	18222	TO #4 - Production Unit #3	213	7	1700	369200	0
11	18223	CB Storage Tank	0	0	0	0	120
12	18224	Feedstock Storage Tank vent	0	0	0	0	33
14	33538	Shipping Dept. CUBF #2	0	0	0	0	30
15	41618	Sealed Bin Clean Up Bag Filter	35	1	70	5000	0
16	47207	Thermal Oxidizer # 1	150	11.5	1700	606000	0
17	47234	Thermal Oxidizer # 1	150	11.5	1700	606000	0
18	47238	Thermal Oxidizer # 2	150	9.5	1700	381000	0
19	47239	Thermal Oxidizer # 3	213	7	1700	369200	0
20	104185	EPN 3	35	1	70	5000	0

21	104186	EPN 7	35	1	70	5000	0
22	104187	EPN 11	35	1	70	5000	0
23	104188	EPN 20	35	1	70	5000	0
24	104189	EBF 4	35	1	70	5000	0
25	104190	Sealed Bin Clean-Up Bagfiller #2	35	1	70	5000	0
26	104191	Transloading Clean-Up Bagfilter	35	1	70	5000	0
27	104197	Dryer 11 Firebox stack	35	1	70	5000	0
28	104198	Dryer 12 Firebox	35	1	70	5000	0
29	104199	Dryer 21 Firebox	35	1	70	5000	0
30	104200	Dryer 31 Firebox	35	1	70	5000	0
31	104201	Dryer 32 Firebox	35	1	70	5000	0
32	104202	Dryer 41 Firebox	35	1	70	5000	0
33	104203	Reactor 11	35	1	70	5000	0
34	104204	Reactor 12	35	1	70	5000	0
35	104205	Reactor 21	35	1	70	5000	0
36	104206	Reactor 31	35	1	70	5000	0
37	104207	Reactor 32	35	1	70	5000	0
38	104208	Reactor 41	35	1	70	5000	0
39	104209	Waste Gas Combuster 11	150	10.5	1700	606000	0
40	104210	Waste Gas Combustor 12	150	10.5	1700	606000	0
41	104211	Waste Gas Combustor	150	10.5	1700	606000	0
42	104212	Waste Gas Combustor 31	150	10.5	1700	606000	0
43	104213	Waste Gas Combustor 32	150	10.5	1700	606000	0
44	104214	Waste Gas Combustor 41	150	10.5	1700	606000	0
45	104215	Emergency Generator 1 and 2	4	0.25	1075	353	0
46	104216	Emergency Generator 3	4	0.25	1075	353	0
47	104217	Emergency Generator 4	4	0.25	1075	557	0

2016 | TEAM ID 333 | **CONTINENTAL CARBON CO** | Tuesday, June 19, 2018

CARBON BLACK PRODUCTION FACILITY | Updated: 3/31/2017

Address: 1006 E OAKLAND AVE
PONCA CITY OK 74601

Status: Active
Class: Major
SIC: 2895

Directions:
1 MI S on Hwy 177 of Jct of Hwy 60 and Hwy 177.

Responsible Official
Contact: BURTON, PHILLIP
Phone: (580) 763-8111
Fax: (580) 763-8150

County: KAY
Sub: NE/4
Section: 10
Town: 25N
Range: 2E

Latitude: 36.66616
Longitude: -97.07163

EMISSIONS

Pollutant	Estimated (tons)	Cas No.
* Carbon Monoxide	298.486	630080
* Nitrogen Oxides - NOx	842.145	
* PM-10 (All Particulate Matter <10	149.283	
* PM-2.5 (All Particulate Matter <2.5	149.283	
* Sulfur Oxides - SOx	2712.511	
* Total VOC	21.311	
Carbon disulfide	0.979	75150
Carbonyl sulfide	0.04	463581
Cyanide and Cyanide compounds	0.077	
Hydrogen sulfide	1.986	7783064

POINTS

Seq.	Name	Status	LATITUDE	LONGITUDE
1	Boiler #1	Operating	36.66151	-97.06980
2	Boiler #2	Operating	36.66146	-97.06981
3	CLEAN-UP BAG FILTER #1	Operating	36.66135	-97.07057
4	CLEAN-UP BAG FILTER #2	Operating	36.66133	-97.07028
5	CLEAN-UP BAG FILTER #3	Operating	36.66128	-97.06929
6	CLEAN-UP BAG FILTER #4	Operating	36.66145	-97.06883
7	Shipping Dept Clean-up Bagfiller 1	Operating	36.66084	-97.06982
8	Thermal Oxidizer #1	Operating	36.66153	-97.07050
9	Thermal Oxidizer #2	Operating	36.66153	-97.07036
10	Thermal Oxidizer #3	Operating	36.66131	-97.06862
11	CB Storage Tanks	Operating	36.66199	-97.07041
12	Feed stock tank 65,000 Bbl	Operating	36.66068	-97.06893
14	Shipping Dept Clean-up Bagfiller 2	Operating	36.66133	-97.06980
15	Sealed Bin Clean Up Bag Filter 1	Operating	36.66616	-97.07163
16	Production Unit 1	Operating	36.66616	-97.07163
17	Production Unit 2	Operating	36.66616	-97.07163
18	Production Unit 3	Operating	36.66616	-97.07163
19	Production Unit 4	Operating	36.66616	-97.07163
20	Production Unit 1 - Transition Events	Operating	36.66616	-97.07163
21	Production Unit 2 - Transition Events	Operating	36.66616	-97.07163
22	Production Unit 3 - Transition Events	Operating	36.66616	-97.07163
23	Production Unit 4 - Transition Events	Operating	36.66616	-97.07163
24	EBF 4	Operating	36.66616	-97.07163
25	Sealed Bin Clean-Up Bagfilter #2	Operating	36.66616	-97.07163

26	Transloading Clean-Up Bagfilter	Operating	36.66616	-97.07163	
27	Dryer 11 Firebox	Operating	36.66616	-97.07163	
28	Dryer 12 Firebox	Operating	36.66616	-97.07163	
29	Dryer 21 Firebox	Operating	36.66616	-97.07163	
30	Dryer 31 Firebox	Operating	36.66616	-97.07163	
31	Dryer 32 Firebox	Operating	36.66616	-97.07163	
32	Dryer 41 Firebox	Operating	36.66616	-97.07163	
33	Reactor 11	Operating	36.66616	-97.07163	
34	Reactor 12	Operating	36.66616	-97.07163	
35	Reactor 21	Operating	36.66616	-97.07163	
36	Reactor 31	Operating	36.66616	-97.07163	
37	Reactor 32	Operating	36.66616	-97.07163	
38	Reactor 41	Operating	36.66616	-97.07163	
39	Waste Gas Combuster 11	Operating	36.66616	-97.07163	
40	Waste Gas Combustor 12	Operating	36.66616	-97.07163	
41	Waste Gas Combustor 21	Operating	36.66616	-97.07163	
42	Waste Gas Combustor 31	Operating	36.66616	-97.07163	
43	Waste Gas Combustor 32	Operating	36.66616	-97.07163	
44	Waste Gas Combustor 41	Operating	36.66616	-97.07163	
45	Emergency Generator 1 and 2	Operating	36.66616	-97.07163	
46	Emergency Generator 3	Operating	36.66616	-97.07163	
47	Emergency Generator 4	Operating	36.66616	-97.07163	

PROCESSES

Seq#	Description	Annual Rate	Hourly	Units	Hr/Yr	Hr/Day	Day/Wk	SCC	Conf.
1	External Combustion Boilers, Ind	18.78	0.002	Million standard cubic feet	8035	24	7	10200603	N
2	External Combustion Boilers, Ind	10.24	0.002	Million standard cubic feet	5967	24	7	10200603	N
3	Industrial Processes, Chemical M	27900.00	4.425	Tons	5143	24	7	30100504	N
4	Industrial Processes, Chemical M	19961.00	4.969	Tons	4017	24	7	30100504	N
5	Industrial Processes, Chemical M	27403.00	5.015	Tons	5464	24	7	30100504	N
6	Industrial Processes, Chemical M	52570.00	7.604	Tons	6913	24	7	30100504	N
7	Industrial Processes, Chemical M	130.00	0.043	Tons	3000	24	7	30100508	N
8	Industrial Processes, Chemical M	4.29	0.001	Million standard cubic feet	5143	24	7	30100502	N
9	Industrial Processes, Chemical M	0.37	0	Million standard cubic feet	5464	24	7	30100502	N
10	Industrial Processes, Chemical M	0.86	0	Million standard cubic feet	6913	24	7	30100502	N
11	Industrial Processes, Chemical M	78398.00	14.08	Tons	8760	24	7	30100599	N
12	Chemical Evaporation, Petroleum	28439476.00	5120	Gallons	8760	24	7	40400301	N
12	Chemical Evaporation, Petroleum	28439476.00	5120	Gallons	8760	24	7	40400302	N
14	Industrial Processes, Chemical M	211.51	0.071	Tons	3000	24	7	30100508	N
15	Industrial Processes, Chemical M	17.23	0.011	Tons	1500	23	7	30100504	N
16	Industrial Processes, Chemical M	6206884.00	1206.9	Gallons	5143	24	7	30100502	N
17	Industrial Processes, Chemical M	4440807.00	1105.53	Gallons	4017	24	7	30100502	N
18	Industrial Processes, Chemical M	6096418.00	1115.6	Gallons	5646	24	7	30100502	N
19	Industrial Processes, Chemical M	11695368.00	1691.68	Gallons	6913	24	7	30100502	N
20	Industrial Processes, Chemical M	141053.00	1808.4	Pounds	13	1	7	30100504	N
21	Industrial Processes, Chemical M	112639.00	1656.45	Pounds	11	1	7	30100504	N
22	Industrial Processes, Chemical M	86924.00	1671.61	Pounds	9	1	7	30100504	N
23	Industrial Processes, Chemical M	167291.00	2534.71	Pounds	11	1	7	30100504	N

24	Industrial Processes, Chemical M	52570.68	7.6	Tons	6913	24	7	30100504	N
25	Industrial Processes, Chemical M	34461.00	22.97	Pounds	1500	24	7	30100504	N
26	Industrial Processes, Chemical M	34461.00	34.46	Pounds	1000	24	7	30100504	N
27	Industrial Processes, Chemical M	0.54	0	Million standard cubic feet	5143	24	7	30100504	N
28	Industrial Processes, Chemical M	0.39	0	Million standard cubic feet	5143	24	7	30100504	N
29	Industrial Processes, Chemical M	0.39	0.001	Million standard cubic feet	4017	24	7	30100504	N
30	Industrial Processes, Chemical M	0.69	0.001	Million standard cubic feet	5464	24	7	30100504	N
31	Industrial Processes, Chemical M	0.49	0.001	Million standard cubic feet	5464	24	7	30100504	N
32	Industrial Processes, Chemical M	1.77	0	Million standard cubic feet	6913	24	7	30100504	N
33	Industrial Processes, Chemical M	111.95	0.022	Million standard cubic feet	5143	24	7	30100504	N
34	Industrial Processes, Chemical M	114.64	0.022	Million standard cubic feet	5143	24	7	30100504	N
35	Industrial Processes, Chemical M	69.85	0.017	Million standard cubic feet	4017	24	7	30100504	N
36	Industrial Processes, Chemical M	130.93	0.024	Million standard cubic feet	5464	24	7	30100504	N
37	Industrial Processes, Chemical M	125.77	0.023	Million standard cubic feet	5464	24	7	30100504	N
38	Industrial Processes, Chemical M	328.53	0.048	Million standard cubic feet	6913	24	7	30100504	N
39	Industrial Processes, Chemical M	0.54	0.001	Million standard cubic feet	5143	24	7	30100502	N
40	Industrial Processes, Chemical M	0.39	0.001	Million standard cubic feet	5143	24	7	30100502	N
41	Industrial Processes, Chemical M	0.38	0.001	Million standard cubic feet	4017	24	7	30100502	N
42	Industrial Processes, Chemical M	0.69	0.001	Million standard cubic feet	5464	24	7	30100502	N
43	Industrial Processes, Chemical M	0.49	0.001	Million standard cubic feet	5464	24	7	30100502	N
44	Industrial Processes, Chemical M	1.77	0.001	Million standard cubic feet	6913	24	7	30100502	N
45	Internal Combustion Engines, Ind	2381.40	63	Horsepower-hours	38	1	1	20200253	N
46	Internal Combustion Engines, Ind	3351.60	63	Horsepower-hours	53	1	1	20200253	N
47	Internal Combustion Engines, Ind	5885.00	63	Horsepower-hours	54	1	1	20200253	N

CONTROLS

Point#	Pollutant	Estimated	Allowed	Est. Method	Control 1	Eff1%	Control 2	Eff2%
1	* Nitrogen Oxides - NOx	0.94	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Carbon Monoxide	0.79	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-2.5 (All Particulate Matter <2.5	0.07	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-10 (All Particulate Matter <10	0.07	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Total VOC	0.052	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Sulfur Oxides - SOx	0.006	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Nitrogen Oxides - NOx	0.52	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Carbon Monoxide	0.43	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-2.5 (All Particulate Matter <2.5	0.04	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-10 (All Particulate Matter <10	0.04	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Total VOC	0.03	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Sulfur Oxides - SOx	0.003	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
3	* PM-2.5 (All Particulate Matter <2.5	0.334	0	Mass Balance	Fabric Filter / B	96	* Uncontrolled	0
3	* PM-10 (All Particulate Matter <10	0.334	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-2.5 (All Particulate Matter <2.5	0.06	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-10 (All Particulate Matter <10	0.06	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-2.5 (All Particulate Matter <2.5	0.044	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-10 (All Particulate Matter <10	0.044	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-2.5 (All Particulate Matter <2.5	0.31	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-10 (All Particulate Matter <10	0.31	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
7	* PM-2.5 (All Particulate Matter <2.5	0.13	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0

7	* PM-10 (All Particulate Matter <10	0.13	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
8	* Nitrogen Oxides - NOx	0.215	1134	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Carbon Monoxide	0.18	1995	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-10 (All Particulate Matter <10	0.016	96	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-2.5 (All Particulate Matter <2.5	0.016	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Total VOC	0.012	69	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Sulfur Oxides - SOx	0.001	8089	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Carbon Monoxide	0.036	1307	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Nitrogen Oxides - NOx	0.019	597	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-10 (All Particulate Matter <10	0.001	44	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-2.5 (All Particulate Matter <2.5	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Total VOC	0.001	58	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Sulfur Oxides - SOx	0	3763	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Nitrogen Oxides - NOx	0.043	746	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Carbon Monoxide	0.036	1634	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-2.5 (All Particulate Matter <2.5	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-10 (All Particulate Matter <10	0.003	55	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Total VOC	0.002	73	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Sulfur Oxides - SOx	0	4704	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
11	* PM-2.5 (All Particulate Matter <2.5	0.359	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
11	* PM-10 (All Particulate Matter <10	0.359	26.49	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
12	* Total VOC	1.001	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
12	* Total VOC	0.385	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
14	* PM-10 (All Particulate Matter <10	0.212	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
14	* PM-2.5 (All Particulate Matter <2.5	0.212	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Sulfur Oxides - SOx	652.058	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Nitrogen Oxides - NOx	161.666	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
16	* PM-2.5 (All Particulate Matter <2.5	24.54	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* PM-10 (All Particulate Matter <10	24.54	96	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Carbon Monoxide	1.16	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Total VOC	0.619	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Hydrogen sulfide	0.009	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Carbon disulfide	0.005	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Carbonyl sulfide	0	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
17	* Sulfur Oxides - SOx	413.504	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Nitrogen Oxides - NOx	115.665	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
17	* PM-10 (All Particulate Matter <10	17.558	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* PM-2.5 (All Particulate Matter <2.5	17.558	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* Carbon Monoxide	0.595	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Total VOC	0.417	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Hydrogen sulfide	0.01	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Carbon disulfide	0.002	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Carbonyl sulfide	0.001	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
18	* Sulfur Oxides - SOx	658.576	3763	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Nitrogen Oxides - NOx	182.169	597	Mass Balance	* Uncontrolled	0	* Uncontrolled	0

18	* PM-2.5 (All Particulate Matter <2.5	31.583	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* PM-10 (All Particulate Matter <10	31.583	44	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* Carbon Monoxide	8.955	1307	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Total VOC	0.452	58	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Hydrogen sulfide	0.072	19.86	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Carbon disulfide	0.041	11.18	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Cyanide and Cyanide compounds	0.003	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
18	Carbonyl sulfide	0	0.24	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Sulfur Oxides - SOx	987.991	4704	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Nitrogen Oxides - NOx	290.223	746	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	* PM-2.5 (All Particulate Matter <2.5	66.206	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* PM-10 (All Particulate Matter <10	66.206	55	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* Carbon Monoxide	30.215	1634	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Total VOC	5.824	73	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Hydrogen sulfide	0.247	39.09	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Carbon disulfide	0.139	13.97	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Cyanide and Cyanide compounds	0.009	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	Carbonyl sulfide	0.003	0.29	Mass Balance	Recuperative T	98	* Uncontrolled	0
20	* Carbon Monoxide	54.241	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Total VOC	2.42	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Hydrogen sulfide	0.443	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbon disulfide	0.249	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Nitrogen Oxides - NOx	0.192	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-10 (All Particulate Matter <10	0.032	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-2.5 (All Particulate Matter <2.5	0.032	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Cyanide and Cyanide compounds	0.02	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Sulfur Oxides - SOx	0.013	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbonyl sulfide	0.005	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Carbon Monoxide	20.446	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Hydrogen sulfide	0.407	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Total VOC	0.32	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbon disulfide	0.094	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Sulfur Oxides - SOx	0.069	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Nitrogen Oxides - NOx	0.048	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-2.5 (All Particulate Matter <2.5	0.029	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-10 (All Particulate Matter <10	0.029	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbonyl sulfide	0.022	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Cyanide and Cyanide compounds	0.014	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Carbon Monoxide	33.425	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Total VOC	1.492	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Hydrogen sulfide	0.273	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbon disulfide	0.154	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Nitrogen Oxides - NOx	0.118	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-10 (All Particulate Matter <10	0.02	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-2.5 (All Particulate Matter <2.5	0.02	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Cyanide and Cyanide compounds	0.012	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Sulfur Oxides - SOx	0.008	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbonyl sulfide	0.003	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Carbon Monoxide	64.328	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0

23	* Total VOC	2.871	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Hydrogen sulfide	0.525	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Carbon disulfide	0.295	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Nitrogen Oxides - NOx	0.227	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* PM-2.5 (All Particulate Matter <2.5	0.038	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* PM-10 (All Particulate Matter <10	0.038	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Cyanide and Cyanide compounds	0.019	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Sulfur Oxides - SOx	0.016	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	Carbonyl sulfide	0.006	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
24	* Carbon Monoxide	46.42	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* Nitrogen Oxides - NOx	30.812	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* Total VOC	2.866	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* PM-2.5 (All Particulate Matter <2.5	1.65	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
24	* PM-10 (All Particulate Matter <10	1.65	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
25	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
25	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
26	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
26	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
27	* Nitrogen Oxides - NOx	1.617	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* PM-10 (All Particulate Matter <10	0.245	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* PM-2.5 (All Particulate Matter <2.5	0.245	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* Total VOC	0.006	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
27	* Carbon Monoxide	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Nitrogen Oxides - NOx	1.617	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* PM-10 (All Particulate Matter <10	0.245	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* PM-2.5 (All Particulate Matter <2.5	0.245	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Total VOC	0.006	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
28	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Nitrogen Oxides - NOx	2.313	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* PM-10 (All Particulate Matter <10	0.351	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* PM-2.5 (All Particulate Matter <2.5	0.351	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Total VOC	0.008	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
29	* Carbon Monoxide	0.002	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Nitrogen Oxides - NOx	1.821	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* PM-10 (All Particulate Matter <10	0.316	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* PM-2.5 (All Particulate Matter <2.5	0.316	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Total VOC	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
30	* Carbon Monoxide	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Nitrogen Oxides - NOx	1.821	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* PM-10 (All Particulate Matter <10	0.316	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* PM-2.5 (All Particulate Matter <2.5	0.316	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Total VOC	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
31	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Nitrogen Oxides - NOx	5.802	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* PM-10 (All Particulate Matter <10	1.291	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* PM-2.5 (All Particulate Matter <2.5	1.291	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Total VOC	0.09	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
32	* Carbon Monoxide	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
33	* Nitrogen Oxides - NOx	5.597	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

33	* Carbon Monoxide	4.702	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-10 (All Particulate Matter <10	0.425	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-2.5 (All Particulate Matter <2.5	0.425	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Total VOC	0.308	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Sulfur Oxides - SOx	0.034	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Nitrogen Oxides - NOx	5.732	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Carbon Monoxide	4.815	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-10 (All Particulate Matter <10	0.436	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-2.5 (All Particulate Matter <2.5	0.436	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Total VOC	0.315	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Sulfur Oxides - SOx	0.034	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Nitrogen Oxides - NOx	3.492	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Carbon Monoxide	2.934	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Total VOC	0.192	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-10 (All Particulate Matter <10	0.132	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-2.5 (All Particulate Matter <2.5	0.132	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Sulfur Oxides - SOx	0.021	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Nitrogen Oxides - NOx	6.547	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Carbon Monoxide	5.499	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-10 (All Particulate Matter <10	0.498	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-2.5 (All Particulate Matter <2.5	0.498	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Total VOC	0.36	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Sulfur Oxides - SOx	0.039	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Nitrogen Oxides - NOx	6.289	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Carbon Monoxide	5.283	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-2.5 (All Particulate Matter <2.5	0.478	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-10 (All Particulate Matter <10	0.478	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Total VOC	0.346	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Sulfur Oxides - SOx	0.038	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Nitrogen Oxides - NOx	16.427	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Carbon Monoxide	13.798	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-10 (All Particulate Matter <10	1.248	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-2.5 (All Particulate Matter <2.5	1.248	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Total VOC	0.903	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Sulfur Oxides - SOx	0.099	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Nitrogen Oxides - NOx	0.027	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Carbon Monoxide	0.023	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Nitrogen Oxides - NOx	0.02	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Carbon Monoxide	0.016	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-10 (All Particulate Matter <10	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-2.5 (All Particulate Matter <2.5	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Nitrogen Oxides - NOx	0.019	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Carbon Monoxide	0.016	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

41	* PM-10 (All Particulate Matter <10	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* PM-2.5 (All Particulate Matter <2.5	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Nitrogen Oxides - NOx	0.034	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Carbon Monoxide	0.029	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-2.5 (All Particulate Matter <2.5	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-10 (All Particulate Matter <10	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Total VOC	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Nitrogen Oxides - NOx	0.025	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Carbon Monoxide	0.021	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Nitrogen Oxides - NOx	0.088	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Carbon Monoxide	0.074	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-10 (All Particulate Matter <10	0.007	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-2.5 (All Particulate Matter <2.5	0.007	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Total VOC	0.005	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Sulfur Oxides - SOx	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Carbon Monoxide	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Carbon Monoxide	0.004	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Carbon Monoxide	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

STACKS

Point#	ID	Stack Description	Height(ft)	Dia.(ft)	Temp(F)	Flow	Plume Ht.(ft)
1	18213	Boiler #1 stack	18	1	800	4610	0
2	18214	Boiler #2 Stack	18	1	800	4610	0
3	18215	CLEAN UP BAG FILTER #1	38	1	70	5000	0
4	18216	CLEAN-UP BAG FILTER #2	38	1	70	5000	0
5	18217	CLEAN-UP BAG FILTER #3	21	1	70	5000	0
6	18218	CLEAN-UP BAG FILTER #4	35	1	70	5000	0
7	18219	Shipping Dept CUBF #1	30	1	72	5000	0
8	18220	Thermal Oxidizer#1 - TOx for Production Units 1 and 2	150	10.5	1700	606000	0
9	18221	TO #2 - The TOx for Production Unit #3	150	9.5	1700	381000	0
10	18222	TO #4 - Production Unit #3	213	7	1700	369200	0
11	18223	CB Storage Tank	0	0	0	0	120
12	18224	Feedstock Storage Tank vent	0	0	0	0	33
14	33538	Shipping Dept. CUBF #2	0	0	0	0	30
15	41618	Sealed Bin Clean Up Bag Filter	35	1	70	5000	0
16	47207	Thermal Oxidizer # 1	150	11.5	1700	606000	0
17	47234	Thermal Oxidizer # 1	150	11.5	1700	606000	0
18	47238	Thermal Oxidizer # 2	150	9.5	1700	381000	0
19	47239	Thermal Oxidizer # 3	213	7	1700	369200	0
20	104185	EPN 3	35	1	70	5000	0

21	104186	EPN 7	35	1	70	5000	0
22	104187	EPN 11	35	1	70	5000	0
23	104188	EPN 20	35	1	70	5000	0
24	104189	EBF 4	35	1	70	5000	0
25	104190	Sealed Bin Clean-Up Bagfiller #2	35	1	70	5000	0
26	104191	Transloading Clean-Up Bagfilter	35	1	70	5000	0
27	104197	Dryer 11 Firebox stack	35	1	70	5000	0
28	104198	Dryer 12 Firebox	35	1	70	5000	0
29	104199	Dryer 21 Firebox	35	1	70	5000	0
30	104200	Dryer 31 Firebox	35	1	70	5000	0
31	104201	Dryer 32 Firebox	35	1	70	5000	0
32	104202	Dryer 41 Firebox	35	1	70	5000	0
33	104203	Reactor 11	35	1	70	5000	0
34	104204	Reactor 12	35	1	70	5000	0
35	104205	Reactor 21	35	1	70	5000	0
36	104206	Reactor 31	35	1	70	5000	0
37	104207	Reactor 32	35	1	70	5000	0
38	104208	Reactor 41	35	1	70	5000	0
39	104209	Waste Gas Combuster 11	150	10.5	1700	606000	0
40	104210	Waste Gas Combustor 12	150	10.5	1700	606000	0
41	104211	Waste Gas Combustor	150	10.5	1700	606000	0
42	104212	Waste Gas Combustor 31	150	10.5	1700	606000	0
43	104213	Waste Gas Combustor 32	150	10.5	1700	606000	0
44	104214	Waste Gas Combustor 41	150	10.5	1700	606000	0
45	104215	Emergency Generator 1 and 2	4	0.25	1075	353	0
46	104216	Emergency Generator 3	4	0.25	1075	353	0
47	104217	Emergency Generator 4	4	0.25	1075	557	0

2015 TEAM ID **333**

CONTINENTAL CARBON CO

CARBON BLACK PRODUCTION FACILITY

Friday, June 22, 2018

Updated: 4/8/2016

Address: 1006 E OAKLAND AVE
PONCA CITY OK 74601

Status: Active
Class: Major
SIC: 2895

Directions:
1 MI S on Hwy 177 of Jct of Hwy 60 and Hwy 177.

Responsible Official
Contact: BURTON, PHILLIP
Phone: (580) 763-8111
Fax: (580) 763-8150

County: KAY
Sub: NE/4
Section: 10
Town: 25N
Range: 2E

Latitude: 36.66616
Longitude: -97.07163

EMISSIONS

Pollutant	Estimated (tons)	Cas No.
* Carbon Monoxide	447.103	630080
* Nitrogen Oxides - NOx	878.924	
* PM-10 (All Particulate Matter <10	153.87	
* PM-2.5 (All Particulate Matter <2.5	153.87	
* Sulfur Oxides - SOx	2920.635	
* Total VOC	27.341	
Carbon disulfide	1.64	75150
Carbonyl sulfide	0.068	463581
Cyanide and Cyanide compounds	0.138	
Hydrogen sulfide	3.313	7783064

POINTS

Seq.	Name	Status	LATITUDE	LONGITUDE
1	Boiler #1	Operating	36.66151	-97.06980
2	Boiler #2	Operating	36.66146	-97.06981
3	CLEAN-UP BAG FILTER #1	Operating	36.66135	-97.07057
4	CLEAN-UP BAG FILTER #2	Operating	36.66133	-97.07028
5	CLEAN-UP BAG FILTER #3	Operating	36.66128	-97.06929
6	CLEAN-UP BAG FILTER #4	Operating	36.66145	-97.06883
7	Shipping Dept Clean-up Bagfiller 1	Operating	36.66084	-97.06982
8	Thermal Oxidizer #1	Operating	36.66153	-97.07050
9	Thermal Oxidizer #2	Operating	36.66153	-97.07036
10	Thermal Oxidizer #3	Operating	36.66131	-97.06862
11	CB Storage Tanks	Operating	36.66199	-97.07041
12	Feed stock tank 65,000 Bbl	Operating	36.66068	-97.06893
14	Shipping Dept Clean-up Bagfiller 2	Operating	36.66133	-97.06980
15	Sealed Bin Clean Up Bag Filter 1	Operating	36.66616	-97.07163
16	Production Unit 1	Operating	36.66616	-97.07163
17	Production Unit 2	Operating	36.66616	-97.07163
18	Production Unit 3	Operating	36.66616	-97.07163
19	Production Unit 4	Operating	36.66616	-97.07163
20	Production Unit 1 - Transition Events	Operating	36.66616	-97.07163
21	Production Unit 2 - Transition Events	Operating	36.66616	-97.07163
22	Production Unit 3 - Transition Events	Operating	36.66616	-97.07163
23	Production Unit 4 - Transition Events	Operating	36.66616	-97.07163
24	EBF 4	Operating	36.66616	-97.07163
25	Sealed Bin Clean-Up Bagfiller #2	Operating	36.66616	-97.07163

26	Transloading Clean-Up Bagfiller	Operating	36.66616	-97.07163
27	Dryer 11 Firebox	Operating	36.66616	-97.07163
28	Dryer 12 Firebox	Operating	36.66616	-97.07163
29	Dryer 21 Firebox	Operating	36.66616	-97.07163
30	Dryer 31 Firebox	Operating	36.66616	-97.07163
31	Dryer 32 Firebox	Operating	36.66616	-97.07163
32	Dryer 41 Firebox	Operating	36.66616	-97.07163
33	Reactor 11	Operating	36.66616	-97.07163
34	Reactor 12	Operating	36.66616	-97.07163
35	Reactor 21	Operating	36.66616	-97.07163
36	Reactor 31	Operating	36.66616	-97.07163
37	Reactor 32	Operating	36.66616	-97.07163
38	Reactor 41	Operating	36.66616	-97.07163
39	Waste Gas Combuster 11	Operating	36.66616	-97.07163
40	Waste Gas Combustor 12	Operating	36.66616	-97.07163
41	Waste Gas Combustor 21	Operating	36.66616	-97.07163
42	Waste Gas Combustor 31	Operating	36.66616	-97.07163
43	Waste Gas Combustor 32	Operating	36.66616	-97.07163
44	Waste Gas Combustor 41	Operating	36.66616	-97.07163
45	Emergency Generator 1 and 2	Operating	36.66616	-97.07163
46	Emergency Generator 3	Operating	36.66616	-97.07163
47	Emergency Generator 4	Operating	36.66616	-97.07163

PROCESSES

Seq#	Description	Annual Rate	Hourly	Units	Hr/Yr	Hr/Day	Day/Wk	SCC	Conf.
1	External Combustion Boilers, Ind	8.36	0.006	Million standard cubic feet	1398	24	7	10200603	N
2	External Combustion Boilers, Ind	26.01	0.006	Million standard cubic feet	4224	24	7	10200603	N
3	Industrial Processes, Chemical M	30396.49	5.742	Tons	5294	24	7	30100504	N
4	Industrial Processes, Chemical M	23956.98	5.45	Tons	4396	24	7	30100504	N
5	Industrial Processes, Chemical M	30595.57	4.868	Tons	6285	24	7	30100504	N
6	Industrial Processes, Chemical M	48452.88	7.585	Tons	6388	24	7	30100504	N
7	Industrial Processes, Chemical M	211.93	0.071	Tons	3000	24	7	30100508	N
8	Industrial Processes, Chemical M	21.73	0.004	Million standard cubic feet	5294	24	7	30100502	N
9	Industrial Processes, Chemical M	31.56	0.005	Million standard cubic feet	6285	24	7	30100502	N
10	Industrial Processes, Chemical M	0.05	0	Million standard cubic feet	6388	24	7	30100502	N
11	Industrial Processes, Chemical M	83579.63	9.541	Tons	8760	24	7	30100599	N
12	Chemical Evaporation, Petroleum	66775154.00	7622.73	Gallons	8760	24	7	40400301	N
12	Chemical Evaporation, Petroleum	66775154.00	7622.73	Gallons	8760	24	7	40400302	N
14	Industrial Processes, Chemical M	142.22	0.047	Tons	3000	24	7	30100508	N
15	Industrial Processes, Chemical M	34989.00	23.33	Pounds	1500	23	7	30100504	N
16	Industrial Processes, Chemical M	6762290.00	1277.39	Gallons	5294	24	7	30100502	N
17	Industrial Processes, Chemical M	5329695.00	1212.51	Gallons	4396	24	7	30100502	N
18	Industrial Processes, Chemical M	6806578.00	#######	Gallons	6285	24	7	30100502	N
19	Industrial Processes, Chemical M	10779283.00	1687.35	Gallons	6388	24	7	30100502	N
20	Industrial Processes, Chemical M	241158.00	1913.95	Pounds	21	1	7	30100504	N
21	Industrial Processes, Chemical M	190759.00	1816.73	Pounds	18	1	7	30100504	N
22	Industrial Processes, Chemical M	425160.00	1622.75	Pounds	44	1	7	30100504	N
23	Industrial Processes, Chemical M	189616.00	2528.22	Pounds	13	1	7	30100504	N

24	Industrial Processes, Chemical M	48452.88	7.58	Tons	6388	24	7	30100504	N
25	Industrial Processes, Chemical M	34989.00	23.33	Pounds	1500	24	7	30100504	N
26	Industrial Processes, Chemical M	34989.00	34.99	Pounds	1000	24	7	30100504	N
27	Industrial Processes, Chemical M	0.89	0	Million standard cubic feet	5294	24	7	30100504	N
28	Industrial Processes, Chemical M	0.31	0	Million standard cubic feet	5294	24	7	30100504	N
29	Industrial Processes, Chemical M	0.32	0	Million standard cubic feet	4396	24	7	30100504	N
30	Industrial Processes, Chemical M	2.10	0	Million standard cubic feet	6285	24	7	30100504	N
31	Industrial Processes, Chemical M	0.59	0	Million standard cubic feet	6285	24	7	30100504	N
32	Industrial Processes, Chemical M	2.16	0	Million standard cubic feet	6388	24	7	30100504	N
33	Industrial Processes, Chemical M	146.13	0.028	Million standard cubic feet	5294	24	7	30100504	N
34	Industrial Processes, Chemical M	73.44	0.014	Million standard cubic feet	5294	24	7	30100504	N
35	Industrial Processes, Chemical M	76.31	0.017	Million standard cubic feet	4396	24	7	30100504	N
36	Industrial Processes, Chemical M	154.60	0.025	Million standard cubic feet	6285	24	7	30100504	N
37	Industrial Processes, Chemical M	242.91	0.039	Million standard cubic feet	6285	24	7	30100504	N
38	Industrial Processes, Chemical M	169.98	0.027	Million standard cubic feet	6388	24	7	30100504	N
39	Industrial Processes, Chemical M	0.89	0	Million standard cubic feet	5294	24	7	30100502	N
40	Industrial Processes, Chemical M	0.31	0	Million standard cubic feet	5294	24	7	30100502	N
41	Industrial Processes, Chemical M	0.32	0	Million standard cubic feet	4396	24	7	30100502	N
42	Industrial Processes, Chemical M	2.10	0	Million standard cubic feet	6285	24	7	30100502	N
43	Industrial Processes, Chemical M	0.59	0	Million standard cubic feet	6285	24	7	30100502	N
44	Industrial Processes, Chemical M	2.16	0	Million standard cubic feet	6388	24	7	30100502	N
45	Internal Combustion Engines, Ind	15.75	63	Horsepower-hours	4	1	1	20200253	N
46	Internal Combustion Engines, Ind	126.00	63	Horsepower-hours	2	1	1	20200253	N
47	Internal Combustion Engines, Ind	110.00	110	Horsepower-hours	1	1	1	20200253	N

CONTROLS

Point#	Pollutant	Estimated	Allowed	Est. Method	Control 1	Eff1%	Control 2	Eff2%
1	* Nitrogen Oxides - NOx	0.418	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Carbon Monoxide	0.351	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-10 (All Particulate Matter <10	0.032	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* PM-2.5 (All Particulate Matter <2.5	0.032	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Total VOC	0.023	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
1	* Sulfur Oxides - SOx	0.003	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Nitrogen Oxides - NOx	1.3	2.62	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Carbon Monoxide	1.092	2.21	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-10 (All Particulate Matter <10	0.099	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* PM-2.5 (All Particulate Matter <2.5	0.099	0.2	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Total VOC	0.072	0.23	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
2	* Sulfur Oxides - SOx	0.008	0.02	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
3	* PM-2.5 (All Particulate Matter <2.5	0.364	0	Mass Balance	Fabric Filter / B	96	* Uncontrolled	0
3	* PM-10 (All Particulate Matter <10	0.364	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-2.5 (All Particulate Matter <2.5	0.075	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
4	* PM-10 (All Particulate Matter <10	0.075	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-10 (All Particulate Matter <10	0.049	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
5	* PM-2.5 (All Particulate Matter <2.5	0.049	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-10 (All Particulate Matter <10	0.286	1.75	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
6	* PM-2.5 (All Particulate Matter <2.5	0.286	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
7	* PM-2.5 (All Particulate Matter <2.5	0.212	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0

7	* PM-10 (All Particulate Matter <10	0.212	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
8	* Nitrogen Oxides - NOx	1.087	1134	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Carbon Monoxide	0.913	1995	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-10 (All Particulate Matter <10	0.083	96	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* PM-2.5 (All Particulate Matter <2.5	0.083	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Total VOC	0.06	69	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
8	* Sulfur Oxides - SOx	0.007	8089	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Nitrogen Oxides - NOx	1.578	597	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Carbon Monoxide	1.326	1307	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-10 (All Particulate Matter <10	0.12	44	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* PM-2.5 (All Particulate Matter <2.5	0.12	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Total VOC	0.087	58	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
9	* Sulfur Oxides - SOx	0.01	3763	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Nitrogen Oxides - NOx	0.003	746	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Carbon Monoxide	0.002	1634	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Sulfur Oxides - SOx	0	4704	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-10 (All Particulate Matter <10	0	55	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* Total VOC	0	73	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
10	* PM-2.5 (All Particulate Matter <2.5	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
11	* PM-10 (All Particulate Matter <10	0.372	26.49	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
11	* PM-2.5 (All Particulate Matter <2.5	0.372	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
12	* Total VOC	1.045	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
12	* Total VOC	0.385	29.12	TANKS	* Uncontrolled	0	* Uncontrolled	0
14	* PM-10 (All Particulate Matter <10	0.142	4.2	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
14	* PM-2.5 (All Particulate Matter <2.5	0.142	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
15	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Sulfur Oxides - SOx	442.878	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Nitrogen Oxides - NOx	176.128	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
16	* PM-2.5 (All Particulate Matter <2.5	26.736	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* PM-10 (All Particulate Matter <10	26.736	96	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
16	* Total VOC	0.623	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	* Carbon Monoxide	0.128	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Carbon disulfide	0	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
16	Hydrogen sulfide	0	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
16	Carbonyl sulfide	0	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Sulfur Oxides - SOx	499.154	8089	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Nitrogen Oxides - NOx	138.815	1134	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
17	* PM-2.5 (All Particulate Matter <2.5	21.072	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* PM-10 (All Particulate Matter <10	21.072	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
17	* Total VOC	0.491	69	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	* Carbon Monoxide	0.101	1995	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
17	Carbonyl sulfide	0	0.16	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Hydrogen sulfide	0	45.3	Mass Balance	Recuperative T	98	* Uncontrolled	0
17	Carbon disulfide	0	17.05	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Sulfur Oxides - SOx	721.97	3763	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Nitrogen Oxides - NOx	203.355	597	Mass Balance	* Uncontrolled	0	* Uncontrolled	0

18	* PM-2.5 (All Particulate Matter <2.5	35.256	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* PM-10 (All Particulate Matter <10	35.256	44	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
18	* Carbon Monoxide	0.095	1307	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	* Total VOC	0.062	58	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
18	Carbon disulfide	0	11.18	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Hydrogen sulfide	0	19.86	Mass Balance	Recuperative T	98	* Uncontrolled	0
18	Carbonyl sulfide	0	0.24	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Sulfur Oxides - SOx	1256.148	4704	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Nitrogen Oxides - NOx	267.392	746	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	* PM-10 (All Particulate Matter <10	61.004	55	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* PM-2.5 (All Particulate Matter <2.5	61.004	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled	0
19	* Total VOC	4.125	73	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	* Carbon Monoxide	0.019	1634	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Cyanide and Cyanide compounds	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled	0
19	Carbon disulfide	0	13.97	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Hydrogen sulfide	0	39.09	Mass Balance	Recuperative T	98	* Uncontrolled	0
19	Carbonyl sulfide	0	0.29	Mass Balance	Recuperative T	98	* Uncontrolled	0
20	* Carbon Monoxide	92.735	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Total VOC	4.138	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Hydrogen sulfide	0.743	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbon disulfide	0.418	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Nitrogen Oxides - NOx	0.328	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-2.5 (All Particulate Matter <2.5	0.055	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* PM-10 (All Particulate Matter <10	0.055	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Cyanide and Cyanide compounds	0.034	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	* Sulfur Oxides - SOx	0.023	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
20	Carbonyl sulfide	0.009	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Carbon Monoxide	34.626	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Hydrogen sulfide	0.676	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Total VOC	0.541	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbon disulfide	0.156	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Sulfur Oxides - SOx	0.115	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* Nitrogen Oxides - NOx	0.081	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-10 (All Particulate Matter <10	0.048	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	* PM-2.5 (All Particulate Matter <2.5	0.048	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Carbonyl sulfide	0.036	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
21	Cyanide and Cyanide compounds	0.024	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Carbon Monoxide	163.487	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Total VOC	7.296	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Hydrogen sulfide	1.31	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbon disulfide	0.737	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Nitrogen Oxides - NOx	0.578	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-10 (All Particulate Matter <10	0.096	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* PM-2.5 (All Particulate Matter <2.5	0.096	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Cyanide and Cyanide compounds	0.059	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	* Sulfur Oxides - SOx	0.04	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
22	Carbonyl sulfide	0.016	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0
23	* Carbon Monoxide	72.913	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled	0

23	* Total VOC	3.254	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	Hydrogen sulfide	0.584	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	Carbon disulfide	0.329	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	* Nitrogen Oxides - NOx	0.258	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	* PM-10 (All Particulate Matter <10	0.043	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	* PM-2.5 (All Particulate Matter <2.5	0.043	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	Cyanide and Cyanide compounds	0.021	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	* Sulfur Oxides - SOx	0.018	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
23	Carbonyl sulfide	0.007	0	DEQ Approved Method	* Uncontrolled	0	* Uncontrolled
24	* Carbon Monoxide	42.782	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
24	* Nitrogen Oxides - NOx	28.399	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
24	* Total VOC	2.641	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
24	* PM-2.5 (All Particulate Matter <2.5	1.521	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled
24	* PM-10 (All Particulate Matter <10	1.521	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled
25	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled
25	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled
26	* PM-10 (All Particulate Matter <10	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled
26	* PM-2.5 (All Particulate Matter <2.5	0.017	0	Mass Balance	Fabric Filter / B	98	* Uncontrolled
27	* Nitrogen Oxides - NOx	1.761	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
27	* PM-2.5 (All Particulate Matter <2.5	0.267	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
27	* PM-10 (All Particulate Matter <10	0.267	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled
27	* Total VOC	0.006	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
27	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
28	* Nitrogen Oxides - NOx	1.761	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
28	* PM-2.5 (All Particulate Matter <2.5	0.267	1.75	Mass Balance	* Uncontrolled	0	* Uncontrolled
28	* PM-10 (All Particulate Matter <10	0.267	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
28	* Total VOC	0.006	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
28	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
29	* Nitrogen Oxides - NOx	2.776	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
29	* PM-10 (All Particulate Matter <10	0.421	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
29	* PM-2.5 (All Particulate Matter <2.5	0.421	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
29	* Total VOC	0.01	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
29	* Carbon Monoxide	0.002	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
30	* Nitrogen Oxides - NOx	2.034	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
30	* PM-10 (All Particulate Matter <10	0.353	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
30	* PM-2.5 (All Particulate Matter <2.5	0.353	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
30	* Total VOC	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
30	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
31	* Nitrogen Oxides - NOx	2.034	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
31	* PM-2.5 (All Particulate Matter <2.5	0.353	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
31	* PM-10 (All Particulate Matter <10	0.353	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
31	* Total VOC	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
31	* Carbon Monoxide	0.001	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
32	* Nitrogen Oxides - NOx	5.348	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
32	* PM-2.5 (All Particulate Matter <2.5	1.19	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
32	* PM-10 (All Particulate Matter <10	1.19	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
32	* Total VOC	0.083	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
32	* Carbon Monoxide	0	0	Mass Balance	* Uncontrolled	0	* Uncontrolled
33	* Nitrogen Oxides - NOx	7.307	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled

33	* Carbon Monoxide	6.137	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-10 (All Particulate Matter <10	0.555	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* PM-2.5 (All Particulate Matter <2.5	0.555	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Total VOC	0.402	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
33	* Sulfur Oxides - SOx	0.044	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Nitrogen Oxides - NOx	3.672	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Carbon Monoxide	3.084	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-10 (All Particulate Matter <10	0.279	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* PM-2.5 (All Particulate Matter <2.5	0.279	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Total VOC	0.202	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
34	* Sulfur Oxides - SOx	0.022	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Nitrogen Oxides - NOx	3.816	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Carbon Monoxide	3.205	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-2.5 (All Particulate Matter <2.5	0.29	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* PM-10 (All Particulate Matter <10	0.29	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Total VOC	0.21	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
35	* Sulfur Oxides - SOx	0.023	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Nitrogen Oxides - NOx	7.73	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Carbon Monoxide	6.493	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-10 (All Particulate Matter <10	0.587	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* PM-2.5 (All Particulate Matter <2.5	0.587	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Total VOC	0.425	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
36	* Sulfur Oxides - SOx	0.046	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Nitrogen Oxides - NOx	12.146	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Carbon Monoxide	10.202	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-2.5 (All Particulate Matter <2.5	0.923	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* PM-10 (All Particulate Matter <10	0.923	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Total VOC	0.668	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
37	* Sulfur Oxides - SOx	0.073	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Nitrogen Oxides - NOx	8.499	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Carbon Monoxide	7.139	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-2.5 (All Particulate Matter <2.5	0.646	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* PM-10 (All Particulate Matter <10	0.646	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Total VOC	0.467	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
38	* Sulfur Oxides - SOx	0.051	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Nitrogen Oxides - NOx	0.045	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Carbon Monoxide	0.037	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-2.5 (All Particulate Matter <2.5	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* PM-10 (All Particulate Matter <10	0.003	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Total VOC	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
39	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Nitrogen Oxides - NOx	0.016	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Carbon Monoxide	0.013	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-2.5 (All Particulate Matter <2.5	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* PM-10 (All Particulate Matter <10	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Total VOC	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
40	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Nitrogen Oxides - NOx	0.016	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Carbon Monoxide	0.013	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

41	* PM-2.5 (All Particulate Matter <2.5	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* PM-10 (All Particulate Matter <10	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
41	* Total VOC	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Nitrogen Oxides - NOx	0.105	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Carbon Monoxide	0.088	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-10 (All Particulate Matter <10	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* PM-2.5 (All Particulate Matter <2.5	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Total VOC	0.006	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
42	* Sulfur Oxides - SOx	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Nitrogen Oxides - NOx	0.03	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Carbon Monoxide	0.025	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Total VOC	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-2.5 (All Particulate Matter <2.5	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* PM-10 (All Particulate Matter <10	0.002	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
43	* Sulfur Oxides - SOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Nitrogen Oxides - NOx	0.108	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Carbon Monoxide	0.091	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-2.5 (All Particulate Matter <2.5	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* PM-10 (All Particulate Matter <10	0.008	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Total VOC	0.006	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
44	* Sulfur Oxides - SOx	0.001	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Carbon Monoxide	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
45	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
46	* Carbon Monoxide	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Carbon Monoxide	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0
47	* Nitrogen Oxides - NOx	0	0	AP-42 Factors	* Uncontrolled	0	* Uncontrolled	0

STACKS

Point#	ID	Stack Description	Height(ft)	Dia.(ft)	Temp(F)	Flow	Plume Ht.(ft)
1	18213	Boiler #1 stack	18	1	800	4610	0
2	18214	Boiler #2 Stack	18	1	800	4610	0
3	18215	CLEAN UP BAG FILTER #1	38	1	70	5000	0
4	18216	CLEAN-UP BAG FILTER #2	38	1	70	5000	0
5	18217	CLEAN-UP BAG FILTER #3	21	1	70	5000	0
6	18218	CLEAN-UP BAG FILTER #4	35	1	70	5000	0
7	18219	Shipping Dept CUBF #1	30	1	72	5000	0
8	18220	Thermal Oxidizer#1 - TOx for Production Units 1 and 2	150	10.5	1700	606000	0
9	18221	TO #2 - The TOx for Production Unit #3	150	9.5	1700	381000	0
10	18222	TO #4 - Production Unit #3	213	7	1700	369200	0
11	18223	CB Storage Tank	0	0	0	0	120
12	18224	Feedstock Storage Tank vent	0	0	0	0	33
14	33538	Shipping Dept. CUBF #2	0	0	0	0	30
15	41618	Sealed Bin Clean Up Bag Filter	35	1	70	5000	0
16	47207	Thermal Oxidizer # 1	150	11.5	1700	606000	0
17	47234	Thermal Oxidizer # 1	150	11.5	1700	606000	0
18	47238	Thermal Oxidizer # 2	150	9.5	1700	381000	0
19	47239	Thermal Oxidizer # 3	213	7	1700	369200	0
20	104185	EPN 3	35	1	70	5000	0

21	104186	EPN 7	35	1	70	5000	0
22	104187	EPN 11	35	1	70	5000	0
23	104188	EPN 20	35	1	70	5000	0
24	104189	EBF 4	35	1	70	5000	0
25	104190	Sealed Bin Clean-Up Bagfiller #2	35	1	70	5000	0
26	104191	Transloading Clean-Up Bagfiller	35	1	70	5000	0
27	104197	Dryer 11 Firebox stack	35	1	70	5000	0
28	104198	Dryer 12 Firebox	35	1	70	5000	0
29	104199	Dryer 21 Firebox	35	1	70	5000	0
30	104200	Dryer 31 Firebox	35	1	70	5000	0
31	104201	Dryer 32 Firebox	35	1	70	5000	0
32	104202	Dryer 41 Firebox	35	1	70	5000	0
33	104203	Reactor 11	35	1	70	5000	0
34	104204	Reactor 12	35	1	70	5000	0
35	104205	Reactor 21	35	1	70	5000	0
36	104206	Reactor 31	35	1	70	5000	0
37	104207	Reactor 32	35	1	70	5000	0
38	104208	Reactor 41	35	1	70	5000	0
39	104209	Waste Gas Combuster 11	150	10.5	1700	606000	0
40	104210	Waste Gas Combustor 12	150	10.5	1700	606000	0
41	104211	Waste Gas Combustor	150	10.5	1700	606000	0
42	104212	Waste Gas Combustor 31	150	10.5	1700	606000	0
43	104213	Waste Gas Combustor 32	150	10.5	1700	606000	0
44	104214	Waste Gas Combustor 41	150	10.5	1700	606000	0
45	104215	Emergency Generator 1 and 2	4	0.25	1075	353	0
46	104216	Emergency Generator 3	4	0.25	1075	353	0
47	104217	Emergency Generator 4	4	0.25	1075	557	0