OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

MEMORANDUM

November 6, 2024

THROUGH: 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: Chad Haecherl, Environmental Programs Specialist
Compliance Section

cc: Pamela Alexander, EHS Superintendent
Continental Carbon Corporation
1006 East Oakland Avenue
Ponca City, OK 74601
(580) 763-8128

SUBJECT: Full Compliance Evaluation at **Continental Carbon Corporation**
Carbon Black Production Facility
Section 10, Township 25N, Range 2E, Kay County, Oklahoma
1006 East Oakland Avenue
Ponca City, Kay County, Oklahoma
Facility ID: 333
FCE ID: 10414

Introduction

On June 24, 2024, from 1100 to 1415 hours, an unannounced full compliance evaluation ("FCE") was conducted at Carbon Black Production Facility ("Facility"), which is owned and operated by Continental Carbon Corporation ("CCC"). Chad Haecherl, Alexis Fessler, Ellie Howell, Environmental Programs Specialists, and Preston Loving, Environmental Programs Manager, of the Department of Environmental Quality, Air Quality Division ("DEQ"), conducted the evaluation. Pamela Alexander, EHS Superintendent, represented CCC. Hard hats, safety glasses, hearing protection, fire resistant clothing, and steel-toed boots were required for the on-site inspection. Proper credentials were presented by DEQ personnel upon arrival.

History/Process Description

This Facility is a carbon black manufacturing plant (SIC 2895) located in Kay County, Oklahoma. It is currently operating under Permit No. 2017-0914-TVR2 **(OnBase Document ID ("OID") 7796876)** and Permit No. 2004-302-C (M-4) **(OID 7762789)**. A complete process description can be found in the permit memorandums. A table listing recent permit history of the Facility is shown below.

OID	Permit No.	Date Issued	Description
7796876	2017-0914-TVR2	8/21/2018	CCC requested a renewal of the Facility's Title V permit. The renewal includes an update to the testing method required for particulate matter ("PM") to Method 5B to be consistent with the requirement in Permit No. 2004-302-C (M-2). This permit also incorporated the controls required by the Consent Decree, as authorized by 2004-302-C (M-2).
7886628	2017-0914-AD (M-1)	11/5/2018	CCC requested an AD that determined that the replacement of Unit #1 air pre-heaters qualified for routine repair, maintenance, and replacement, so no permitting action was required.
7762789	2004-302-C (M-4)	11/30/2018	CCC requested a construction modification to do the following: • Operate the electric cogeneration boilers prior to installation of the selective catalytic reduction ("SCR") system, and dry scrubber system. EPA has granted an extension to the Consent Decree ("CD") which does not require the SCR or scrubber controls be operational prior to April 1, 2021. • Continue to vent the combustion gases from the plant's dryer combustors to the existing thermal oxidizer exhaust stacks. • Remove the requirement to operate continuous emission monitoring systems ("CEMSs") during this scenario.
8182210	2017-0914-AD (M-2)	8/13/2020	CCC requested AD that clarified the stack testing requirements in Permit No. 2004-302-C (M-4) for the Facility.
--	2023-0099-TVR3	Technical Review	CCC requested a renewal of the Facility's Title V permit.
--	2017-0914-AD (M-4)	Application Withdrawn	CCC requested an AD to establish permit requirements for the replacement of the Unit 2 Reactor.
--	2017-0914-C (M-5) PSD	Technical Review	CCC intends to replace one carcass grade reactor (RX #21) with a tread grade reactor (RX #21T). There is no change in emissions, but the project will require PSD review.
--	2017-0914-C (M-3) PSD	Technical Review	CCC requests PSD modification to increase nitrogen oxides, sulfur dioxide, carbon monoxide, and particulate matter emissions limits.

According to OAC 252:100-8-4(b)(8), a Title V permit renewal application shall be submitted 180 days before the date of permit expiration.

Title V Permit No.	Application Date	Date Issued	Title V Permit Expiration Date	Title V Permit Renewal Deadline
2017-0914-TVR2	6/9/2017	8/21/2018	8/22/2023	2/23/2023

2023-0099-TVR3	2/2/2023	N/A	N/A	N/A

It appears the Facility applied for Title V Permit Renewal No. 2023-0099-TVR3 in a timely manner.

The project proposed in Permit No. 2004-302-C (M-4) has been completed. It should be noted the proposed SCR and dry scrubber systems have also been installed. Permit No. 2004-302-C (M-4) lists the following equipment located at the Facility:

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)	Production Unit No. 1-Transition Events
MBF #2	EPN #7 (N/C)	Production Unit No. 2-Transition Events
MBF #3	EPN #11 (N/C)	Production Unit No. 3-Transition Events
MBF #4	EPN #20 (N/C)	Production Unit No. 4-Transition Events

N/C – Normally Closed

EUG 3 Exhaust Bag Filters

Vent stacks will be routed to the outlet of the proposed boilers prior to the SCR and scrubber system.

EUG 4 Cleanup Bag Filters (CUBF)

EU	Point	Name
CUBF #1	EPN #10	Clean Up Bag Filter 1
CUBF #2	EPN #6	Clean Up Bag Filter 2
CUBF #3	EPN #14	Clean Up Bag Filter 3
CUBF #4	EPN #24	Clean Up Bag Filter 4
CUBF #5	EPN #23	Shipping Dept. Clean Up Bag Filter 1
CUBF #6	EPN #34	Shipping Dept. Clean Up Bag Filter 2
CUBF #7	EPN#32	Sealed Bin Clean Up Bag Filter 1
CUBF #8	EPN#35	Sealed Bin Clean Up Bag Filter 2
CUBF #9	EPN#33	Transloading Clean Up Bag Filter

EUG 5 Clean Gas and Energy Units

EU	Point	Name	Const. Date

CGEU 1	EPN #40	Clean Gas and Energy Unit 1	2017
CGEU 2	EPN #41	Clean Gas and Energy Unit 2	2017
CGEUH 1	EPN #40	Clean Gas and Energy Unit 1-Heat Load	2017
CGEUH 2	EPN #41	Clean Gas and Energy Unit 2-Heat Load	2017

EUG 6 Firebox Stacks

EU	Point	Name	Const. Date
FS 11	EPN 5	Dryer 11 Firebox Stack	1954
FS 12	EPN 8	Dryer 12 Firebox Stack	1954
FS 21	EPN 9	Dryer 21 Firebox Stack	1954
FS 31	EPN 12	Dryer 31 Firebox Stack	1959
FS 32	EPN 13	Dryer 32 Firebox Stack	1959
FS 41	EPN 21	Dryer 41 Firebox Stack	1991

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	1968
	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	Reactor 11- Heat Load	1955
RX #12	EPN #3	Reactor 12- Heat Load	1955
RX #21	EPN #7	Reactor 21- Heat Load	1955
RX #31	EPN #11	Reactor 31- Heat Load	1959
RX #32	EPN #11	Reactor 32- Heat Load	1959
RX #41	EPN #20	Reactor 41- Heat Load	1991

EUG 9 Waste Gas Combustors (WGC)

EU	Points	Unit No.	MMBTUH	Const. Date
WGC #11	EPN 40/41	WGC 11- Heat Load	19.3	1954
WGC #12	EPN 40/41	WGC 12- Heat Load	19.3	1954
WGC #21	EPN 40/41	WGC 21- Heat Load	19.3	1954
WGC #31	EPN 40/41	WGC 31- Heat Load	19.3	1959
WGC #32	EPN 40/41	WGC 32- Heat Load	19.3	1959
WGC #41	EPN 40/41	WGC 41- Heat Load	24.75	1991

EUG 10 Carbon Black Tanks

EU	Point	Contents	Size (lbs)
CB Tanks	TK 11	Carbon Black	750,000
	TK 12	Carbon Black	125,000
	TK 13	Carbon Black	750,000
	TK 14-17	Carbon Black	375,000
	TK 21-22	Carbon Black	375,000
	TK 23	Carbon Black	750,000
	TK 31	Carbon Black	750,000
	TK 32	Carbon Black	125,000
	TK 33	Carbon Black	750,000
	TK 34-36	Carbon Black	375,000
	TK 41-47	Carbon Black	525,000
	TK 48	Carbon Black	125,000
	TK 49	Carbon Black	40,000
	TK OQ1	Carbon Black	125,000
	TK OQ2	Carbon Black	125,000
	TK OQ3	Carbon Black	125,000
	TK OQ4	Carbon Black	125,000
	SB 1 & SB2	Carbon Black	30,000
	DT 11	Day Tank	40,000
	DT 12	Day Tank	40,000
	DT 21	Day Tank	40,000
	DT 31	Day Tank	40,000
	DT 32	Day Tank	40,000
	DT 41	Day Tank	40,000

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	1886956	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)	63	40	45,325	867	450
5	30	36			
6	38	12	5,000	106.1	70
7 (N/C)	60	40	45,325	867	450
8	75	36			
10	38	12	5,000	106.1	70
11 (N/C)	58	40	45,325	867	450

EPN	Height (feet)	Diameter (inches)	Flow (ACFM)	Velocity (FPS)	Temperature (°F)
14	21	12	5,000	106.1	70
20 (N/C)	69	40	45,325	867	450
21	10	36	0	0	900
24	35	12	5,000	106.1	70
23	30	12	5,000	106.1	70
34	30	12	5,000	106.1	70

(N/C) – Normally Closed, only open for transition events and reactor heat load.

Emission/Source Classification

The Facility is classified as a Prevention of Significant Deterioration ("PSD") major source of nitrogen oxides ("NO_X"), carbon monoxide ("CO"), sulfur dioxide ("SO_2") and particulate matter ("PM"). The Facility is a major source of volatile organic compounds ("VOCs") and hazardous air pollutants ("HAPs"). The potential emissions for the Facility are 2,484.76 tons per year ("TPY") of NO_X, 4,941.31 TPY of CO, 230.06 TPY of VOC, 16,555.2 TPY of SO_2, and 652.30 TPY of PM. HAP potential emissions are listed as 132.88 TPY of total reduced sulfur ("TRS"), 89.99 TPY of hydrogen sulfide ("H_2S"), 42.20 TPY of carbon disulfide ("CS_2"), and 2.14 TPY of carbonyl sulfide ("COS").

Three years of emissions inventory ("EI") summaries (2021, 2022, and 2023) were reviewed for the purposes of this evaluation **(OIDs 8460814, 8548383, and 21974779)**. A summary of the emissions with the resulting percent changes between reporting years is provided in the table below.

Emissions Inventory Summary					
Pollutant	**2021**	**% Change**	**2022**	**% Change**	**2023**
CO	91.805	*1,597.79*	1,558.654	*19.65*	1,864.984
NO_X	1,037.429	*-86.64*	138.562	*16.63*	161.599
PM	178.648	*-74.32*	45.880	*-9.74*	41.409
SO_2	2,248.464	*-81.78*	409.600	*-47.72*	214.148
VOC	13.309	*67.75*	22.326	*84.19*	41.123
CS_2	0.000	--	1.813	*32.16*	2.396
COS	0.000	--	0.072	*34.72*	0.097
H_2S	0.000	--	3.635	*32.63*	4.821

Emissions of CO, NO_X, PM, SO_2, and VOC significantly (>30%) changed from 2021 to 2022. This is primarily due to the installation of the clean gas and energy cogeneration units ("cogen") units, which occurred in 2022. The significant emissions changes from 2022 to 2023 is primarily due production amounts.

State/Federal Regulatory Applicability

OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-19 (PM)

This section specifies a PM emissions limitation of 0.6 pound 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 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.

OAC 252:100-31 (Sulfur Compounds)
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 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 at maximum storage temperature 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 and is not subject to this subchapter.

FEDERAL REGULATIONS
PSD, 40 C.F.R. Part 52
Facilities with potential emissions above the major source threshold of 250 TPY are subject to this Part.

The Facility is a PSD major source and is in an attainment area. Any future increases in emissions will be evaluated in comparison to the PSD significance levels.

NSPS, 40 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 of 6.28 MMBTUH, below the applicability threshold of these Subparts.

Subparts K, Ka, Kb, Volatile Organic Liquid (VOL) Storage Vessels.

The carbon black oil tanks at this site are not subject because the tanks were constructed prior to the June 11, 1973, effective date of Subpart K.

Subpart JJJJ applies to Stationary Spark Ignition Internal Combustion Engines ("SI-ICE"). It promulgates emission standards for new SI engines ordered after June 12, 2006, that are manufactured after certain dates, and for new SI engines modified or reconstructed after June 12, 2006.

Three of the natural gas-fired emergency generators at the Facility were constructed prior to the applicability date; therefore, they are not subject to this subpart.

The emergency generator Pond 1 commenced construction after June 12, 2006, but it was manufactured on September 1, 2006. This is prior to the January 1, 2007, manufacture applicability date of the subpart and is thus not subject to this subpart.

NESHAP, 40 C.F.R. Part 63
Subpart SS applies to closed vent systems, control devices and routing of air emissions to a fuel gas system or process when another subpart references the use of this subpart for such air emission control.

The Facility has opted to reduce total HAP emissions by venting emissions through a closed vent system to cogen units and waste gas combustors meeting the requirements of 40 C.F.R. Part 63, Subpart SS, §63.982(a)(2). Because the Facility utilizes non-flare devices with the closed vent system, the Facility must comply with the following requirements:

§63.983 Closed vent systems.

The Facility's closed vent systems are designed and operated to collect the emissions from the carbon reactors and to route them to the waste gas combustors and thermal oxidizers as required by §63.983(a)(1).

This system is operated at all times when emissions are vented to them as required by §63.983(a)(2), and the system does not contain bypass lines.

The Facility conducts annual Leak Detection and Repair ("LDAR") every January to comply with §63.983(b).

In June 2005, the Facility conducted an initial inspection of their closed vent system as specified in §63.983(c), which was discussed in a prior FCE.

§63.988 Incinerators, boilers, and process heaters.

The Facility uses two cogen units and six waste gas combustors to meet the 98 wt% HAP reduction specified in 40 C.F.R. Part 63, Subpart YY, which shows compliance with § 63.988(a)(1).

According to §63.988(a)(2), these control devices must be operated at all times when emissions are vented to them. Ms. Alexander stated that the control devices are operated at all times except during startup, shutdown, and malfunction ("SSM") events, which are reported on a semiannual basis. Based on these records, the Facility appears to be in compliance with §63.988(a)(2).

The Facility conducted initial performance tests of the thermal oxidizers (now removed) waste gas combustors in 2004 that showed 0.00 parts per million of CS2 and COS, meeting the required 98 wt% reduction in HAP emissions, which is in compliance with § 63.988(b). The cogen units operate in the same temperature range as the thermal oxidizers did; therefore, the change to the cogen units provide approximately the same level or greater control of HAP emissions.

The cogen units and waste gas combustors at the Facility are equipped with thermocouples to continuously monitor the temperature except during SSM events. Based on this information, the Facility appears to be in compliance with §63.988(c).

§63.998 Recordkeeping requirements.

The temperature data for the cogen units and waste gas combustors provided in the Facility's SARs was reviewed and showed that the temperatures were recorded as required by §63.988(b).

The Facility submits a 40 C.F.R. Part 63, Subpart YY SSM report semiannually to DEQ. This record includes the date and duration of each SSM event for process equipment or air pollution control equipment. Compliance will be discussed under the *On-site Evaluation* section of this report.

§63.999 Notification and other reports.

The Facility submits 40 C.F.R. Part 63, periodic reports as required by 40 C.F.R. Part 63, Subpart YY in the Facility's SARs. The Facility appears to be in compliance with §63.999(c)(1) based on these submittals.

According to §63.999(c)(2)(i), the Facility is required to submit LDAR inspection records with the 40 C.F.R. Part 63, Subpart SS and YY SSM semiannual reports, if leaks were detected during the semiannual period.

LDAR inspection records were provided to DEQ, demonstrating compliance.

§63.999(c)(2)(ii) does not apply to the Facility because the Facility does not have any bypass lines.

The requirements of §63.999(c)(6) currently do not apply to the Facility because the main process filter vents are routed to waste gas combustors that use the streams as primary fuel. Streams from process vents used as primary fuel are exempt from monitoring per §63.988(c).

Subpart YY (Generic 40 C.F.R. Part 63, Standards – Source Category: Carbon Black Production)
This subpart applies to new and existing carbon black production units located at a major source of HAP emissions listed in Table 1 of 40 C.F.R. § 63.1100(a).

The Facility is subject to this subpart due to being a carbon black production facility and a major source of HAP emissions. The Facility's applicability to this subpart was also confirmed in AD No. 98-176-AD (M-5) by DEQ. Compliance with this subpart will be discussed under the *On-site Evaluation* section of this report.

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 three existing emergency stationary RICE located on-site that are subject to this subpart. Requirements for these engines under Table 2c are summarized as follows:

- **Change oil and filter every 500 hours of operation or annually,**
- **Inspect spark plugs every 1,000 hours of operation or annually, and**
- **Inspect all hoses and belts every 500 hours of operation or annually.**

Engine runtime hour records are required from the Facility to ensure that the engines have not operated more than 500 hours in a year unless under emergency conditions.

Pond 1 demonstrates compliance with this rule by complying with NSPS Subpart JJJJ. Compliance with this subpart will be discussed under the *On-site Evaluation* section of this report.

Subpart DDDDD (Industrial Boilers and Process Heaters)
This subpart affects industrial, commercial, and institutional boilers and process heaters that are operating at a major source of HAP emissions.

The two 6.28 MMBTUH boilers are considered new affected industrial boilers and are subject to this Subpart. Both boilers 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 per 40 C.F.R. § 63.7540. Compliance with this subpart will be discussed under the *On-site Evaluation* section of this report.

Compliance Assurance Monitoring ("CAM"), 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 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 cogen units at the Facility are used to control emissions of NOx, CO, PM, VOCs, SO_2, and other air toxic compounds (H_2S, CS_2, COS, and HCN). The CAM plan for the cogen units will be addressed in the operating permit.

The waste gas combustors (driers) are also used to control emissions from the carbon black furnaces. However, emissions from the driers are exhausted after the boilers and prior to the SCR and scrubber. Therefore, no CAM requirements are applicable to these emission units.

Emissions from the main and exhaust baghouses are exhausted through the cogen units, no CAM requirements are applicable to these control devices.

Evaluation/Enforcement History
Two FCEs have been completed in the last five years at the Facility. Summaries of the FCEs are provided below.

FCE No. 9056 – The evaluation was conducted on June 25, 2020. Ten (10) violations and three areas of concern were discovered as a result of this evaluation. Enforcement Case No. 10381 was opened to address the compliance issues.

FCE No. 9404 – The evaluation was conducted on August 26, 2021. Two violations were discovered as a result of this evaluation. Enforcement Case No. 10432 was opened to address the compliance issues.

Three on-site partial compliance evaluations ("PCE") have been conducted since the last FCE (August 26, 2021). Summaries of the PCEs are provided below.

PCE No. 61244 – The evaluation was conducted on August 23, 2022, in response to multiple complaints against the Facility. Three violations were discovered as a result of this evaluation. Enforcement Case No. 10629 was opened to address the compliance issues.

PCE No. 62818 – The evaluation was conducted on March 9, 2023, in response to a complaint. No issues of noncompliance were discovered as a result of this evaluation.

PCE No. 63206 – The evaluation was conducted on April 3, 2024, in response to a complaint. Two violations were discovered as a result of this evaluation. Enforcement Case No. 12755 was opened to address the compliance issues.

The following Enforcement Cases are still open concerning the Facility:

Case Number	Consent Order	Date Opened	Date Closed	Violations
7877	--	5/5/2015	--	This case tracks completion of the requirements of Federal Consent Decree Case No. 5:15-cv-00290F.

8456	--	9/16/2016	--	Addresses the following compliance issues discovered during FCE 07401: 1. No 40 C.F.R. Part 63, Subpart 5D initial notification of startup or notification of compliance status was submitted to DEQ for Boiler #1 and Boiler #2. 2. TO_X Unit 1 and TO_X Unit 4 failed the 2015 stack tests by exceeding their PM_{10} emission limits 3. Excess emission ("EE") reports were not submitted to DEQ for the 2015 failed stack tests
8637	--	12/22/2016	--	Self-disclosed exceedance of the PM_{10} limit during a stack test of TO_X Unit 1 on 10/11/2016.
9894	--	7/31/2020	--	Addresses the following compliance issues discovered during FCE 08348: 1. TO_X Unit 4 failed the stack test conducted on 11/14/17 by exceeding its PM_{10} emission limit 2. Failure to submit DEQ Form 100-925 for the semiannual reports ("SARs") submitted to DEQ for the reporting periods of 8/1/16-1/31/17 and 8/1/17-1/31/18.
10381		5/4/2022	--	Addresses the following compliance issues discovered during FCE 9056: 1. The Facility failed to comply with §§63.983(b)(1)(i)(B) and 63.998(d) by not providing LDAR inspection records for 2019 and 2020 to DEQ, which would confirm that annual inspections are conducted of their closed vent system and that records are maintained as required. 2. The Facility failed to comply with Standard Condition III(C) and Specific Condition 19 of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2 by not submitting thermal oxidizer maintenance records for the reporting period of February 1, 2018, through July 31, 2020, in the SARs submitted to DEQ on 8/9/18, 2/27/19, 8/27/19, 2/28/20, and 8/17/20. These records are required to be maintained by Specific Condition 16(c) of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2, and are required to be submitted to DEQ semiannually according to the above referenced standard and specific conditions. 3. The Facility failed to comply with Standard Condition III(C) and Specific Condition 19 of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2 by not submitting continuous temperature data for the thermal oxidizers and waste gas combustors and all occasions when operating temperatures of the thermal oxidizers and waste gas combustors fall outside the established temperature range for the reporting period of February 1, 2019, through July 31, 2019, in the SAR submitted to DEQ on 8/27/19. These records are required to be maintained by Specific Conditions 16(a) and (d) of Permit No. 2017-0914-TVR2 and are required to be submitted to DEQ semiannually according to the above referenced standard and specific conditions. Since the records were not provided in the SAR, it

				could not be determined that the temperature data of the thermal oxidizers and waste gas combustors, and All occasions when these control devices fell below 1,500°F are maintained as required for the above reporting period. Thus, the Facility is in noncompliance of Specific Conditions 9(b), 16(a), 16(d), and 21 of Permit No. 2017-0914-TVR2, and §63.988(b)(i) as well. 4. The Facility failed to comply with Standard Condition III(C) and Specific Condition 19 of Permit No. 2017-0914-TVR2 by not submitting the total natural gas usage for each boiler in units of SCF for the reporting period of February 1, 2020, through July 31, 2020, in the SAR submitted to DEQ on 8/17/20. These records are required to be maintained by Specific Condition 16(g) of Permit No. 2017-0914-TVR2, and should be submitted to DEQ semiannually according to the above referenced standard and specific conditions. Since the records were not provided in the SAR, it could not be determined that the natural gas usage of each boiler is maintained as required for the above reporting period, so the Facility is in noncompliance of Specific Condition 16(g) of Permit No. 2017-0914-TVR2 as well. 5. The Facility failed to comply with Standard Condition III(C) and Specific Condition 19 of Permit No. 2017-0914-TVR2 by not submitting the MACT Subpart ZZZZ maintenance records and the emergency generator operating hours for the reporting period of February 1, 2020, through July 31, 2020, in the SAR submitted to DEQ on 8/17/20. These records are required to be maintained by Specific Condition 14(k) and 16(j) of Permit No. 2017-0914-TVR2 and §63.6655(f), and should be submitted to DEQ semiannually according to the above referenced standard and specific conditions. 6. The Facility failed to comply with Specific Condition 18, and Standard Conditions IV(A) and (B) of Permit No. 2017-0914-TVR2 by not certifying their compliance status throughout the ACC certification period of August 1, 2019, through July 31, 2020, as continuous or intermittent, and did not certify their current compliance status as continuous or intermittent with each specific condition and each standard condition of Permit No. 2017-0914-TVR2 in the ACC submitted to DEQ on August 17, 2020. 7. The Facility failed to comply with §63.6602 and Specific Condition 14 of Permit No. 2017-0914-TVR2 by not conducting maintenance requirements listed under #5 of Table 2c to Subpart ZZZZ on the emergency generators by June 30, 2020. 8. The Facility failed to comply with §63.6655(f)(1), and Specific Conditions 14(k) and 16(j) by not

				maintaining emergency generator operating hour records for the reporting period of February 1, 2020, through July 31, 2020. 9. The Facility failed to comply with §§ 63.7550(b)(1)-(4), and Specific Condition 15(v) of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2 by not submitting MACT Subpart 5D biennial compliance reports to DEQ by January 31 in 2018 and 2020 for Boiler #1 and by January 31 in 2017, 2019, and 2021 for Boiler #2. 10. The Facility failed to comply with Specific Condition 20(B) of Permit No. 2017-0914-TVR2. The Facility did not provide test plans to DEQ 30 days prior to each of the following test dates: November 12, 2019, November 13, 2019, and November 14, 2019.
12755		4/22/2024	--	Addresses the following compliance issues discovered during complaint inspection: 1. On February 28, 2024, CCC failed to control fugitive dust originating from the Facility. The inspectors observed carbon black and lime buildup on the CPs property. This is a violation of OAC 252:100-29. 2. On April 3, 2024, the Facility had excess emissions of particulate matter and opacity that were reported to DEQ on April 4, 2024. All excess emissions are considered violations under OAC 252:100-9-8(a). OAC 252:100-9-8(b) and (c) allow for mitigating factors for penalties on EEs that occurred during startup, shutdown, or malfunction. The cause of the malfunction was reported to have been corrected.

Annual Compliance Certifications/Semiannual Reports

The Facility is classified as a PSD major source in Permit No. 2017-0914-TVR2 and is required to submit Annual Compliance Certifications ("ACCs") no later than 30 days after the anniversary date of the issuance of the Facility's initial Title V Permit.

The initial permit was issued on April 21, 2000, but the Facility has alternative ACC and Semiannual Monitoring and Deviation Report ("SAR") submittal dates under Specific Conditions 18 and 19 of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2. ACCs must be submitted no later than August 30th each year. SARs must be submitted by March 2nd and August 30th each year. The following ACCs and SARs have been submitted since the last FCE:

Annual Compliance Certifications				
OID	**Reporting Period**	**Date Received**	**Late**	**Deviations Reported**
8439274	8/1/2021 – 7/31/2022	8/30/2022	No	None
11677990	8/1/2022 – 7/31/2023	8/30/2023	No	None
Semiannual Reports				
OID	**Reporting Period**	**Date Received**	**Late**	**Deviations Reported**
20623684	8/1/2021 – 1/31/2022	3/1/2022	No	None

8439270	2/1/2022 – 7/31/2022	8/30/2022	No	None
8529033	8/1/2022 – 1/31/2023	3/15/2023	Yes	None
12272025	2/1/2023 – 7/31/2023	8/30/2023	No	None
21273599	8/1/2023 – 1/31/2024	2/27/2024	No	None
50589257	2/1/2024 – 7/31/2024	8/20/2024	No	None

The SAR covering the reporting period of August 1, 2022, through January 31, 2023, was received 13 days late. This is included as a violation under the ***Exit Interview/Summary*** section of this report.

Excess Emissions

CCC reported 14 excess emission ("EE") events since the last FCE, which was conducted August 26, 2021. The table below summarizes the events.

EE ID	Date of Event	30-Day Report Date	Affirmative Defense?	Emission Unit	Cause of Event	Pollutant	Excess Emissions Amount
HPM-PK7V-TM95V	6/21/2022	8/9/2022*	No	EUG 2 (Production Unit 1 – Transition Events)	Malfunction	Opacity	45%
HPN-CB8Y-RA3EJ	7/27/2022	9/12/2022*	Yes	EUG 5 (Cogen 2)	Malfunction	Opacity/ Total PM	80%/ 297.34 lbs/hr
HPN-CAZY-EZPQD	8/19/2022	9/13/2022	Yes	EUG 5 (Cogen 1)	Malfunction	Opacity/ Total PM	32%/ 77.07 lbs/hr
HPN-CAK0-41AA5	6/21/2022	8/9/2022*	Yes	EUG 5 (Cogen 1)	Malfunction	Opacity/ Total PM	42%/ 106.37 lbs/hr
HPN-RZZ8-93PG2	9/30/2022	10/28/2022	Yes	EUG 5 (Cogen 2)	Malfunction	SO_X	48.92 ppmvd
HPQ-8ZFT-5SVDX	12/3/2022	12/27/2022	Yes	EUG 5 (Cogen 2)	Malfunction	SO_X	49.88 ppmvd
HPQ-8YVC-YQE8C	11/29/2022	12/27/2022	Yes	EUG 5 (Cogen 1)	Malfunction	SO_X	182.52 ppmvd
HPR-8GCD-RHGD3	12/29/2022	1/31/2023*	Yes	EUG 2 (Production Unit 2 – Transition Events)	Malfunction	SO_X	219.05 ppmvd
HPR-8G6D-844VQ	1/4/2023	1/30/2023	Yes	EUG 2 (Production Unit 1 – Transition Events)	Malfunction	SO_X	93.86 ppmvd
HPS-1NJC-Z5Z5X	2/1/2023	3/10/2023*	Yes	EUG 5 (Cogen 1)	Malfunction	SO_X	138.34 ppmvd
HPS-4MMZ-QXPJA	2/8/2023	3/10/2023	Yes	EUG 5 (Cogen 2)	Malfunction	SO_X	46.03 ppmvd

EE ID	Date of Event	30-Day Report Date	Affirmative Defense?	Emission Unit	Cause of Event	Pollutant	Excess Emissions Amount
HPV-SDNW-Y9YHG	4/16/2023	5/24/2023*	Yes	EUG 5 (Cogen 1)	Malfunction	PM	93.86 ppmv
HPX-5DDW-XV9FD	7/28/2023	8/24/2023	Yes	EUG 5 (Cogen 1)	Malfunction	PM	267.63 lbs/hr
HQ2-RK72-RXVC3	4/3/2024	4/5/2024	Yes	EUG 2 (Production Unit 1 – Transition Events)	Malfunction	Opacity/ PM	65%/ 127.33 lbs/hr

* Late 30-day report

OAC 252:100-9-8(a) defines all periods of EEs regardless of cause to be violations of the Act and rules promulgated thereunder, the Oklahoma Clean Air Act and rules promulgated thereunder, and applicable permit or other authorization of the DEQ. Mitigating factors on and after September 15, 2016, may provide relief from civil or administrative penalties that would otherwise be assessed by DEQ for EEs that occur during periods of startup, shutdown, and malfunction. However, mitigating factors is prohibited if the EE was an exceedance of a federally promulgated emission limit, including, but not limited to, 40 C.F.R. Parts 60, 61, and 63. None of the EE events identified in the table above were a direct violation of a federally promulgated emission limit; therefore, mitigating factors received with those events identified in the table above are allowed with the exceptions of EE ID HPM-PK7V-TM95V.

All EE events identified in the table above are violations of emission limits identified in Specific Condition 1 and/or the 20% opacity limit identified in OAC 252:100-25-3.

OAC 252:100-9-7(a) requires an immediate notice to be submitted no later than 4:30 p.m. the following working day of the first occurrence of EEs in each EE event, except as provided below.

- Excess emission events with a primary cause of startup or shutdown as defined in OAC 252:100-1-3; or
- Excess emissions that do not exceed ten percent (10%) opacity above the applicable opacity limit or standard; or
- Excess emissions that do not exceed ten percent (10%) of the applicable non-opacity emission limit or standard and are less than two hundred (200) pounds of the relevant regulated pollutant during any twenty-four (24) hour period.

Immediate notices for each EE event listed in the table above were received within the required timeframe.

OAC 252:100-9-7(b) requires an EE event report to be submitted no later than thirty (30) calendar days after the start of any excess emission event. EE reports for each EE event listed in the table above were received within the required timeframe with the exception of EE IDs HPM-PK7V-TM95V, HPN-CB8Y-RA3EJ, HPN-CAK0-41AA5, HPR-8GCD-RHGD3, HPS-1NJC-Z5Z5X, and HPV-SDNW-Y9YHG.

Excess Emission ID HPM-PK7V-TM95V violated SIP limits or permit limits that have been set taking into account potential emissions during startup and shutdown, including, but not limited to, limits that indicate they apply during startup and shutdown, and limits that explicitly indicate they apply at all times or without exception; therefore, CCC is not eligible to qualify for mitigating factors to this event.

- EE ID HPM-PK7V-TM95V reported the cause of this event was the result of leaking bag filters caused by cage separation.

These excess emissions are addressed in the ***Exit Interview/Summary*** section of this report below.

On-Site Evaluation
Upon arrival at the Facility the permit was reviewed, records were requested, and an equipment inventory was conducted. The Facility was under normal operation.

SPECIFIC CONDITIONS OF PERMIT NO. 2017-0914-TVR2

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

The equipment above was found as listed. Facility personnel confirmed that the boilers are only fueled with commercial grade natural gas.

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

The thermal oxidizers are out-of-service and have been replaced with the cogen units.

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, 26	Unit No. 3	19.3	1959
WGC #32	EPN #12, 26	Unit No. 3	19.3	1959
WGC #41	EPN #20, 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 (Unit #1 & Unit #2)	lb/hr	270	475	17	45.40	40.97	2,568
	TPY	1,135	1,995	69	190.68	172.07	8,089
TO #2 (Unit #3)	lb/hr	142	311	14	44.47	41.96	1,195
	TPY	597	1,308	58	186.77	176.23	3,763
TO #4 (Unit #4)	lb/hr	178	389	18	54.34	37.60	1,494
	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

The thermal oxidizers are out-of-service and have been replaced with the cogen units.

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

The above equipment was found as listed.

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)]

The Facility operates continuously as permitted.

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]

The boilers in EUG 1 were observed to have permanent identification plates as required, and that the serial numbers matched what was in the permit. Based on these observations, the Facility appears to be in compliance with this specific condition.

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 provided by CCC (Confidential) indicate that the 3.0% feedstock sulfur content limit has not been exceeded since the last FCE. Based on these records, the Facility appears to be in compliance with this specific condition.

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)]

Ms. Alexander stated that sulfur content is sampled daily. Records provided (Confidential) indicate that weekly averages are generated from these daily samples and average hourly sulfur dioxide emissions rates are calculated as required, and are in compliance with this specific condition.

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]

Ms. Alexander stated that all of the above listed equipment is fired with pipeline grade natural gas that is purchased from Oklahoma Natural Gas. CCC provided a natural gas bill to confirm (Confidential). Based on this record, the Facility appears to be in compliance with this specific condition, as well as Specific Condition 4 in Permit No. 2004-302-C (M-4).

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)]

Ms. Alexander stated that the bypass stacks on the Main Bag Filters and Drying Drums are utilized only during start-up, shut-down, and malfunction of the Facility as required by this specific condition, as well as Specific Condition 5 in Permit No. 2004-302-C (M-4).

8. All off-gases from the carbon black reactors at the facility shall be oxidized in either the CGEUs, 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)]

The thermal oxidizers are out-of-service and have been replaced by the cogen units. Ms. Alexander confirmed that all off-gasses from the carbon black reactors at the Facility are oxidized in either the cogen units and/or the waste gas combustors. Based on this statement, the Facility appears to be in compliance with this specific condition.

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.

Ms. Alexander stated that the waste gas combustors are operated at a temperature of at least 1,500°F when waste gas is being injected into the equipment. **Temperature data of the waste**

gas combustors was submitted and indicated that the minimum temperature was maintained except during periods of SSM of the waste combustors. These SSM events are reported semiannually as required in the Facility's 40 C.F.R. Part 63, Subpart YY SSM reports (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).

Ms. Alexander verified that the temperature of the waste gas combustors are monitored and recorded continuously using thermocouples, with readings taken every 15 minutes and averaged for an hourly temperature reading. Records received indicate that the temperatures are recorded every hour as required. Based on the temperature records (Confidential) and Ms. Alexander's statement, the Facility appears to be in compliance with this specific condition.

c. The residence time of the stack gases shall be at least 1 (one) second.

Ms. Alexander stated that the residence time of the stack gases of the waste gas combustors are at least 1 second. The residence time of the stack gases was determined to be 1.5 seconds in the Facility's 2016 FCE, which is in compliance with this requirement.

d. Proper operation of the thermocouple shall be verified annually by an instrument which is calibrated annually.

Ms. Alexander stated that the thermocouples are verified annually as required. Calibration records were provided and based on these records, the Facility appears to be in compliance with this specific condition (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.

The thermal oxidizers are out-of-service and have been replaced by the cogen units.

f. The thermal oxidizers shall only be fueled with pipeline quality natural gas.

The thermal oxidizers are out-of-service and have been replaced by the cogen units.

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 99% 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)]

Ms. Alexander stated that all discharges from the dryer, bagging operation, screening operation, and associated conveying equipment are processed with a baghouse with a design

efficiency of 99% or more as required. The pressure drop across the baghouse are monitored digitally from the control room and an alarm exists to alert personnel of pressure issues with the baghouse. This system was observed during the on-site evaluation. Based on this information, the Facility appears to be in compliance with this specific condition and Specific Condition 10 of Permit No. 2004-302-C (M-4).

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.

Ms. Alexander stated that the particulate monitoring/sensing devices on the Main Bag Filters at the Facility are operated continuously except during periods of device maintenance, calibration, testing, malfunction, failure, or unit shutdown. These devices were confirmed by Ms. Alexander to be operated in the normal operating range recommended by the manufacturer. Based on these statements, the Facility appears to be in compliance with this specific condition and Specific Condition 9(a) of Permit No. 2004-302-C (M-4) as well.

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.

Ms. Alexander stated that immediate action is taken to isolate and determine what repairs may need to be made on the units if an exceedance in the particulate level is detected. Based on records submitted (Confidential) and statements made, the Facility appears to be in compliance with this specific condition and Specific Condition 9(b) of Permit No. 2004-302-C (M-4).

c. The permittee shall keep particulate monitoring/sensing device replacements on hand for any equipment failures.

Ms. Alexander stated they keep particulate monitoring/sensing device replacements on hand for any equipment failures. Based on this statement, the Facility appears to be in compliance

with this specific condition and Specific Condition 9(c) of Permit No. 2004-302-C (M-4) as well.

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 bag filters utilized and manufacturer specifications for each type of bag filter,
(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 bag filters.

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.

Ms. Alexander confirmed that Baghouse Recordkeeping Plan for each of the Main Bag Filters is kept and maintained as required. A copy of this plan was provided and reviewed in a previous FCE. Based on this statement and past review, the Facility appears to be in compliance with this specific condition and Specific Condition 9(d) of Permit No. 2004-302-C (M-4) as well.

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 Bag filter System so as to prevent excessive temperatures.

Ms. Alexander stated that CCC maintains and repairs Unit No. 4 Bag filter system to prevent excessive temperatures and that temperatures are monitored in the baghouse in the control room. Previous FCEs also stated that the Facility can feed water to the system 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.

Ms. Alexander stated that CCC conducts product loading operations in a manner to minimize carbon black fugitive emissions as much as possible. They use Torit clean up (load out) bag filters, check for leaks often, and change out bags as needed. A riding sweeper is utilized to cleanup any spills of carbon black during loading operations, and a local exhaust system is utilized for clean-up. Based on this statement, the Facility appears to be in compliance with this specific condition and Specific Condition 11(b) of Permit No. 2004-302-C (M-4).

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.

Ms. Alexander stated that the carbon black areas are cleaned daily, and a riding sweeper is utilized to clean the Facility.

d. Conduct removal and replacement of bag filters in such a manner that the replaced bag filters, 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 bag filter from said compartment.

Ms. Alexander stated that the bag filters are replaced as required by this specific condition, and that the sealed containers are disposed of at the landfill.

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.

Ms. Alexander confirmed that all high-speed processing equipment is inspected weekly and lubricated daily to ensure proper operation. **Based on this statement, the Facility appears to be in compliance with this specific condition and Specific Condition 11(c) of Permit No. 2004-302-C (M-4) as well.**

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.

Per §63.1103(f)(3)(i), the carbon black production standards and applicability for existing sources are specified in Table 8. This section further states that an affected source is not required to perform applicability tests or other applicability assessment procedures specified in §63.1104 if compliance is shown with the most stringent applicable requirements of this subpart.

Table 8 lists the following requirements:

- **Reduce emissions of HAP by using a flare meeting the requirements of subpart SS of this part; or**
- **Reduce emissions of total HAP by 98 weight-percent ("wt%") 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).**

The Facility reduces total HAP emissions by 98 wt% by routing emissions from their main unit filter process vents to either waste gas combustors or cogen units, which meets the requirements of §63.982(a)(2) and is the most stringent option.

e. §63.1104 Process vents from continuous unit operations: applicability assessment procedures and methods.

The requirements of § 63.1104 are not applicable to the Facility.

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.

Ms. Alexander confirmed that notifications, records, and reports are maintained for at least five years after the date of recording as required.

i. §63.1110 Reporting requirements.

The Initial Notification described in §§63.1110(a)(2) and (c)(2)-(7) and the Notification of Compliance Status described in §§63.1110(a)(4) and (d)(1)-(2) have been submitted to DEQ and were discussed in prior FCEs.

According to §63.1110(e), periodic reports are required for an affected source subject to monitoring requirements of this subpart. The only reports specified in this subpart are the SSM reports listed in §§63.1110(a)(7) and 63.1111.

j. §63.1111 Startup, shutdown, and malfunction.

The following 40 C.F.R. Part 63, Subpart YY SSM reports have been submitted semiannually in the SARs since the last FCE:

40 C.F.R. Part 63, Subpart YY SSM Reports				
Date Submitted	**Submission Deadline**	**Semiannual periods**	**Required Information**	**Followed SSMP**
3/1/2022	3/2/2022	8/1/2021 – 1/31/2022	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required
8/30/2022	8/30/2022	2/1/2022 – 7/31/2022	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required
3/15/2023*	3/2/2023	8/1/2022 – 1/31/2023	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required

8/30/2023	8/30/2023	2/1/2023 – 7/31/2023	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required
2/27/2024	3/2/2024	8/1/2023 – 1/31/2024	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required
8/20/2024	8/30/2024	2/1/2024 – 7/31/2024	Yes, and total duration of periods of malfunction for the thermocouples was less than 5% of operating time.	Yes, and no immediate reporting was required

*Late semiannual report. This is included as a violation under the ***Exit Interview/Summary*** section of this report.

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]

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?
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?
f. § 63.6605 What are my general requirements for complying with this subpart?
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?
i. § 63.6640 How do I demonstrate continuous compliance with the emission limitations and operating limitations?
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?
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?

The Facility has four existing emergency stationary RICE located on-site that are subject to this subpart. Requirements for these engines under Table 2c are summarized as follows:

- **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.**

Engine runtime hour records are required from the Facility to ensure that the engines have not operated more than 500 hours in a year unless under emergency conditions. The following emergency generators at the Facility are SI RICE located at a major source of HAP emissions that must be in compliance with the applicable requirements of this subpart, and have been equipped with non-resettable hour meters as required:

Emergency Generator	Make & Model	Serial No.	Rating	Manufactured Date
Unit 1 & 2	4569080100/4.3 L Chevy	2079790	63-hp	10/26/2004
Unit 3	Generac 4128990100/4.3 L Chevy	2077604	63-hp	6/10/2004
Unit 4	5373280100/7.1 L Ford	2083539	110-hp	7/1/2005

Based on the operating hours provided in the SARs, the above engines operated less than 500 hours annually as required (Confidential).

Records submitted to the inspector indicate that the required maintenance under Table 2c has been conducted as required (Confidential).

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?

Boiler #1 and Boiler #2 are industrial boilers designed to burn gas 1 fuels with a heat input capacity greater than 5 MMBTUH, but less than 10 MMBTUH. Construction of the boilers commenced after June 4, 2010, and they are located at a major source of HAP emissions; therefore, they are subject to this subpart as new affected sources. The Initial Notification of Startup and the Notification of Compliance Status was addressed in the 2016 FCE.

According to §§ 63.7500(e), 63.7515(d), and 63.7540(a)(11), the Facility is required to perform tune-ups every 2 years. Ms. Alexander stated the most recent tune-up was conducted in February 2024.

According to records provided (Confidential), the Facility appears to be conducting burner inspections to demonstrate continuous compliance as specified in § 63.7540(a)(10)(i)-(iv).

According to §§ 63.7550(b)(1)-(4), the Facility is required to submit compliance reports to DEQ biennially. The Facility failed to comply with § 63.7550(b) by not submitting biennial compliance reports to DEQ for Boiler #1 and Boiler #2. This is included as a violation under the *Exit Interview/Summary* section of this report.

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.

The Facility maintains the above records and provided them in the SARs.

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).

The above records are being kept and are provided in the SARs.

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, except 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)]

ACCs have been submitted as required.

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. 18, 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)]

SARs have been submitted as required.

20. Since emission points TO #1, TO #2, and TO #3 each has NOx, CO, and SO_2 emissions greater than 500 TPY, the permittee shall conduct performance testing for these emissions once a year and submit a written report of the results to the AQD. $PM/PM_{10}/PM_{2.5}$ emissions from these emissions points are greater than 100 TPY and less than 250 TPY, and shall be tested once every 5 years.

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 5B: 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 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.

The thermal oxidizers are out-of-service and have been replaced by the cogen units.

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 ^oF and 2,100 ^oF 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.

The thermal oxidizers are out-of-service and have been replaced by the cogen units.

22. This permit supersedes all previous air quality operating permits, which are now cancelled.

SPECIFIC CONDITIONS OF PERMIT NO. 2004-302-C (M-4)

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

Before April 1, 2021, the facility is authorized for the following:

- Operate the electric cogeneration boiler prior to installation of the SCR and scrubber system. The cogeneration boilers have a destruction efficiency the same as or greater than the current thermal oxidizers.
- Continue to vent the combustion gases from the plant's dryer combustors to the existing thermal oxidizer exhaust stacks or vent through the boiler stacks.
- Remove the requirement to operate CEMS units during this scenario.

The following emission limitations will take effect on April 1, 2021.

The thermal oxidizers are out-of-service and have been replaced by the cogen units. The cogen units are equipped with the SCR and scrubber system.

EUG 8 Reactors

EU	Point	Unit No.	Const. Date
RX #11	EPN #3, 40, or 41	Unit No. 1 - Reactor #11	1955
RX #12	EPN #3, 40, or 41	Unit No. 1 - Reactor #12	1955
RX #21	EPN #4, 40, or 41	Unit No. 2 - Reactor #21	1955
RX #31	EPN #11, 13, 40, or 41	Unit No. 3 - Reactor #31	1959
RX #32	EPN #11, 13, 40, or 41	Unit No. 3 - Reactor #32	1959
RX #41	EPN #20, 40, or 41	Unit No. 4 - Reactor #4	1991

a. During periods other than heat load operation, reactor startup, shutdown, and malfunction, the main bag filter heat load vents shall be closed.
b. All carbon black product and PM emissions generated by the reactor shall be vented to a main bag filter. Direct venting to the atmosphere of any carbon black product or PM emissions generated by the reactor is prohibited at all times.

Ms. Alexander confirmed the reactors are operated according to the above conditions as required.

Emission Limitations

Point	EU No.	Emissions Unit Name	NO_x		CO		VOC	
			lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EPN 3	MBF 1	Production Unit 1 – Transition Events	69.91	7.41	12,738	157.18	568.54	7.04
	Rx 11	Reactor 11 - Heat Load						
	Rx 12	Reactor 12 - Heat Load						
EPN 7	MBF 2	Production Unit 2 – Transition Events	27.89	3.85	6,239.29	76.63	97.64	1.23
	Rx 21	Reactor 21 - Heat Load						
EPN 11	MBF 3	Production Unit 3 – Transition Events	70.26	7.90	12,962.20	160.26	578.55	7.16
	Rx 31	Reactor 31 - Heat Load						
	Rx 32	Reactor 32 - Heat Load						
EPN 20	MBF 4	Production Unit 4 – Transition Events	77.00	7.92	13,481.04	166.26	601.71	7.45
	Rx 41	Reactor 41 - Heat Load						

Point	EU No.	Emissions Unit Name	$PM/PM_{10}/PM_{2.5}$		SO_2	
			lb/hr	TPY	lb/hr	TPY
EPN 3	MBF 1	Production Unit 1 – Transition Events	7.86	0.19	7.87	0.11
	Rx 11	Reactor 11 - Heat Load				
	Rx 12	Reactor 12 - Heat Load				
EPN 7	MBF 2	Production Unit 2 – Transition Events	8.92	0.17	52.23	0.64
	Rx 21	Reactor 21 - Heat Load				
EPN 11	MBF 3	Production Unit 3 – Transition Events	8.00	0.21	8.01	0.11
	Rx 31	Reactor 31 - Heat Load				
	Rx 32	Reactor 32 - Heat Load				
EPN 20	MBF 4	Production Unit 4 – Transition Events	8.37	0.21	8.34	0.11
	Rx 41	Reactor 41 - Heat Load				

a. Transition event duration shall not exceed 10 minutes per event when transitioning between (A) an operational mode in which oil, natural gas, and combustion air are all fed to the reactor burner and the reactor is manufacturing carbon black and generating Tail Gas, and (B) an operational mode, including, but not limited to, during periods of Startup and Shutdown, in which no oil but only natural gas and combustion air are supplied to the reactor.
b. Records of duration of each transition event and number of transition events in any 12 months shall be maintained.

Ms. Alexander confirmed the transition event duration does not exceed 10 minutes per event. Records of each transition event were provided in the SARs (Confidential).

EUG 4: Cleanup Bag Filters (CUBF)

Point	Emission Unit	Emission Unit Name	$PM/PM_{10}/PM_{2.5}$	
			lb/hr	TPY
EPN #10	CBF #1	Unit No. 1	0.20	0.87
EPN #6	CBF #2	Unit No. 2	0.05	0.24
EPN #14	CBF #3	Unit No. 3	0.03	0.12
EPN #24	CBF #4	Unit No. 4	0.10	0.45
EPN #23	CBF #5	Shipping Dock	0.09	0.39
EPN #34	CBF #6	Shipping Dock	0.09	0.39
EPN #35	CBF #7	Sealed Bin #1	0.01	0.04
EPN #35	CBF #8	Sealed Bin #2	0.01	0.04
EPN #33	CBF #9	Transloading	0.01	0.04

EUG 5: Clean Gas and Energy Units
Emissions from these emission points include emissions from EUG 2: Main Bag Filters, EUG 3: Exhaust Bag Filters, EUG 5: CGEUs, EUG 6: Pellet Dryers, EUG 8: Reactors, and EUG 9: waste gas combustors.

Summary of Emission Sources

EUG 5 Clean Gas and Energy Units (CGEU)

EU	Point	Name	Const. Date
CGEU 1	EPN #40	Clean Gas and Energy Unit 1	TBD
CGEU 2	EPN #41	Clean Gas and Energy Unit 2	TBD
CGEUH 1	EPN #40	Clean Gas and Energy Unit 1-Heat Load	TBD
CGEUH 2	EPN #41	Clean Gas and Energy Unit 2-Heat Load	TBD

a. The clean gas and energy units shall each consist of a tail gas boiler, selective catalytic reduction system, and a dry scrubber with a baghouse.

Ms. Alexander confirmed the cogen units consist of a tail gas boiler, selective catalytic reduction system, and a dry scrubber with a baghouse.

EUG 6 Pellet Dryers

EU	Point	Unit No.	Const. Date
Dryer #11	EPN #40	Unit No. 1	1954

Dryer #12	EPN #40	Unit No. 1	1954
Dryer #21	EPN #40	Unit No. 2	1954
Dryer #31	EPN #41	Unit No. 3	1959
Dryer #32	EPN #41	Unit No. 3	1959
Dryer #41	EPN #41	Unit No. 4	1991

EUG 9 Waste Gas Combustors (WGC)

EU	Points	Name	MMBTUH	Const. Date
WGC #11	EPN #40	WGC 11- Heat Load	19.3	1954
WGC #12	EPN #40	WGC 12- Heat Load	19.3	1954
WGC #22	EPN #40	WGC 21- Heat Load	19.3	1954
WGC #31	EPN #41	WGC 31- Heat Load	19.3	1959
WGC #32	EPN #41	WGC 32- Heat Load	19.3	1959
WGC #41	EPN #41	WGC 41- Heat Load	24.75	1991

Emission Limitations

Emission limitations for the clean gas energy units are listed in the following table.

Pollutants	7-Day Rolling Average Emission Limits	365-Day Rolling Average Emission Limits	3-hr Average Emission Limits
SO_2	No less than 120 ppmvd and no greater than 158 ppmvd (at 0% oxygen)	No less than 80 ppmvd and no greater than 130 ppmvd (at 0% oxygen)	
NOx	No greater than 54 ppmvd (at 0% oxygen)	No greater than 38 ppmvd (at 0% oxygen)	
PM			No greater than 0.0069 gr/dscf
NOx Limits for Heat Load, Startup, and Shutdown: No greater than 50 TPY			

The following table lists combined emissions from Emission Points 40 and 41.

Point	NO_x		CO		VOC		$PM/PM_{10}/PM_{2.5}$		SO_2	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EPN 40	41.67	79.04	3.25	1.93	5.28	22.27	5.63	23.56	98.14	353.62
EPN 41	43.57	79.61	3.59	2.02	5.29	22.27	5.66	23.58	98.14	353.62

According to the 2022 and 2023 EIs, as well as the performance testing conducted October 11-13, 2022, the cogen units emit CO and PM emissions in excess of the above limits. Performance testing on EPN 40 showed emissions rates of 81.44 TPY CO and 47.45 TPY PM. Performance testing on EPN 41 showed emission rates of 213.81 TPY CO and 24.98 TPY PM. This is included as a violation under the *Exit Interview/Summary* section of this report.

a. Each of the dry scrubbers shall be designed to achieve 95% removal of SO_2 emissions at all times.
b. Permittee shall demonstrate compliance with the control efficiency by monitoring operating parameters as specified in Appendix B of this permit.
c. Permittee shall follow the protocol specified in Appendix B of this permit for control design, optimization and demonstration, and compliance with final emission limits.

CCC has submitted records demonstrating SO_2 emissions control efficiency for the cogen units per Appendix B (Confidential).

d. Permittee shall use a CEMS to monitor SO_2 and NOx emissions for each of the two emission points during process system operation. Permittee shall install, calibrate, certify, maintain, and operate all CEMS in accordance with the equipment manufacturer's specifications and reference methods specified in 40 CFR 60.13 that are applicable to CEMS, and Part 60, Appendixes A and F, and the applicable performance specification test of 40 CFR Part 60, Appendix B, to demonstrate compliance with the SO_2 and NOx emission limits. Per Appendix F to Part 60, Paragraph 5.1.1, Relative Accuracy Test Audit (RATA) must be conducted at least once every four calendar quarters.

RATAs were conducted on the cogen units October 11-13, 2022, and December 12-16, 2023, demonstrating compliance.

e. Beginning no later than 4/1/2021, and continuing annually thereafter, permittee shall conduct a stack test for PM. No two annual tests shall be conducted less than 11 months apart. The reference methods and procedures for performing PM stack tests and for determining compliance with the applicable PM 3-hour average emission limit shall be those specified in 40 CFR 60.8(f) and 40 CFR Part 60, Appendix A-3, Reference Method 5/5B. Each test shall consist of three separate runs performed under representative operating conditions, not including periods of startup, shutdown, or malfunction. The sampling time for each run shall be at least sixty (60) minutes and the minimum sample volume of each run shall be 30 ft^3 (dry volume, standard temperature basis).

A PM stack test was conducted on the cogen units October 11-13, 2022, and December 12-19, 2023, demonstrating compliance.

EUG 6: Dryer Firebox Stacks (N/C)

EU	Point	Name	Const. Date
FS 11	EPN 5	Dryer 11 Firebox Stack	1954
FS 12	EPN 8	Dryer 12 Firebox Stack	1954
FS 21	EPN 9	Dryer 21 Firebox Stack	1954
FS 31	EPN 12	Dryer 31 Firebox Stack	1959
FS 32	EPN 13	Dryer 32 Firebox Stack	1959
FS 41	EPN 21	Dryer 41 Firebox Stack	1991

EU No.	Emissions Unit Name	NO_x		CO		VOC		$PM/PM_{10}/PM_{2.5}$	
		lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
FS 11	Dryer 11 Firebox Stack	0.24	1.05	0.0002	0.0008	0.0008	0.0037	0.04	0.16
FS 12	Dryer 12 Firebox Stack	0.24	1.05	0.0002	0.0008	0.0008	0.0037	0.04	0.16
FS 21	Dryer 21 Firebox Stack	0.50	2.18	0.0004	0.0016	0.0018	0.0077	0.08	0.33
FS 31	Dryer 31 Firebox Stack	0.24	1.07	0.0002	0.0008	0.0009	0.0038	0.04	0.16
FS 32	Dryer 32 Firebox Stack	0.24	1.07	0.0002	0.0008	0.0009	0.0038	0.04	0.16
FS 41	Dryer 41 Firebox Stack	0.51	2.22	0.0004	0.0016	0.0018	0.0079	0.08	0.34

a. All PM emissions from each dryer other than from the firebox shall be directed to the Exhaust Bag Filters for recovery of product. The exhaust bag filters shall not vent to the atmosphere and shall be directed to the outlet of the CGEU boiler outlets prior to the SCR.

Ms. Alexander confirmed the dryer emissions are directed according to the condition above.

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

a. The carbon black tanks shall be controlled by either a fabric filtration device that is equipped with cartridge filters specified by their supplier to achieve PM collection efficiency at least 99%. Per the CD, Appendix A and Appendix D, the facility shall spend at least $475,000 in project dollars for the purchase, installation, and use of continuous-duty, cartridge dust collector technology ("Dust Collectors") to minimize PM emissions from the carbon black product storage tanks. The Dust Collectors shall replace existing bag filters and shall include cartridge filters utilizing nanofiber technology to provide high removal efficiency of PM.

Ms. Alexander stated the carbon black tanks are controlled by a fabric filtration device with a control efficiency of at least 99%. CCC provided information on the fabric filtration device to DEQ, demonstrating compliance (Confidential).

b. Permittee shall monitor the control device as specified in Specific Condition 13.

Refer to Specific Condition 13 below.

7. Total NOx emissions from heat load operation, startup, and shutdown from the reactors and boilers shall not exceed 50 tons for the prior 365 days. Permittee shall demonstrate compliance with this 365-day rolling sum emission limit by performing the following calculation for each day, summing as described, to derive cumulative NOx emissions in tons.

$$X=\sum_{i=1}^{365}\left[\frac{\varphi * consumption_i}{2000\ lbs}\right]$$

Where:
"X" = cumulative NOx emissions (tons) during preceding 365 days
"φ" = 0.48 lbs NO_x/MMBtu
"i" = each Day in the preceding 365 Days
$consumption_i$ = the amount of energy input from natural gas and feedstock (in MMBtu) to the Process System per Day for each Day *i* of Heat Load Operation, Startup, or Shutdown. For any Day in which no Heat Load Operation, Startup, or Shutdown occur, $consumption_i$ shall equal zero.

CCC provided NO_x emissions from heat load operation, startup, and shutdown from the reactors and boilers based on a 365-day rolling sum (Confidential), demonstrating compliance.

8. The CGEUs shall be operated in conjunction with the reactors while the reactors are producing carbon black. This requires oil to be injected into the reactors. The CGEUs shall only be fueled with pipeline quality natural gas or waste gas from carbon black production for warm-up.

Ms. Alexander stated the cogen units are operated in conjunction with the reactors while the reactors are producing carbon black. The cogen units are only fueled with pipeline quality natural gas or waste gas from carbon black production for warm-up.

11. 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. Implement the Particulate Emissions Best Management Practices Control Plan in accordance with Consent Decree 5:15-cv-00290-F, dated May 7, 2015.
(1). All operations and maintenance personnel shall be trained to both recognize leaks and spills of carbon black, and to report them to the proper plant personnel for

response. Visual observation of the physical condition of plant process equipment that conveys, stores, loads, unloads, and packages carbon black, including at connection points between equipment and/or sections of piping, and of the physical condition of containers and bags used to package carbon black, shall be part of the daily responsibilities of the operations and maintenance personnel to help ensure that potential leaks are addressed before they occur.

(2). All carbon black product shall be stored in tanks, silos, or closed bags. No carbon black product shall be stored in open piles.

(3). All product and off-quality carbon black shall be shipped off-site in closed bags, sealed cardboard boxes (or landfill), or sealed rail cars, hoppers, or bulk transport trucks.

(4). All process equipment at the facility shall be designed, operated, and maintained in a manner intended to minimize leaks and spills of carbon black and fugitive particulate emissions. In addition, the facility shall develop and implement practices to collect carbon black dust otherwise emitted from product conveyance, packaging, and storage operations, and either recycle it back into the manufacturing process or convey it to a packaging system. Where practicable, the operation of such equipment, including carbon black product conveyors, elevators, and packing units, shall be conducted under negative pressure and served by vacuum systems that collect carbon black.

(5). All process equipment shall be located either indoors or in outdoor areas that have paved or rock/gravel ground surfaces.

(6). Events that trigger the PM Early Warning system shall be handled pursuant to the protocol in appendix D of the consent decree. Leaks and spills of all carbon black that are otherwise identified shall be investigated and addressed (cleaned up and repaired) either immediately upon discovery or as quickly as practicable. When immediate repair or isolation is not feasible, the actions taken to complete the repair shall be documented. Incident reports for sills or leaks of carbon black shall be created to document cause and corrective actions.

(7). Special precautions shall be taken during maintenance actions to minimize particulate emissions from the equipment on which maintenance is being performed. Prior to conducting maintenance or baghouse bag replacement on equipment that is prone to accumulation of carbon black on its interior surfaces, including, but not limited to, on the Main Bag Filters, elevators, and conveyors, and storage tanks and silos, the responsible maintenance personnel shall identify and take steps necessary to minimize the generation of particulate emissions at the equipment being maintained during the maintenance or bag replacement activity. The specific approaches taken to minimize particulate emissions during maintenance or bag replacement shall be developed on a case-specific basis based on the judgment of the maintenance personnel and shall include, as relevant, but need not be limited to, activities such as the following:

- Vacuuming carbon black from the equipment prior to beginning the maintenance,
- Vacuuming or washing down the equipment when an appropriate stage in the maintenance activity has been reached,

- If units are equipped with vents, closing vents during maintenance to prevent drafting of PM, except when conducting a safety or hazard analysis and concluding in writing that closing the vent would create an unsafe or unhealthy work atmosphere, and
- Sealing filter bags removed from Main Bag Filters inside plastic bags.

(8). Accessible floor and/or grounds surfaces in the carbon black production areas shall be swept or washed as needed in order to minimize particulate emissions attributable to leaks or spills of carbon black that are not otherwise identified and/or addressed during the daily visual assessments. All material collected through these actions shall either be incorporated into the production process, or used as product of commercial distribution, or properly disposed of in accordance with applicable regulatory standards.

CCC has taken actions and provided a Particulate Emissions Best Management Practices Control Plan as required by this condition (Confidential).

12. The permittee shall install and continuously operate a PM Early Warning System to monitor the PM emitted from each PM monitor point in accordance with Appendix A of this permit.

CCC has installed and continuously operates a PM Early Warning System to monitor the PM emitted from each PM monitor point as required by this condition.

13. For each of the following PM emission units listed in the table below, the permittee shall conduct a Method 22 visual assessment once each operating day to determine if there are any detectable visible emissions.

Emission Unit Group	Name
EUG 2	Main Bag Filters
EUG 6	Carbon Black Pellet Dryers
EUG 8	Reactors
EUG 10	Carbon Black Product Storage Tanks, Silos, or Bins

a. In the event that any visible emissions are observed, permittee shall identify, address, and resolve the source of visible emissions as expeditiously as practicable.
b. If the visible emissions event occurs after the date of continuous operation of the PM early warning system, the event shall be considered resolved once the PM early warning system alarm is below the action level.
c. If the visible emissions event is not resolved within 24 hours, once visibility conditions are sufficient for a Method 9 observation, permittee shall conduct a six-minute observation in accordance with Method 9 at least once every eight (8) hours (during daylight hours), until visible emissions from the PM emission unit that triggered the event are less than 5% over the six-minute average.
d. Permittee shall maintain a record of each visual assessment conducted.

CCC conducts daily Method 22 visual assessments as required by this condition (Confidential). Any deviations were reported as EEs.

17. To demonstrate compliance with OAC 252:100-31-7(b), emissions of H_2S from the main bag filters during transition periods shall not exceed 2,205.15 lb/24 hr rolling period. The Permittee shall demonstrate compliance by

a. Either showing less than 8 transition events for all reactors in a 24-hour period at no greater than 4% sulfur content of the feedstock or by preparing daily calculations of H_2S emissions based on actual number and duration of transition events occurred, actual sulfur content, and amount of oil fed to the reactors, assuming 70% sulfur becomes H_2S (based on previous stack test data showing 25-40% sulfur retention and industry standard).
b. Analyzing sulfur content of feedstock oils being processed at least once during every operating week (exclusive of analysis on holidays and weekends) day in which oil is received (within 24-hours of receipt). If the pipeline is operating and plant receiving oil from Phillips, or if vendor oil trucks make delivery over the weekend, oil sampling shall be required within 24-hours of receipt.

CCC has provided records to demonstrate compliance with OAC 252:100-31-7(b) (Confidential).

18. 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. Operation and maintenance of the CGEUs.
b. Records of oil feed to all units and fuel sulfur content of all feedstock required by Specific Condition 17.
c. 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).
d. Total amount of Carbon Black Oil used (monthly and 12 month rolling total).
e. Operation, maintenance, and inspection logs for the grandfathered emission units in EUG1.
f. Records required by NESHAP Subparts YY, DDDDD, and ZZZZ.
g. Records required by Specific Conditions No. 9, 11, and 13.
h. Records of transition events for each production unit.
i. Records of NOx and SO_2 CEMS data.
j. Records of CEMS RATA tests data.
k. Records of annual stack test data.
l. Records as required by Appendix A of this permit.
m. Records of monitored operating parameters as specified in Appendix B of this permit.

The Facility maintains the above records and provided them in the SARs.

22. No later than 180 days after initial startup of the proposed project (complete by April 1, 2021), the permittee shall conduct initial performance test(s) 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 5/5B: 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.
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.

Initial performance testing was conducted October 11-13, 2022, demonstrating compliance with everything except the CO and PM emissions (Confidential). Performance testing on EPN 40 showed emissions rates of 81.44 TPY CO and 47.45 TPY PM. Performance testing on EPN 41 showed emission rates of 213.81 TPY CO and 24.98 TPY PM.

23. The permittee shall submit a request for modification of the current Title V operating permit application within 180 days of commencement of operations (After April 1, 2021).

The Title V renewal application was submitted on February 2, 2023.

Exit Interview/Summary

Based on the information gathered during the on-site evaluation and from records received, the following compliance issues were discovered at the Facility during this FCE:

1. All EE events identified in the table under the ***Excess Emissions*** section above are violations of emission limits identified in Specific Condition 1 and/or the 20% opacity limit identified in OAC 252:100-25-3.
   a. OAC 252:100-9-7(b) requires an EE event report to be submitted no later than thirty (30) calendar days after the start of any excess emission event. EE reports for each EE event listed in the table above were received within the required timeframe with the exception of EE IDs HPM-PK7V-TM95V, HPN-CB8Y-RA3EJ, HPN-CAK0-41AA5, HPR-8GCD-RHGD3, HPS-1NJC-Z5Z5X, and HPV-SDNW-Y9YHG.
   b. Excess Emission ID HPM-PK7V-TM95V violated SIP limits or permit limits that have been set taking into account potential emissions during startup and shutdown, including, but not limited to, limits that indicate they apply during startup and shutdown, and limits that explicitly indicate they apply at all times or without exception; therefore, CCC is not eligible to qualify for mitigating factors to this event.
2. The SAR covering the reporting period of August 1, 2022, through January 31, 2023, was received 13 days late.

3. The semiannual 40 C.F.R. Part 63, Subpart YY report covering the reporting period of August 1, 2022, through January 31, 2023, was received 13 days late.
4. According to §§63.7550(b)(1)-(4), the Facility is required to submit compliance reports to DEQ biennially. The Facility failed to comply with §63.7550(b) by not submitting biennial compliance reports to DEQ for Boiler #1 and Boiler #2.
5. According to the 2022 and 2023 EIs, as well as the performance testing conducted October 11-13, 2022, the cogen units emit CO and PM emissions in excess of the limits found under Permit No. 2004-302-C (M-4) Specific Condition 1 EUG 9. Performance testing on EPN 40 showed emissions rates of 81.44 TPY CO and 47.45 TPY PM. Performance testing on EPN 41 showed emission rates of 213.81 TPY CO and 24.98 TPY PM.

No other compliance issues were noted.

OnBase Document References

1. Permits
    a. OID 7796879
    b. OID 7886628
    c. OID 7762789
    d. OID 8182210
2. Emissions Inventories
    a. OID 8460814
    b. OID 8548383
    c. OID 21974779
3. ACCs
    a. OID 8439274
    b. OID 11677990
4. SARs
    a. OID 20623684
    b. OID 8439270
    c. OID 8529033
    d. OID 12272025
    e. OID 21273599
    f. OID 50589257