

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

October 6, 2021

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: Jason Ballard, Environmental Programs Specialist
Compliance Section

cc: Pamela Alexander
EHS Specialist
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**
S10, T25N, R2E, Kay County, Oklahoma
1006 East Oakland Avenue
Ponca City, Kay County, Oklahoma
AIRS ID: 071-00004
FCE ID: 09404

Introduction

On August 26, 2021, from 0910 to 1030 hours, an unannounced full compliance evaluation (“FCE”) was conducted at the Carbon Black Production Facility (“Facility”), which is owned and operated by Continental Carbon Corporation (“CCC”). Environmental Programs Specialist Jason Ballard of the Department of Environmental Quality, Air Quality Division (“DEQ”), conducted the evaluation. EHS Specialist Pamela Alexander 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 operated under Permit No. 2017-0914-TVR2, which is maintained in the DEQ’s Electronic document storage system (“Edoctus”). A complete process description can be found in the memorandum for Permit No. 2017-0914-TVR2 (**Edoctus No. 2049297**). A table listing the permit history of the Facility is shown below.

Edoctus ID	Permit No.	Date Issued	Description
1928133	2004-302-AD (M-3)	12/29/2017	CCC requested an Applicability Determination (“AD”) that determined that the replacement of Unit #3 air pre-heaters and replacement of Unit #4 dryer drum and firebox projects qualified for routine repair, maintenance, and replacement, so no permitting action was required.
2049297	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).
2074225	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.
2082418	2004-302-C (M-4)	11/30/2018	CCC requested a construction modification to do the following: <ul style="list-style-type: none"> 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.
2355866	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.

Permit No. 2017-0914-TVR2 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)	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
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N/C – Normally Closed

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

EUG 4 Cleanup Bag Filters (CUBF)

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

EUG 5 Thermal Oxidizers (TO)

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

EUG 6 (Dryers) Waste Gas Combustors

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

EUG 7 Feedstock Oil Tanks

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

EUG 8 Reactors

EU	Point	Unit No.	Const. Date
RX #11	EPN #3, 25	Unit No. 1 - Reactor #11	1955
RX #12	EPN #3, 25	Unit No. 1 - Reactor #12	1955
RX #21	EPN #7, 25	Unit No. 2 - Reactor #21	1955
RX #31	EPN #11, 26	Unit No. 3 - Reactor #31	1959
RX #32	EPN #11, 26	Unit No. 3 - Reactor #32	1959
RX #41	EPN #20, 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 #26	Unit No. 3	19.3	1959
WGC #32	EPN #26	Unit No. 3	19.3	1959
WGC #4	EPN #22	Unit No. 4	24.75	1991

EUG 10 Carbon Black Tanks

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

EUG 11 Natural Gas Fired Emergency Generators

Generators	Model	Serial #	HP	Manufactured Date
Unit 1&2	4569080100/4.3 L Chevy	2079790	63	10/26/2004
Unit 3	Generac 4129890100/4.3 L Chevy	2077604	63	6/10/2004
Unit 4	5373280100/7.1 L Ford	2083539	110	7/1/2005

Stack Parameters

EPN	Height (feet)	Diameter (inches)	Flow (ACFM)	Velocity (FPS)	Temperature (°F)
1	18	12	4,610	97.8	800
2	18	12	4,610	97.8	800
3 (N/C)	61	39	39,284	76.6	420
10	38	12	5,000	106.1	70
6	38	12	5,000	106.1	70
14	21	12	5,000	106.1	70
19	22	12	124	2.6	800
21 (N/C)	10	36	0	0	900
22	213	84	369,200	159.9	1,700

24	35	12	5,000	106.1	70
23	30	12	5,000	106.1	70
25	150	138 OD	606,000	109.0	1,700
26	150	114 OD	381,000	104.0	1,700
29 (N/C)	20	24	0	0	420
30 (N/C)	4	14	0	0	400
34	30	12	5,000	106.1	70

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

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 (“SO₂”) 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 SO₂, 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 (“H₂S”), 42.20 TPY of carbon disulfide (“CS₂”), and 2.14 TPY of carbonyl sulfide (“COS”).

The emissions inventory summaries for 2018 through 2020 are summarized in the table below. Equipment on-site was the same as listed in the current issued permit and emissions inventory.

Pollutant	2018 (Tons)	Percent Change	2019 (Tons)	Percent Change	2020 (Tons)
CO	185.866	-6.09	174.539	-36.87	110.19
NO_x	1061.877	-2.62	1034.075	-33.91	683.43
PM	184.54	-2.97	179.055	-33.24	119.54
SO₂	2315.771	27.59	2954.672	-39.51	1787.35
VOC	17.647	-10.02	15.879	-29.84	11.14
CS₂	0.318	23.90	0.394	-41.37	0.231
COS	0.012	241.67	0.041	-70.73	0.012
H₂S	0.63	73.49	1.093	-54.89	0.493

The percentage changes for COS and H₂S are insignificant given the amount of emissions involved. Ms. Alexander stated that the emissions changes from 2019 to 2020 were caused by the reduced operation due to COVID-19.

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/MMft³ 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 SO₂ 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, 2007. 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 thermal oxidizers 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 three thermal oxidizers 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).

- **SSM Reports Folder – CONFIDENTIAL**

The Facility conducted initial performance tests of the control devices 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 thermal oxidizers 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 thermal oxidizers 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 Specific Condition 13(j) of the *On-site Evaluation* section of this report.

- **CAM & Thermal Oxidizer Temperatures Folder – CONFIDENTIAL**
- **SSM Reports Folder – CONFIDENTIAL**

§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.

No LDAR inspection records were provided to DEQ, although they were requested. This is a violation of 40 C.F.R. §63.999(c)(2)(i).

§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 Specific Condition 13 in 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 Specific Condition 14 in 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 Specific Condition 15 in the *On-site Evaluation* section of this report.

Compliance Assurance Monitoring (“CAM”), 40 C.F.R. Part 64

This Part applies to Title V permitted sources that have any pollutant specific emission unit that is subject to the following criteria: emission limit or standard for an applicable regulated air pollutant; equipped with a control device to achieve compliance with the applicable emission limit or standard; and has potential emissions of 100 TPY of the applicable regulated air pollutant without the control device.

The Facility meets the previous criteria for each thermal oxidizer, because the potential to emit, prior to any control device, is greater than 100 TPY for CO, PM, and VOC emissions. Compliance with this subpart will be discussed under Specific Condition 21 in the *On-site Evaluation* section of this report.

Evaluation/Enforcement History

There have been no partial compliance evaluations conducted on-site in the last five years.

There have been two on-site FCE conducted at the Facility in the last five years. FCE 08348 was conducted on June 25, 2018, and the findings of the evaluation were addressed under Enforcement Case 9894. FCE 09056 was conducted on June 25, 2020 and is currently in peer review. Compliance issues discovered during FCE 09056 are as follows:

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.
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.
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.
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.
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 40 C.F.R. Part 63, 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.
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), and Specific Conditions 14(k) and 16(j) by not maintaining emergency generator operator hour records for the reporting period of February 1, 2020 through July 31, 2020.
9. The Facility failed to comply with § 63.7550(b), and Specific Condition 15(v) of Permit Nos. 2004-302-TVR (M-2) and 2017-0914-TVR2 by not submitting 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.

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: <ol style="list-style-type: none"> 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 PM₁₀ 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: <ol style="list-style-type: none"> 1. TO_x Unit 4 failed the stack test conducted on 11/14/17 by exceeding its PM₁₀ 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.

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 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				
Edoctus No.	Reporting Period	Date Received	Late	Deviations Reported
2518482	8/1/2020 – 7/31/2021	8/30/2021	No	None
2358631	8/1/2019 – 7/31/2020	8/18/2020	No	None
Semiannual Reports				
Edoctus No.	Reporting Period	Date Received	Late	Deviations Reported
2518481	2/1/2021 – 7/31/2021	8/30/2021	No	None
2433467	8/1/2020 – 1/31/2021	3/1/2021	No	None
2358630	2/1/2020 – 7/31/2020	8/18/2020	No	None

Excess Emissions

There have been no EEs reported by the Facility since the last FCE, and none were discovered during this FCE.

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

- 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	NO _x		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.

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

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

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

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

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

EU	Point	Contents	Barrels	Gallons
FS Tanks	EPN #18a	Carbon Black Oil	5,000	210,000
	EPN #18b	Carbon Black Oil	5,000	210,000

	EPN #18c	Carbon Black Oil	5,000	210,000
	EPN #18d	Carbon Black Oil	65,000	2,730,000
	EPN #18e	Carbon Black Oil	500	21,000
	EPN #18f	Carbon Black Oil	500	21,000

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

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

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 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.

- 2020 %S Feedstock & Product.pdf – CONFIDENTIAL

- **2021 %S Feedstock & Product.pdf – CONFIDENTIAL**

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

[OAC 252:100-8-6(a)(1)]

Ms. Alexander stated that sulfur content is sampled daily. Records provided 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.

- **SEM 2020-21.pdf – CONFIDENTIAL**
- **SEM 2021.pdf - CONFIDENTIAL**

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

[OAC 252:100-31]

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 the inspector with a natural gas bill to confirm. 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).

- **OK NATURAL GAS AUG. 2021.pdf – CONFIDENTIAL**

7. The bypass stacks on the MBF's and the Drying Drums shall be utilized only during start-up, shut-down, and malfunction of the facility.

[OAC 252:100-8-6(a)(1)]

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 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)]

Ms. Alexander confirmed that all off-gasses from the carbon black reactors at the Facility are oxidized in either the thermal oxidizers 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 thermal oxidizers and 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 thermal oxidizers and waste gas combustors was submitted and indicated that the minimum temperature was maintained except during periods of SSM of the thermal oxidizers and waste combustors. These SSM events are reported semiannually as required in the Facility's 40 C.F.R. Part 63, Subpart YY SSM reports.

- **CAM & Thermal Oxidizer Temperatures Folder – CONFIDENTIAL**
- **SSM Reports Folder – 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 thermal oxidizers and 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 and Ms. Alexander's statement, the Facility appears to be in compliance with this specific condition.

- **CAM & Thermal Oxidizer Temperatures Folder – CONFIDENTIAL**

- 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 thermal oxidizers and 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.

- **Thermocoupling Inspection & Calibration Folder – 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.

Per Ms. Alexander, the thermal oxidizers are operated with the reactors when producing carbon black except during SSM periods of control equipment. In prior FCEs, periods when the thermal oxidizers are not operated during carbon black production are reported as deviations and/or excess emissions, which is included in the Facility’s 40 C.F.R. Part 63, Subpart YY SSM reports.

- **SSM Reports Folder – CONFIDENTIAL**

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

Ms. Alexander confirmed that the thermal oxidizers are only fueled with pipeline quality natural gas. A natural gas bill was provided that confirmed that pipeline quality natural gas is used.

- **OK NATURAL GAS AUG. 2021.pdf – CONFIDENTIAL**

10. All air discharges from the dryer, bagging operation, screening operation, and associated conveying equipment shall be processed by a baghouse or an equivalent PM emissions control device with a design efficiency of 98% or more. The permittee shall maintain accessible monitoring equipment to verify the pressure drop across the baghouse.

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

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 98% 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 and an image was provided of the monitoring screen. 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).

- **Baghouse Pressure Monitoring Folder – CONFIDENTIAL**
- **Baghouse Recordkeeping Plan – CONFIDENTIAL**

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 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).

- **Baghouse Pressure Monitoring Folder – CONFIDENTIAL**
- **Baghouse Recordkeeping Plan – CONFIDENTIAL**

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

Ms. Alexander stated that 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 bagfilters utilized and manufacturer specifications for each type of bagfilter,
- (3). Date(s) on which maintenance is performed, type of maintenance, and reason for performing the maintenance, and

(4). General means of disposing of used bagfilters.

Such records shall be recorded in electronic format and/or in hard copy and shall be maintained at the facility for a minimum of two years following the date of recording and shall be provided to regulatory personnel upon request.

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 Bagfilter System so as to prevent excessive temperatures.

Ms. Alexander stated that CCC maintains and repairs Unit No. 4 Bagfilter 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 bagfilters in such a manner that the replaced bagfilters, when sufficient space is available within the baghouse compartment, are

placed into sealed containers (or wetted down when insufficient space is not available internally of the compartment) prior to removal of the bagfilter from said compartment.

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 thermal oxidizers, 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.

In 2004, performance tests were conducted on all three thermal oxidizers, which showed compliance with the 98 wt% reduction in HAP emissions.

- 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
8/18/2020	8/30/2020	2/1/2020 – 7/31/2020	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
3/3/2021	3/4/2021	8/1/2020 – 1/31/2021	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
8/30/2021	8/30/2021	2/1/2021 – 7/31/2021	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

- 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]

The following determinations apply to Specific Condition 15 of Permit No. 2004-302-C (M-4) as well.

- 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	Hour Meter Reading
Unit 1 & 2	4569080100/4.3 L Chevy	2079790	63-hp	10/26/2004	678.3
Unit 3	Generac 4128990100/4.3 L Chevy	2077604	63-hp	6/10/2004	308.2
Unit 4	5373280100/7.1 L Ford	2083539	110-hp	7/1/2005	570.8

Based on the operating hours listed in previous FCEs, the above engines operated less than 500 hours annually as required.

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

- **Generator Maintenance Records – CONFIDENTIAL**
- **Generator Picture - 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]

The following determinations apply to Specific Condition 16 of Permit No. 2004-302-C (M-4) as well.

- §63.7480 What is the purpose of this subpart?
- §63.7485 Am I subject to this subpart?
- §63.7490 What is the affected source of this subpart?
- §63.7491 Are any boilers or process heaters not subject to this subpart?
- §63.7495 When do I have to comply with this subpart?
- §63.7499 What are the subcategories of boilers and process heaters?
- §63.7500 What emission limitations, work practice standards, and operating limits must I meet?
- §63.7501 Affirmative Defense for Violation of Emission Standards During Malfunction.
- §63.7505 What are my general requirements for complying with this subpart?
- §63.7510 What are my initial compliance requirements and by what date must I conduct them?
- §63.7515 When must I conduct subsequent performance tests, fuel analyses, or tune-ups?
- §63.7520 What stack tests and procedures must I use?
- §63.7521 What fuel analyses, fuel specification, and procedures must I use?
- §63.7522 Can I use emissions averaging to comply with this subpart?
- §63.7525 What are my monitoring, installation, operation, and maintenance requirements?
- §63.7530 How do I demonstrate initial compliance with the emission limitations, fuel specifications and work practice standards?
- §63.7533 Can I use efficiency credits earned from implementation of energy conservation measures to comply with this subpart?
- §63.7535 Is there a minimum amount of monitoring data I must obtain?
- §63.7540 How do I demonstrate continuous compliance with the emission limitations, fuel specifications and work practice standards?
- §63.7541 How do I demonstrate continuous compliance under the emissions averaging provision?
- §63.7545 What notifications must I submit and when?
- §63.7550 What reports must I submit and when?
- §63.7555 What records must I keep?
- §63.7560 In what form and how long must I keep my records?
- §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. The following tune-ups and burner inspections were performed on the boilers at the Facility since their initial startup:

Affected Source	Initial Startup	Tune-up & Burner Inspections
Boiler #1 (North)	1/5/2016	1/5/2016
		3/15/2017
		2/14/2018
		2/21/2019
		3/19/2019
		3/12/2021
Boiler #2 (South)	3/30/2015	1/20/2016
		5/12/2017
		2/14/2018
		2/21/2019
		3/19/2019
		3/3/2021

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

- **1. 2021 Boiler H2O Sampling summary Rpts and Scanned Rpts.xlsx - CONFIDENTIAL**

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.

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 SO₂ 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 made them available to the inspector as required.

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)]

The below specific conditions correspond to Specific Conditions 19(a)-(b) in Permit 2004-302-C (M-4).

- 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 were made available upon request as required.

- **Gas & Diesel Usage – CONFIDENTIAL**
- **Storage Tank Inventory – CONFIDENTIAL**

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 NO_x, CO, and SO₂ 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/PM₁₀/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 SO₂ Emissions from Stationary Sources.

Method 7E: Determination of NO_x 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.

Performance test results for the thermal oxidizers can be seen in the table below:

Source	Test Date	Test Plan Submitted	Test Plan Timely?	Pollutant	Limit (lb/hr)	Results (lb/hr)
TO #1	3/19/2021	1/8/2021	Yes	NO ₂	270	104.29
				CO	475	0.58
				VOC	17	0.16
				SO ₂	2,568	278.79
TO #2	3/16–17/2021	1/8/2021	Yes	NO ₂	142	75.98
				CO	311	0.00
				VOC	14	0.02
				SO ₂	1,195	158.70

TO #4	2/9–10/2021	1/8/2021	Yes	NO ₂	178	95.84
				CO	389	4.21
				VOC	18	0.83
				SO ₂	1,494	370.25

Based on the records received, the Facility appears to be in compliance with this specific condition. The last PM test conducted at the Facility was on November 14, 2017, and showed a rate of 56.11 lb/hr, which was an exceedance of the 54.34 lb/hr limit. This violation was addressed in FCE 8348. The next PM test must occur by the end of November, 2022.

- **Stack Testing Report – CONFIDENTIAL**
- **Edoctus 2480730 – Test Protocol**

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

	Indicator No. 1
I. Indicator	Operating temperature of the combustion chamber.
Measurement Approach	Combustion chamber temperature is measured continuously with at minimum a Type K thermocouple.
II. Indicator Range	The indicator range for the combustion chamber temperature is between 1,700 °F and 2,100 °F with a minimum accuracy of ± 3%.
III. Performance Criteria	The TOx shall consist of at minimum a Type K thermocouple which shall be maintained in accordance with the manufacturer’s specifications.
A.Data Representativeness	TOx in operation-verified by daily checks. Alarms are also in place to indicate any malfunction in proper operation of the unit.
B. Verification of Operational Status	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).
C.QA/QC Practices and Criteria	Temperature is measured continuously.
D. Monitoring Frequency	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.
Data Collection Procedures	None, not to exceed min. and max.

Averaging Period	
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Records confirm that the combustion chamber temperatures of the thermal oxidizers are measured continuously with at least Type K thermocouples, and that these thermocouples are maintained and calibrated annually as required. The thermocouples are monitored daily at the control room and an alarm will alert personnel of any temperature issue or malfunction.

- **Thermocoupling Inspection & Calibration – CONFIDENTIAL**

Ms. Alexander confirmed that checks and maintenance on the thermal oxidizers are conducted in accordance with the manufacturer’s recommendations. The Facility does maintain a SSM plan and a record of all the SSM events and a record of all temperatures that fall below 1,500 °F. Records confirmed that the operating temperature of the combustion chambers of the thermal oxidizers is measured continuously.

- **CAM & Thermal Oxidizer Temperatures Folder – CONFIDENTIAL**
- **SSM Reports Folder – CONFIDENTIAL**

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

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. No LDAR inspection records were provided to DEQ, although they were requested. This is a violation of 40 C.F.R. §63.999(c)(2)(i).
2. The Facility failed to comply with § 63.7550(b) by not submitting biennial compliance reports to DEQ for Boiler #1 and Boiler #2.

No other compliance issues were noted.

Edoctus Numbers

- 1928133 – Permit No. 2004-302-AD (M-3)
- 2049297 – Permit No. 2017-0914-TVR2
- 2074225 – Permit No. 2017-0914-AD (M-1)
- 2082418 – Permit No. 2004-302-C (M-4)
- 2355866 – Permit No. 2017-0914-AD (M-2)
- 2518482 – ACC for reporting period 8/1/2020 – 7/31/2021
- 2358631 – ACC for reporting period 8/1/2019 – 7/31/2020
- 2518481 – SAR for reporting period 2/1/2021 – 7/31/2021
- 2433467 – SAR for reporting period 8/1/2020 – 1/31/2021
- 2358630 – SAR for reporting period 2/1/2020 – 7/31/2020

- 2480730 – Test Protocol

Confidential Records

- Baghouse Pressure Monitoring
- Baghouse Recordkeeping Plan
- Boiler Reports
- CAM & Thermal Oxidizer Temperatures
- Feedstock %S
- Gas & Diesel Usage
- Generator Maintenance Records
- Generator Picture
- Hourly Sulfur
- Natural Gas Bill
- SSM Reports
- Stack Testing Report
- Storage Tank Inventory
- Thermocoupling Inspection & Calibration