



Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

Braskem Neal plant TV permit renewal

9 messages

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

Wed, Nov 16, 2022 at 8:12 AM

To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

Hi Mr. Marshall,

I am working on your draft Title V permit renewal and need your help, please.

In the renewal Application, Facility-Wide Emissions Summary Table (Section 3, item 23) it is indicated "See Appendix A", but the Appendix A summary is a bit unclear to me.

Would you, please, fill out and email me the Facility-Wide Emissions Summary Table form (renewal Application, Section 3, item 23).

Thank you for your cooperation!

Sincerely,

Natalya Chertkovsky

WV DEP DAQ

TV Permit Engineer

304 926 0499 x 41250

BERNARD K MARSHALL <bernard.marshall@braskem.com>

Thu, Nov 17, 2022 at 3:04 PM

To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Cc: LAURENCE J KERRIGAN <laurence.kerrigan@braskem.com>, Daniel Wheeler <dwheeler@trinityconsultants.com>

As you requested, we have filled out the "Facility-Wide Emissions Summary" in Section 3, item 23 of the Title V application submittal. The PDF is attached.

The criteria pollutant data for this table was pulled from the bottom of "Table 1-Emissions Summary" in Appendix A of the application. It is page 107 of the PDF submittal package. The HAP emissions are calculated as the sum of the emission rates for Emission Unit IDs 001-02, B604, 001-03, 001-04, EG-1, EG-2, EG-3, B101, OSBL Flare, ISBL Flare, D106A, and D106B. Emission calculations for these units can be found in Appendix A in Tables 1, 2.A, 2.C, 3, and 4.

Please contact me if you have additional questions.

From: Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>
Sent: Wednesday, November 16, 2022 8:13 AM
To: BERNARD K MARSHALL <bernard.marshall@braskem.com>
Subject: Braskem Neal plant TV permit renewal

ATENÇÃO: Esta mensagem foi enviada por um REMETENTE EXTERNO. Tenha CUIDADO, principalmente com links e anexos.
ATTENTION: This message was sent by an EXTERNAL SENDER. Be CAREFUL, especially with links and attachments.
ATENCIÓN: Este mensaje fue enviado desde un REMITENTE EXTERNO. Tenga PRECAUCIÓN, particularmente con los enlaces y archivos adjuntos.
ACHTUNG: Diese Nachricht wurde von einem EXTERNEN Absender gesendet. Seien Sie Vorsichtig, vor allem beim Öffnen von Links und Anhängen.

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 **Title V General Application Form Section 3 Item 23 Revised.pdf**
94K

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Thu, Nov 17, 2022 at 7:19 PM
To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

Thank you so much for your quick response, I appreciate the PTE Table and the clarification!
[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Fri, Dec 23, 2022 at 6:14 PM
To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

Hi Bernard,
Please, find attached Braskem Neal plant draft permit renewal and a renewal fact sheet for your quick review.
There are not many changes.
Please, let me know if you have any questions or comments ASAP, or by next Thursday, December 29, 2022, if possible.
If everything looks ok we plan to go to notice in the first week of January.
Thank you for your cooperation, and Merry Christmas!
Sincerely,
Natalya Chertkovsky
[Quoted text hidden]

2 attachments

 **DPFactSheetRenewal2023.docx**
167K

 **DPPermitRenewal2023-rev.docx**
421K

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov> Fri, Dec 23, 2022 at 6:31 PM
To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

P. S. We plan to publish notice on January 4, 2023. If I hear from you before this date just to make sure you're ok with the draft - I'd really appreciate it!

[Quoted text hidden]

Fri, Dec 23, 2022 at 7:24 PM

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

To: "dwheeler@trinityconsultants.com" <dwheeler@trinityconsultants.com>

Hi Daniel,

I work on the Braskem Neal plant draft renewal permit.

Please, see my email to Mr. Bernard Marshall earlier today. I sent a draft permit renewal and a fact sheet for his review, but received an automatic reply that he's on vacation and will not be back until January 3.

The problem is we plan to go to notice with the draft on January 4, 2023, so I'm reaching out to you - maybe, you can help to review the draft next week (there are almost no changes).

If we can confirm by January 3, 2023 (or sooner) that the company is ok with the draft - it would be really appreciated!

Thank you in advance for your help, and Merry Christmas!

Sincerely,

Natalya Chertkovsky

WV DEP DAQ

TV Permit Engineer

304 926 0499 x 41250

cell 304-552-6088

[Quoted text hidden]

Tue, Jan 3, 2023 at 9:28 AM

BERNARD K MARSHALL <bernard.marshall@braskem.com>

To: "Chertkovsky, Natalya V" <natalya.v.chertkovsky@wv.gov>

Cc: Daniel Wheeler <dwheeler@trinityconsultants.com>

I just got back into the office today and noticed your below email. I would appreciate a couple of days to review the draft. I know you planned on going to public notice tomorrow. Could you delay until Thursday to give us another day? I have been out of office for 12 days (it was nice) and there is a lot to catch up on.

Please let me know.

[Quoted text hidden]

Tue, Jan 3, 2023 at 9:37 AM

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

Hi Bernard!

Thank you for getting back to me. It would be best if you can make a quick review today, but you'll still have a chance to review and comment during the official 30-day comment period starting on January 4, 2023.

There are only a few changes to the permit - they are explained in the FS:

"The following changes to the permit were made since the latest permit modification MM01 (issued 05/19/2020):

1. Page 1 – the permittee mailing address was revised to change the name of the road from “Big Sandy Road” to “Big Sandy River Road”.
2. Permit Shield (condition 3.7.2) – the following reason for non-applicability of the 40 CFR 63, Subpart EEEE and Subpart FFFF was added to conditions 3.7.2, d and 3.7.2, e: “this Subpart only applies to major sources of HAPs, and the Neal Plant is not a major source of HAPs”.
3. Section 8.0 – 40 CFR 63 Subpart ZZZZ language was revised in accordance with the latest Subpart revision. Also, an applicable reporting requirement 40 CFR §63.6650(h) was added for Emergency Fire Pumps EG-1 and EG-2 (condition 8.5.5)."

Please, let me know.

Thank you,

Sincerely,

Natalya Chertkovsky

[Quoted text hidden]

Chertkovsky, Natalya V <natalya.v.chertkovsky@wv.gov>

Tue, Jan 3, 2023 at 2:20 PM

To: BERNARD K MARSHALL <bernard.marshall@braskem.com>

Hi Bernard,

If you don't have any major comments, I am going to get the draft permit ready for public notice, and will look forward to your comments or questions (if any) during the notice period.

Thank you!

Natalya

[Quoted text hidden]

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions ³
Carbon Monoxide (CO)	74.91
Nitrogen Oxides (NO _x)	72.95
Lead (Pb)	4.08E-04
Particulate Matter (PM _{2.5}) ¹	90.11
Particulate Matter (PM ₁₀) ¹	92.94
Total Particulate Matter (TSP)	103.85
Sulfur Dioxide (SO ₂)	1.04
Volatile Organic Compounds (VOC)	208.04
Hazardous Air Pollutants ²	Potential Emissions ⁴
Hexane	1.48
Formaldehyde	6.39E-02
Benzene	3.63E-03
Toluene	3.62E-03
Nickel	1.72E-03
Regulated Pollutants other than Criteria and HAP	Potential Emissions

¹PM_{2.5} and PM₁₀ are components of TSP.
²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.
³Total facility-wide emissions obtained from the final row of Table 1 in Appendix A.
⁴HAP emissions are calculated as the sum of the emission rates for Emission Unit IDs 001-02, B604, 001-03, 001-04, EG-1, EG-2, EG-3, B101, OSBL Flare, ISBL Flare, D106A, and D106B. Emission calculations for these units can be found in Appendix A in Tables 1, 2.A, 2.C, 3, and 4.

West Virginia Department of Environmental Protection

Harold D. Ward

Cabinet Secretary

Permit to Operate



Pursuant to

Title V

of the Clean Air Act

Issued to:

Braskem America, Inc.

Neal Plant / Kenova

R30-09900010-2023

Laura M. Crowder

Director, Division of Air Quality

Expiration: [5 years after issuance date] • Issued: [Date of issuance] • Effective: [Equals issue date plus two weeks] • Renewal Application Due: [6 months prior to expiration]

Permit Number: **R30-09900010-2023**
Permittee: **Braskem America, Inc.**
Facility Name: **Neal Plant**
Permittee Mailing Address: **200 Big Sandy River Road, Kenova, WV 25530**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Kenova, Wayne County, West Virginia
Facility Mailing Address:	Same as above
Telephone Number:	(304) 453-1371
Type of Business Entity:	Corporation
Facility Description:	Polypropylene Polymers
SIC Codes:	2821
UTM Coordinates:	360.60 km Easting • 4246.10 km Northing • Zone 17

Permit Writer: Natalya V. Chertkovsky-Veselova

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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APPENDIX A - (Monthly Opacity Record, Certification of Data Accuracy)

1.0 Emission Units and Active R13, R14, and R19 Permits

1.1 Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
001 Utilities					
001-02 B600	01E	Boiler #1 -Natural Gas Steam Boiler: Model# 1VP-10B, Serial# 6380	1961	77 MM Btu/hr	Low NOx Burners Installed in 1995
B604	75E	Boiler #4 - Natural Gas Steam Boiler: Babcock & Wilcox Model # FM 103-79	2011	99.66 MMBtu/hr	Inherent Flue Gas Recirculation
001-03 H-081	70E	H-081- Natural Gas Steam Boiler Nebraska Boiler, Model# NS-A-20, Serial# D-3226	1993	6.3 MM Btu/hr	NA
001-04 H-082	70E	H-082 -Natural Gas Steam Boiler Nebraska Boiler, Model# NS-A-20, Serial# D-3227	1993	6.3 MM Btu/hr	NA
Cooling Tower	Fugitive	Facility Cooling Tower			NA
EG-1	EG-1E	H9202A Emergency Fire Pump (Caterpillar Model # 3406 B-DIT)	1988	330 hp	NA
EG-2	EG-2E	H9202B Emergency Fire Pump (Caterpillar Model # 3406 B-DIT)	1988	330 hp	NA
EG-3	EG-3E	H516 Emergency Fire Pump (Caterpillar Model # 3408 DITA)	1998	507 hp	NA
002 - Raw Material Preparation (Areas 10, 11, 15, & 16)					
B101	B101E	Nitrogen Heater	1960	300 TPY Propane (1.7 MMBtu/hr)	NA
OSBL Flare	B542E	OSBL Flare; Model # STF-S-18C (Smokeless)	Const. - 10/6/60 Modif. - 5/1/88	40,000 lb/hr	APCD Air pollution Control Device
D-1105A	B542E	Propylene Dryer	1995	81,000 lb/hr	OSBL Flare
D-1105B	B542E	Propylene Dryer	1995	81,000 lb/hr	OSBL Flare
LDAR Components (A-10, A-11, A15 and A16)	Fugitive	Raw Material Prep Fugitive Emissions	1985	NA	NA
Material Prep. Analyzer Bld. Speed Loops (EP27 &EP28)	B542E	Analyzer speed loops on old 27E and 28E sources	1988		OSBL Flare

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device
J1401A	B542E	#1 Propylene RR Unloading Station	1985	70,000 lb/hr	OSBL Flare
J1401B	B542E	#2 Propylene RR Unloading Station	1985	70,000 lb/hr	OSBL Flare
J1401C	B542E	#3 Propylene RR Unloading Station	1988	70,000 lb/hr	OSBL Flare
J1401D	B542E	#4 Propylene RR Unloading Station	1995	70,000 lb/hr	OSBL Flare
Unpaved Roads	fugitive	Facility-wide unpaved roads	1960		NA
Paved Roads	fugitive	Facility-wide paved roads	1960		NA
003 Polymerization (Area 11)					
ISBL Flare	91E	ISBL Flare	1988	366,000 lb/hr	(APCD)
DS503	82E	DS503 Vent	1988		NA
Poly Analyzer (EP29)	B542E	Analyzer Speed Loop on old 29E	1988		Flare
LDAR Components (A-91)	Fugitive	Poly Fugitive Emissions	1988	NA	NA
004 Material Recovery					
LDAR Components (A-RR)	Fugitive	Material Recovery Fug. Emissions			NA
005 Product Finishing (Area 8)					
L-8903	76E	L-8903 Feeder #2	2014	75,000 lb/hr	Filter #2
L-8904	77E	L-8904 Feeder #3	2014	75,000 lb/hr	Filter #3
L-8905	78E	L-8905 Feeder #5	2014	75,000 lb/hr	Filter #5
L-8906	79E	L-8906 Feeder #6	2014	75,000 lb/hr	Filter #6
L-8907	80E	L-8907 Feeder #7	2014	75,000 lb/hr	Filter #7
L-8908	81E	L-8908 Feeder #4	2014	75,000 lb/hr	Filter #4
Filter #2	76E	L-8903 Feeder #2 Bag Filter	2014	--	APCD
Filter #3	77E	L-8904 Feeder #3 Bag Filter	2014	--	APCD
Filter #5	78E	L-8905 Feeder #5 Bag Filter	2014	--	APCD
Filter #6	79E	L-8906 Feeder #6 Bag Filter	2014	--	APCD
Filter #7	80E	L-8907 Feeder #7 Bag Filter	2014	--	APCD
Filter #4	81E	L-8908 Feeder #4 Bag Filter	2014	--	APCD
L-8829	74E	L-8829 Blender/Conveyor	1994	75,000 lb/hr	G-8830 Bag Filter
G-8830	74E	L-8829 Blender/ Conveyor Bag Filter	2011	--	APCD
L-8856	56E	WPB Pellet Dryer	1994	75,000 lb/hr	NA
G-738	58E	WPB South Dust Collector			APCD
Matcon-Buls Loading Booth	58E	Matcon-Buls Loading Booth (2 nd Floor)	1988	1500 lb/hr	G-738 Dust Collector

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
Drum Weigh Station	58E	Drum Weigh Station (3 rd Floor)	1988	1500 lb/hr	G-738 Dust Collector
L-739	58E	L-739 Additive Mixer/Blender (3 rd Floor)	1988	1500 lb/hr	G-738 Dust Collector
Matcon-Buls Unloading Booth	58E	Matcon-Buls Unloading Booth (3 rd Floor)	1988	1500 lb/hr	G-738 Dust Collector
Unnamed Cyclone #2.	71E	Portable Blower Unit #2 - Unnamed Cyclone #2			APCD
Portable Blower Unit #2	71E	Portable Blower Unit #2	1980	8,000 lb/hr	Unnamed cyclone #2
L-816B	68E	WP2 Extruder	1980	1000 lb/hr	NA
WP2 Pellet Loading Hopper	69E	WP2 Pellet Loading Hopper	1980	1000 lb/hr	NA
006 Product Storage (Area 8)					
G-9001	24E	G-9001 Silos Bag Filter			APCD
D-9003	24E	D-9003 Pellet Silo	1990	75,000 lb/hr	G-9001 Bag Filter
D-9002	24E	D-9002 Pellet Silo	1990	75,000 lb/hr	G-9001 Bag Filter
G-9002	26E	G-9002 Silo/Blender Bag Filter			APCD
D-9001	26E	D-9001 Pellet Silo	1990	75,000 lb/hr	G-9002 Bag Filter
D-9004	26E	D-9004 Pellet Silo	1990	75,000 lb/hr	G-9002 Bag Filter
G-9003	72E	G-9003 Blenders Bag Filter			APCD
D-9005	72E	D-9005 Pellet Silos	1994	75,000 lb/hr	G-9003 Baghouse
D-9012	72E	D-9012 Pellet Silos	1994	75,000 lb/hr	G-9003 Baghouse
G-9004	38E	G-9004 Blenders Bag Filter			APCD
D-9006	38E	D-9006 Pellet Silo	1994	75,000 lb/hr	G-9004 Bag Filter
D-9011	38E	D-9011 Pellet Silo	1994	75,000 lb/hr	G-9004 Bag Filter
G-9501	42E	Flotriator Bag Filter			APCD
L-9501	42E	Flotriator	1984	60,000 lb/hr	G-9501 Bag Filter
G-9005	49E	G-9005 Blenders Bag Filter			APCD
D-9007	49E	D-9007 Pellet Silo	1994	75,000 lb/hr	G-9005 Bag Filter
D-9010	49E	D-9010 Pellet Silo	1994	75,000 lb/hr	G-9005 Bag Filter
G-9006	50E	G-9006 Blenders Bag Filter			APCD

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed/Modified	Design Capacity	Control Device
D-9008	50E	D-9008 Pellet Silo	1994	75,000 lb/hr	G-9006 Bag Filter
D-9009	50E	D-9009 Pellet Silo	1994	75,000 lb/hr	G-9006 Bag Filter
G-9503	51E	Pelletron Bag Filter			APCD
L-9503	51E	Pelletron	1994	60,000 lb/hr	G-9503 Bag Filter
G-0908	59E	Returned Rail Car Unloading Cyclone Cartridge Filter			APCD
G-0911	59E	Returned Rail Car Unloading Cyclone Bag Filter			G-0908 – Cartridge Filter
G-0904	59E	Returned Rail Car Unloading Cyclone	1980	5,479 lb/hr	G-0911 Bag Filter
D-670 (SB-1)	60E	SB-1 Super Blender	1978	5,479 lb/hr	NA
D-672 (SB-2)	61E	SB-2 Super Blender	1981	5,479 lb/hr	NA
SB-3	62E	Truck Loading Pellet Silo	1979	33,000 lb/hr	NA

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-18300	March 13, 2020
G60-C019	August 3, 2010

2.0 General Conditions

2.1 Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2 Acronyms

CAAA	Clean Air Act Amendments	NSPS	New Source Performance Standards
CBI	Confidential Business Information	PM	Particulate Matter
CEM	Continuous Emission Monitor	PM₁₀	Particulate Matter less than 10µm in diameter
CES	Certified Emission Statement	pph	Pounds per Hour
C.F.R. or CFR	Code of Federal Regulations	ppm	Parts per Million
CO	Carbon Monoxide	PSD	Prevention of Significant Deterioration
C.S.R. or CSR	Codes of State Rules	psi	Pounds per Square Inch
DAQ	Division of Air Quality	SIC	Standard Industrial Classification
DEP	Department of Environmental Protection	SIP	State Implementation Plan
FOIA	Freedom of Information Act	SO₂	Sulfur Dioxide
HAP	Hazardous Air Pollutant	TAP	Toxic Air Pollutant
HON	Hazardous Organic NESHAP	TPY	Tons per Year
HP	Horsepower	TRS	Total Reduced Sulfur
lbs/hr or lb/hr	Pounds per Hour	TSP	Total Suspended Particulate
LDAR	Leak Detection and Repair	USEPA	United States Environmental Protection Agency
m	Thousand	UTM	Universal Transverse Mercator
MACT	Maximum Achievable Control Technology	VEE	Visual Emissions Evaluation
mm	Million	VOC	Volatile Organic Compounds
mmBtu/hr	Million British Thermal Units per Hour		
mmft³/hr or mmcf/hr	Million Cubic Feet Burned per Hour		
NA or N/A	Not Applicable		
NAAQS	National Ambient Air Quality Standards		
NESHAPS	National Emissions Standards for Hazardous Air Pollutants		
NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]
- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

- 2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
- a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

- 2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

- 2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

- 2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

- 2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
- a. The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - c. The change shall not qualify for the permit shield.
 - d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

- f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

- 2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

- 2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

- a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
- b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

- 2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.40]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
- a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

- 2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
- a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
- a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

- 2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Emergency

- 2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

- 2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The permitted facility was at the time being properly operated;
- c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

- d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

- 2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

- 2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.

[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

- 2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

- 2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

- 2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

- 2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.
[45CSR§30-5.6.a.]

2.21.2. Nothing in this permit shall alter or affect the following:

- a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
- b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
- c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.
[45CSR§30-5.3.e.3.B.]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.
[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege.
[45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

- a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

- 2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1 Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1., 45CSR13, R13-1830 condition 3.1.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2., 45CSR13, R13-1830 condition 3.1.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34, 45CSR13, R13-1830 condition 3.1.3.]
- 3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11. [45CSR§11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.

- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

- 3.1.8. **Risk Management Plan.** This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

- 3.1.9. *Operation and Maintenance of Air Pollution Control Equipment.* The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-1830 condition 4.1.19.]

- 3.1.10. **Permanent shutdown.** A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shutdown, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shutdown.

[45CSR13, R13-1830 condition 3.1.5.]

- 3.1.11. The permittee shall not cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that is required pursuant to condition 3.1.12 to have a full enclosure and be equipped with a particulate matter control device.

[45CSR§7-3.7., 45CSR13, R13-1830 condition 4.1.16.3.]

- 3.1.12. The permittee shall not cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

[45CSR§7-5.1., 45CSR13, R13-1830 condition 4.1.16.4.]

- 3.1.13. The permittee shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

[45CSR§7-5.2., 45CSR13, R13-1830 condition 4.1.16.5.]

3.2. Monitoring Requirements

- 3.2.1. Reserved.

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
 - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
 - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
 - d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13, Permit No. R13-1830, Conditions 4.3.5., 4.3.6.]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
- a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A., 45CSR13, Permit No. R13-1830, Condition 4.4.1.]

- 3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.

[45CSR§30-5.1.c. State-Enforceable only.]

3.5. Reporting Requirements

- 3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

- 3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

- 3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class

or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Section Chief
U. S. Environmental Protection Agency, Region III
Enforcement and Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.
[45CSR§30-8.]

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

- a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

3.6. Compliance Plan

3.6.1. Reserved.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

- a. **40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units:** Boiler #1 (B600) commenced construction prior to June 9, 1989 and has not undergone a modification or reconstruction. The addition of a low NOx burner in 1995 is not considered a modification under 40CFR60, Subpart A.

Boilers H-081 and H-082 each have maximum design heat inputs less than 10 MMBtu/hr.

- b. **40 CFR 60, Subpart DDD - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry:** Tanks F-698, D103, D105, D106A, D106B, D107, D110A, D110B, F-8809A, F-8809B, F291, H-9209A tank, H-9209B tank, F1000, F290, F704, and F707 are not affected facilities as they are not included in the definitions of the affected sources (i.e., raw materials preparation, polymerization reaction, material recovery, product finishing, and product storage).
- c. **40 CFR 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006:** The Neal Plant does not produce, as intermediates or final products, any of the chemicals listed in 40 CFR §60.489, and therefore is not included as an affected facility in the definition for “synthetic organic chemical manufacturing industry” per 40 CFR §60.481a.
- d. **40 CFR 63, Subpart EEEE - National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline):** The liquid materials handled and processed at the facility do not contain organic HAPs listed in Table 1 of this subpart in concentrations of five (5) percent by weight or greater as determined according to the procedures specified in 40 CFR §63.2354(c). Therefore in accordance with the definitions in 40 CFR §63.2406, the Neal Plant is not defined as “an organic liquids distribution” (OLD) operation. Also, this Subpart applies only to major sources of HAPs, and the Neal Plant is not a major source of HAPs.
- e. **40 CFR 63, Subpart FFFF - National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing:** Pursuant to 40 CFR §63.2435(b), organic chemical manufacturing process units (MCPUs) include the equipment necessary to operate a miscellaneous organic chemical manufacturing process as defined in 40 CFR §63.2550 that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of §63.2435. Although the Neal Plant meets the criteria in paragraphs (b)(1) and (b)(3) it does not meet the criteria in paragraph (b)(2) in that it does not use, or generate any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in 40 CFR §63.2550. Therefore, the Neal Plant does not operate an MCPUs subject to this subpart. Also, this Subpart applies only to major sources of HAPs, and the Neal Plant is not a major source of HAPs.
- f. **40 CFR 63, Subpart VVVVVV (GACT 6V) - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources:** The Neal Plant facility does not use as feedstock, generate as a byproduct, or produce as product in the chemical manufacturing process unit, any of the HAPs listed in Table 1 of this subpart and therefore does not meet the applicability condition in 40 CFR §63.11494(a)(2).

4.0 Boilers [emission point ID(s): 01E, 75E, 70E]

4.1. Limitations and Standards

4.1.1. The permitted facility shall comply with all applicable requirements of 45CSR2 - “To Prevent and Control Particulate Air Pollution from Combustion of Fuel in Indirect Heat Exchangers,” provided that compliance is maintained with any more stringent limitation set forth in this permit.

4.1.1.1. The permittee shall not cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average. [45CSR§2-3.1]

4.1.1.2. The visible emissions standards set forth in section 4.1.1.1 shall apply at all times except in periods of start-ups, shutdowns and malfunctions. Where the Director believes that start-ups and shutdowns are excessive in duration and/or frequency, the Director may require the permittee to provide a written report demonstrating that such frequent start-ups and shutdowns are necessary. [45CSR§2-9.1]

4.1.1.3. At all times, including periods of start-ups, shutdowns and malfunctions, owners and operators shall, to the extent practicable, maintain and operate any fuel burning unit(s) including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [45CSR§2-9.2]

[45CSR13, Permit No. R13-1830, condition 4.1.14., 45CSR§§2-3.1., 9.1., and 9.2.]

4.1.2. Maximum allowable hourly and annual emissions from the following emission points shall not exceed the limitations set forth below:

Emission Point	Pollutant	Emission Limits	
		pph	tpy
70E (Boilers H-081 & H-082)	PM ₁₀	0.09	0.36
	SO ₂	0.01	0.02
	NO _x	1.24	4.68
	CO	1.04	3.94
	VOC	0.14	0.26
75E (Boiler 604)	PM _{2.5}	0.76	3.32
	PM ₁₀	0.76	3.32
	PM	0.76	3.32
	SO ₂	0.03	0.15
	NO _x	4.98	21.83
	CO	3.99	17.46
	VOC	0.35	1.53

Compliance with the streamlined PM and SO₂ limits for Boiler 604 assures compliance with 45CSR§2-4.1.b. and 45CSR§10-3.3.f. respectively.

[45CSR13, Permit No. R13-1830, conditions 4.1.1., 4.1.17., 45CSR§2-4.1.b., 45CSR§10-3.3.f.]

- 4.1.3. For Boiler B600 (01E)
- a. Pursuant to 45CSR2, Section 4, the emission of particulate matter into the open air from Boiler B600 shall not exceed 6.93 lb/hr.
[45CSR§2-4.1.b.]
 - b. Pursuant to 45CSR10, Section 3, the emissions of SO₂ from Boiler B600 shall not exceed 246.4 lb/hr.
[45CSR13, Permit No. R13-1830 condition 4.1.17., 45CSR§10-3.3.f.]
- 4.1.4. The permittee shall operate boiler B604 according to the following procedures:
- 4.1.4.1. Boiler B604 shall be limited to a maximum design heat input of 99.66 MM Btu/hr and shall combust only natural gas.
 - 4.1.4.2. The permittee shall, at all times B604 is in operation, utilize flue gas recirculation. A flue gas recirculation rate shall be utilized that is consistent with good engineering practices, manufacturer's recommendations, and data developed during any required stack test so as to guarantee the optimum reduction in the formation of NO_x.
 - 4.1.4.3. The permittee shall meet all applicable requirements as given under 40 CFR 60, Subpart Dc. Due to utilizing natural gas as the fuel source, these requirements are limited to the reporting and recordkeeping provisions of 40 C.F.R. §60.48c(a), (g), and (i).
 - 4.1.4.4. The permittee shall meet all applicable requirements as given under 40 CFR 60, Subpart A
[45CSR16, 45CSR13, Permit No. R13-1830 condition 4.1.8., 40 C.F.R. §§60.48c(a), (g), (i)]
- 4.1.5. The two boilers, identified as H081 and H082, shall fire only natural gas and shall be operated in such a manner as to not exceed, for each boiler, a steam production capacity of 5,000 pounds per hour or a maximum design heat input of 6.3 MMBtu per hour.
[45CSR13, Permit No. R13-1830, condition 4.1.5.]
- 4.1.6. The two boilers, identified as H081 and H082, shall, for each boiler, combust no more than 46.8×10^6 ft³ of natural gas per year on a rolling continuous twelve month basis.
[45CSR13, Permit No. R13-1830, condition 4.1.6.]
- 4.1.7. The permittee shall demonstrate that any future proposed changes to SO₂ emission rates or emission parameters at the facility will not cause or contribute to any violation of the SO₂ NAAQS.
[45CSR13, Permit No. R13-1830, condition 4.1.9.]

4.2. Monitoring Requirements

- 4.2.1. Boiler B600 and Boiler B604 shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each fuel burning unit in a manner consistent with 45CSR§2A-7.1.a.1., which is defined as follows: For fuel burning unit(s) which burn only pipeline quality natural gas, such records shall include, but not be limited to, the date and time of start-up and shutdown as well as the quantity of fuel consumed on a monthly basis. *(For Boiler B604 compliance with this streamlined monitoring and recordkeeping requirement assures compliance with the NSPS fuel monitoring requirements of 4.1.4.3. above.)*
[45CSR§2A-7.1.a.1., 45CSR§2-8.3.c.]

4.3. Testing Requirements

- 4.3.1. Within six (6) months of startup of B604, and at such times thereafter as may be required by the Secretary, the permittee shall conduct, or have conducted, a performance test on Boiler B604 to determine compliance with the emission limits (as defined within 4.1.2.) of the pollutants listed in the table below. The permittee shall use the test methods specified in the following table unless granted approval in writing by the Director to use an alternative test method in a protocol submitted pursuant to section 3.3.1.c.

Pollutant	Test Method ⁽¹⁾
CO	Method 10
NO _x	Method 7E

(1) All test methods refer to those given under 40 CFR 60, Appendix

[45CSR13, Permit No. R13-1830, condition 4.3.8.]

4.4. Recordkeeping Requirements

- 4.4.1. For the purpose of determining compliance with 45CSR§2-8.3.c as well as the limitations of 4.1.4.1 and 4.1.6. the permittee shall keep individual monthly and rolling twelve-month total records of natural gas usage for boilers B600, B604, H081, and H082 and the corresponding operating schedule records. Said records shall be kept on-site for a period of at least five (5) years. Said records shall be certified and made available upon request of the Director or his/her duly authorized representative. *(For Boiler B604, compliance with this streamlined requirement assures compliance with 40 CFR §§60.48c(g) and (i).)*

[45CSR§2-8.3.c, 45CSR§§2A-7.1.a.1 and 7.1.b, 45CSR13, R13-1830, Condition 4.4.4., 45CSR16, 40 CFR §§60.48c(g) and (i)]

- 4.4.2. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction (SSM) in the operation of Boiler B604; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative

[45CSR13, R13-1830, Condition 4.4.5, 40 CFR §60.7(b)]

4.5. Reporting Requirements

- 4.5.1. The permittee shall report any malfunction of a fuel burning unit or its air pollution control equipment which results in any excess particulate matter emission rate or excess opacity (i.e. emission exceeding the standards defined in 4.1.1., 4.1.2. and 4.1.3. of this permit) as provided in one of the following subdivisions:

- a. Excess opacity periods meeting the following conditions may be reported on a quarterly basis unless otherwise required by the Director:
 1. The excess opacity period does not exceed thirty (30) minutes within any 24-hour period; and
 2. Excess opacity does not exceed 40%
- b. The permittee shall report any malfunction resulting in excess particulate matter or excess opacity, not meeting the criteria in section 4.5.1.a. of this permit, by telephone, or e-mail by the end of the next business day after becoming aware of such condition. The permittee shall file a certified written report

concerning the malfunction with the Director within thirty (30) days providing the following information:

1. A detailed explanation of the factors involved or causes of the malfunction;
2. The date and time of duration (with starting and ending times) of the period of excess emissions;
3. An estimate of the mass of excess emissions discharged during the malfunction period;
4. The maximum opacity measured or observed during the malfunction;
5. Immediate remedial actions taken at the time of the malfunction to correct or mitigate the effects of the malfunction; and
6. A detailed explanation of the corrective measures or program that will be implemented to prevent a recurrence of the malfunction and a schedule for such implementation.

[45CSR§2-9.3, 45CSR13, R13-1830, condition 4.5.4.]

4.6. Compliance Plan

- 4.6.1. Reserved.

5.0 Particulate Matter Sources [Emission Point ID(s): 24E, 26E, 38E, 42E, 49E, 50E, 51E, 56E, 58E, 59E, 60E, 61E, 62E, 68E, 69E, 71E, 74E, 72E, 76E, 77E, 78E, 79E, 80E and 81E]

5.1. Limitations and Standards

5.1.1. The permitted facility shall comply with all applicable requirements of 45CSR7 - “To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations,” provided that compliance is maintained with any more stringent limitations set forth in this permit.

5.1.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 3.2, 3.3, 3.4, 3.5, 3.6, and 3.7 of 45CSR7.

5.1.1.2. The provisions of 5.1.1.1 shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.

[45CSR13, Permit No. R13-1830, Condition 4.1.16., 45CSR§§7-3.1, and 3.2.]

5.1.2. Maximum allowable hourly and annual emissions from the following emission points shall not exceed the limitations set forth in the table below.

Emission Point	Pollutant	Emission Limit	
		pph	tpy
24E	PM ₁₀	0.02	0.09
26E	PM ₁₀	0.02	0.09
38E	PM ₁₀	0.02	0.09
42E	PM ₁₀	0.02	0.09
49E	PM ₁₀	0.02	0.09
50E	PM ₁₀	0.02	0.09
51E	PM ₁₀	3.14	13.75
74E	PM ₁₀	0.01	0.04
76E, 77E, 78E, 79E, 80E, 81E	PM ₁₀	0.01	0.01
56E	PM ₁₀	5.00	21.90
58E	PM ₁₀	0.18	0.79
59E	PM ₁₀	0.55	2.40
60E	PM ₁₀	0.55	2.40
61E	PM ₁₀	0.55	2.40
62E	PM ₁₀	2.38	10.42
68E	PM ₁₀	0.12	0.53
69E	PM ₁₀	0.12	0.53
71E	PM ₁₀	0.80	3.50

Emission Point	Pollutant	Emission Limit	
		pph	tpy
72E	PM ₁₀	0.02	0.09

Compliance with the streamlined PM emission limits above assures compliance with 45CSR§7-4.1.

[45CSR13, Permit No. R13-1830, Condition 4.1.1, 45CSR§7-4.1]

5.2. Monitoring Requirements

- 5.2.1. *Opacity Monitoring and Visual Emission Check Procedures.* For the purpose of determining compliance with the opacity limits set forth in Sections 5.1.1. the permittee shall conduct visible emission checks and/or opacity monitoring and recordkeeping for all emission sources subject to an opacity limit.

The visible emission check shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may be obtained from written materials found in the References 1 and 2 from 40CFR Part 60, Appendix A, Method 22 or from the lecture portion of the 40CFR Part 60, Appendix A, Method 9 certification course.

Visible emission checks shall be conducted at least once per calendar month with a maximum of forty-five (45) days between consecutive readings. These checks shall be performed at each source (stack, transfer point, fugitive emission source, etc.) for a sufficient time interval, but no less than one (1) minute, to determine if any visible emissions are present. Visible emission checks shall be performed during periods of normal facility operation and appropriate weather conditions.

If visible emissions are present at a source(s) for three (3) consecutive monthly checks, the permittee shall conduct an opacity reading at that source(s) using the procedures and requirements of 45CSR§7A as soon as practicable, but within seventy-two (72) hours of the final visual emission check for the calendar quarter. A 45CSR§7A observation at a source(s) restarts the count of the number of consecutive readings with the presence of visible emissions.

[45CSR13, Permit No. R13-1830, Condition 4.2.1.]

5.3. Testing Requirements

- 5.3.1. *Opacity testing.* Any test to determine compliance with the visible emission (opacity) limitations set forth in Sections 5.1.1, per the requirements of Section 5.2.1, shall be conducted by personnel appropriately trained for the task. Personnel performing the visual emissions observation shall be trained and familiar with the limitations and restrictions associated with 40CFR Part 60, Appendix A – Method 22. Any person performing an opacity observation for compliance assessment in the event of visible emissions must be a certified visible emission observer in accordance with 45CSR7A – “Compliance Test Procedures for 45CSR7 – To Prevent and Control Particulate Air Pollution from Manufacturing Process Operations” and Method 22 of 40CFR60 Appendix A. Nothing in this section, however, shall preclude any permittee or the Secretary from using opacity data from a properly installed, calibrated, maintained and operated continuous opacity monitor as evidence to demonstrate compliance or a violation of visible emission requirements. If continuous opacity monitoring data results are submitted when determining compliance with visible emission limitations for a period of time during which 45CSR7A or Method 22 data indicates noncompliance, the 45CSR7A or Method 22 data shall be used to determine compliance with the visible emission limitations.

[45CSR13, Permit No. R13-1830, Condition 4.3.4.]

- 5.3.2. Any stack serving any process source operation or air pollution control device on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR13, Permit No. R13-1830, Condition 4.3.3., 45CSR§7-4.12.]
- 5.3.3. *Stack testing.* At such reasonable times as the Secretary may designate, the permittee may be required to conduct or have conducted stack tests to determine the particulate matter loading in exhaust gases when the Secretary has reason to believe that an emission limitation is being violated. For cause, the Secretary may request the permittee to install such stack gas monitoring devices as the Secretary deems necessary to determine continuing compliance. The data from such devices shall be readily available for review on-site or at such other reasonable location that the Secretary may specify. At the request of the Secretary, such data shall be made available for inspection or copying and the Secretary may require periodic submission of excess emission reports.
[45CSR13, Permit No. R13-1830, Condition 4.3.1.]
- 5.3.4. *Compliance testing.* Any such test to determine compliance with particulate matter limitations set forth in Section 5.1.2. shall be conducted in accordance with Method 5 of 40CFR60 Appendix A, Method 201 or 201A of 40CFR§51, or other such appropriate method approved by the Secretary. All such compliance tests must consist of not less than three (3) test runs; any test run duration shall not be less than sixty (60) minutes and no less than thirty (30) standard cubic feet of exhaust gas must be sampled during each test run. Such tests shall be conducted under such reasonable operating conditions as the Secretary may specify. The Secretary, or a duly authorized representative, may option to witness or conduct such stack tests. Should the Secretary exercise this option to conduct such tests, the registrant shall provide all necessary sampling connections and sampling ports located in a manner as the Secretary may require, power for test equipment and required safety equipment in place such as scaffolding, railings and ladders in order to comply with generally accepted good safety practices.
[45CSR13, Permit No. R13-1830, Condition 4.3.2., 45CSR§7-8.1.]

5.4. Recordkeeping Requirements

- 5.4.1. *Record of Maintenance of Air Pollution Control Equipment.* For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.
[45CSR13, Permit No. R13-1830, Condition 4.4.2.]
- 5.4.2. *Record of Malfunctions of Air Pollution Control Equipment.* For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
- a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- g. Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, Permit No. R13-1830, Condition 4.4.3.]

- 5.4.3. Compliance with the maintenance of air pollution control equipment requirements of Section 3.1.9. and the recordkeeping of Sections 5.4.1. and 5.4.2. shall constitute compliance with the PM₁₀ emission limits in Section 5.1.2.

[45CSR13, Permit No. R13-1830, Condition 4.1.3.]

- 5.4.4. The permittee shall maintain records of all monitoring data required by Section 5.2.1. documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the responsible observer, the results of the check, whether the visible emissions are normal for the process, and, if necessary, all corrective actions taken. The permittee shall also record the general weather conditions during the observations. An example form is supplied as Appendix A. Should a visible emission observation be required to be performed per the requirements specified in 45CSR§7A, the data records of each observation shall be maintained per the requirements of 45CSR§7A. For an emission unit out of service during the normal monthly evaluation, the record of observation may note “out of service” (O/S) or equivalent.

[45CSR13, Permit No. R13-1830, Condition 4.4.6.]

5.5. Reporting Requirements

- 5.5.1. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in 45CSR7 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.

[45CSR§7-9.1.]

- 5.5.2. Any violation(s) of the allowable visible emission requirement for any emission source discovered during testing using 45CSR§7A must be reported in writing to the Director of the Division of Air Quality as soon as practicable, but within ten (10) calendar days, of the occurrence and shall include, at a minimum, the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s), and any corrective measures taken or planned.

[45CSR13, Permit No. R13-1830, Condition 4.5.3.]

5.6. Compliance Plan

- 5.6.1. Reserved.

6.0 Manufacturing of Polypropylene: Requirements for Volatile Organic Compounds (VOC) - [Equipment-Area IDs or Emission Points: 91E, B542E, 68E, WPB Extruder, WPA Extruder, EP27, EP28, EP29, R201, R202, and Fugitive Emission Areas A-RR, A-10, A-11, A-91, and A-8]

6.1. Limitations and Standards

- 6.1.1. The permitted facility shall comply with all applicable requirements of 40 CFR 60 subpart DDD - "Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry," provided that compliance is maintained with any more stringent limitations set forth in this permit. *(Compliance with this streamlined condition assures compliance with 45CSR§§21-37 and -38.)*
[45CSR13 Permit No. R13-1830 condition 4.1.11, 4.1.12, 4.1.13, 45CSR§21-37, 45CSR§21-38, 45CSR16, 40CFR60 Subpart DDD, Emission Point ID(s) (91E, B542E)]
- 6.1.2. The permittee's polypropylene production unit shall control all continuous VOC emissions from the affected facility as defined by 40CFR§60.560(a)(1) in accordance with process emission standard 40CFR§60.562-1(a)(1)(i)(C). This standard requires these vent streams be combusted in a flare that meets the conditions specified in 40CFR§60.18. *(Compliance with the streamlined opacity requirements within 40CFR§60.18 assures compliance with the incinerator opacity requirements of 45CSR§6-4.3.)*
[45CSR13 Permit No. R13-1830 condition 4.1.15, 4.1.11, 45CSR16, 40CFR§60.562-1(a)(1)(i)(C), 45CSR§6-4.3, Emission Unit ID (OSBL Flare), Emission Point ID(s) (B542E)]
- 6.1.3. The permittee's polypropylene production unit shall control all intermittent VOC emissions from the affected facility as defined in 40CFR§60.560(a)(1) by meeting the control requirements specified by 40CFR§60.562-1(a)(2)(i). This section specifies the permittee shall combust the emissions in a flare that is:
- A. Designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours,
 - B. Operated with a flame present at all times, and
 - C. Designed to maintain a stable flame.
- (Compliance with the streamlined opacity requirements specified within 6.1.3.A. above assures compliance with the 20% opacity incinerator requirements of 45CSR§6-4.3.)*
- [45CSR13 Permit No. R13-1830 conditions 4.1.15, 4.1.11, 40CFR§60.562-1(a)(2)(i), 45CSR§6-4.3, Emission Unit ID (ISBL Flare), Emission Point ID(s) (91E)]**
- 6.1.4. The permittee's Neal Plant being subject to the provisions of 40CFR60 Subpart DDD shall comply with the standards for VOC equipment leaks per 40CFR§60.562-2. This includes, but is not limited to the requirements specified by 40CFR§60.482-1 through §60.482-10 pertaining to 40CFR60 Subpart VV. *(Compliance with this streamlined condition assures compliance with 45CSR§§21-37.)*
[45CSR13 Permit No. R13-1830 conditions 4.1.10, 4.1.12, 45CSR§21-37., 45CSR16, 40CFR§60.562-2, Process Areas (A-RR, A-10, A-11, A-91, A-8)]

6.1.5. The feed of Volatile Organic Compounds to the OSBL Flare (B542E) and to the ISBL Flare (91E) shall not exceed 5,000,000 pounds per year combined on a rolling continuous twelve (12) month basis. Compliance with the annual feed rate to the OSBL Flare and ISBL Flare constitutes compliance with the emission limits in Section 6.1.8.

[45CSR13 Permit No. R13-1830 condition 4.1.2.]

6.1.6. The hourly production, as measured at the polymerization loop reactors (R201 and R202), of Polypropylene Resin shall not exceed 80,000 pounds. The annual production of Polypropylene Resin shall not exceed 325,000 tons on a rolling continuous twelve (12) month basis.

[45CSR13 Permit No. R13-1830 condition 4.1.4.]

6.1.7. The speed loops associated with the *de minimus* (per 45CSR§13-2.6) in-line process stream analyzer units (EP27, EP28, and EP29) shall at all times be vented to the flare header system.

[45CSR13 Permit No. R13-1830 condition 4.1.18.]

6.1.8. Maximum allowable hourly and annual emissions from the following emission points shall not exceed the limitations set forth in the table below.

Emission Point	Pollutant	Emission Limit	
		pph	tpy
91E (ISBL Flare) and B542E (OSBL Flare)	VOC	125.71	34.72
	CO	77.06	19.56
	NO _x	14.21	3.82
	PM ₁₀	7.91	2.02

Compliance with the streamlined PM emission limits above assures compliance with 45CSR§6-4.1.

[45CSR13 Permit No. R13-1830 conditions 4.1.1., 4.1.15., 45CSR§6-4.1.]

6.2. Monitoring Requirements

6.2.1. The permittee shall comply with the Monitoring Requirements of 40CFR§60.563. The sections applicable to the permittee’s Neal Plant include the following:

§60.563(a)(2) Whenever a particular item of monitoring equipment is specified in this section to be installed, the owner or operator shall install, calibrate, maintain, and operate according to manufacturer’s specifications that item as follows:

A flame monitoring device, such as a thermocouple, an ultraviolet sensor, an infrared beam sensor, or similar device to indicate and record continuously whether a pilot light flame is present, as specified below.

§60.563(b)(2)(i) If a flare is used:

A flame monitoring device shall be installed to indicate the presence of a flare flame or a flame for each pilot light, if the flare is used to comply with §60.562-1(a)(1)., including those flares controlling both continuous and intermittent emissions.

§60.563(c) Owners or operators of control devices used to comply with the provisions of this subpart, except §60.562-1(a)(1)(i)(D), shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs.

[45CSR16, 40CFR§60.563, (91E, B542E)]

6.2.2. The permittee shall monitor the heat content of the OSBL Flare (B542E) gas using a gas chromatography (GC) analyzer or other approved device and shall calculate, as a three (3) hour rolling average, the net heating value of the gas using the equations and methods established in 40 CFR 60.564(a)(3) and 40 CFR 60.564(f) to demonstrate compliance with 40 CFR 60.18(c)(3)(ii).

[45CSR13 Permit No. R13-1830 condition 4.2.2.]

6.3. Testing Requirements

6.3.1. The permittee shall comply with the Testing Requirements of 40CFR§60.564. The sections applicable to the permittee's Neal Plant include the following:

§60.564(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures specified in this section, except as provided under §60.8(b).

§60.564(a)(1) Whenever changes are made in production capacity, feedstock type or catalyst type, or whenever there is a replacement, removal, or addition of a control device, each owner or operator shall conduct a performance test according to the procedures in this section as appropriate, in order to determine compliance with §60.562-1.

§60.564(e) The owner or operator shall determine compliance with the visible emission and flare provisions in §60.562-1 as follows:

(e)(1)- Method 22 shall be used to determine visible emissions. The observation period for each run shall be 2 hours.

(e)(2)- The monitoring device of §60.563(b)(2) shall be used to determine whether a flame is present.

§60.564(f) The owner or operator shall determine compliance with the net heating value provisions in §60.18 as referenced by §60.562-1(a)(1)(i)(C). The net heating value of the process vent stream being combusted in a flare shall be computed as follows:

$$H_T = K_3 \left(\sum_{j=1}^n C_j H_j \right)$$

Where:

H_T = Vent stream net heating value, MJ/scm (Btu/scf), where the net enthalpy per mole of off gas is based on combustion at 25°C and 760 mm Hg (68°F and 30 in. Hg), but the standard temperature for determining the volume corresponding to one mole is 20° C (68°F).

$K_3 = 1.74 \times 10^{-7}$ (1/ppm)(g-mole/scm)(MJ/kcal) (metric units) where standard temperature for (g-mole/scm) is 20°C

$= 4.67 \times 10^{-6}$ (1/ppm)(lb-mole/scf)(Btu/kcal) (English Units) where standard temperature for (lb-mole/scf) is 68°F

C_j = Concentration on a wet basis of compound j in ppm.

H_j = Net heat of combustion of compound j, kcal/(g-mole) (kcal/lb-mole), based on combustion at 25°C and 760 mm Hg (77°F and 30 in. Hg).

- (1) Method 18 shall be used to determine the concentration of each individual organic component (C_j) in the gas stream. Method 1 or 1A, as appropriate, shall be used to determine the sampling site to the inlet of the flare. Using this same sample, ASTM D1946-77 or 90 (Reapproved 1994) (incorporated by reference – see §60.17) shall be used to determine the hydrogen and carbon monoxide content.
- (2) The sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at 15 minute intervals.
- (3) Published or calculated values shall be used for the net heats of combustion of the sample components. If values are not published or cannot be calculated, ASTM D2382-76 or 88 or D4809-95 (incorporated by reference – see §60.17) may be used to determine the net heat of combustion of component “j”.

§60.564(g) The owner or operator shall determine compliance with the exit velocity provisions in § 60.18 as referenced by § 60.562-1(a)(1)(i)(C) as follows:

- (1) If applicable, the net heating value (H_T) of the process vent shall be determined according to the procedures in paragraph (f) of this section to determine the applicable velocity requirements.
- (2) If applicable, the maximum permitted velocity (V_{max}) for steam-assisted and nonassisted flares shall be computed using the following equation:

$$\text{Log}_{10} (V_{max}) = (H_T + K_4)/K_5$$

Where:

V_{max} = Maximum permitted velocity, m/sec (ft/sec)

K_4 = 28.8 (metric units), 1212 (English units)

K_5 = 31.7 (metric units), 850.8 (English units)

H_T = The net heating value as determined in paragraph (f) of this section, MJ/scm (Btu/scf).

- (3) The maximum permitted velocity, V_{\max} , for air-assisted flares shall be determined by the following equation:

$$V_{\max} = K_6 + K_7 H_T$$

Where:

V_{\max} = Maximum permitted velocity, m/sec (ft/sec).

K_6 = 8.706 m/sec (metric units)

= 28.56 ft/sec (English units)

K_7 = 0.7084 [(m/sec)/(MJ/scm)] (metric units)

= 0.00245 [(ft/sec)/(Btu/scf)] (English Units)

H_T = The net heating value as determined in paragraph (f) of this section, MJ/scm (Btu/scf).

- (4) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Method 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip.

[45CSR16, 40 CFR §60.564, (91E, B542E)]

6.4. Recordkeeping Requirements

6.4.1. The permittee shall comply with the following sections from 40CFR§60.565(a):

- (a) Each owner or operator subject to the provisions of 40CFR60 Subpart DDD shall keep an up-to-date, readily-accessible record of the following information measured during each performance test, and shall include the following information in the report of the initial performance test in addition to the written results of such performance tests as required under § 60.8.

(3) When a flare is used to demonstrate compliance with § 60.562-1, except § 60.562-1(a)(2):

(i) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test,

(ii) Continuous records of the pilot flame heat-sensing monitoring, and

(iii) Records of all periods of operations during which the pilot flame is absent.

(5) When a flare is used to demonstrate compliance with § 60.562-1(a)(2):

- (i) All visible emission readings made during the performance test,
- (ii) Continuous records of the pilot flame heat-sensing monitoring, and
- (iii) Records of all periods of operation during which the pilot flame is absent.

[45CSR16, 40 CFR §§60.565(a)(3) and (5), (91E, B542E)]

6.4.2. The permittee shall comply with the following sections from 40CFR§60.565(e):

- (e) Where a flare is used to comply with § 60.562-1, except § 60.562-1(a)(1)(i)(D), each owner or operator subject to the provisions of this subpart shall keep for at least 2 years up-to-date, readily accessible continuous records of:
 - (1) The flare or pilot light flame heat sensing monitoring specified under § 60.563(b)(2), and
 - (2) All periods of operation in which the flare or pilot flame, as appropriate, is absent.

[45CSR16, 40 CFR §60.565(e), (91E, B542E)]

6.4.3. The permittee shall comply with the following sections from 40CFR§60.565(g) and (i):

- (g) Each owner or operator of an affected facility subject to the provisions of this subpart and seeking to demonstrate compliance with § 60.560(j) or § 60.562-1 shall keep up-to-date, readily accessible records of:
 - (1) Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of product recovery equipment; and
 - (2) The results of any performance test performed pursuant to the procedures specified by § 60.564.
- (i) Each owner and operator subject to the provisions of this subpart is exempt from § 60.7(c) of the General Provisions.

[45CSR16, 40 CFR §§60.565(g) and (i), (91E, B542E)]

6.4.4. The permittee shall comply with the following sections from 40CFR§60.565(k):

- (k) Each owner or operator that seeks to comply with the requirements of this subpart by complying with the uncontrolled threshold emission rate cutoff provision of §60.560 (d) and (e), the individual stream exemptions of §60.560(g), or the requirements of § 60.562-1 shall submit to the Administrator semiannual reports of the following recorded information, as applicable. The initial report shall be submitted within 6 months after the initial start-up date.
 - (4) All periods recorded under § 60.565(e) in which the flare or pilot flame was absent.

[45CSR16, 40 CFR §60.565(k)(4), (91E, B542E)]

- 6.4.5. For the purpose of determining compliance with Section 6.1.5, the permittee shall maintain records of the 12-month rolling total of VOC loading to each flare and shall maintain records of the 12-month rolling total of the combined VOC loading to both flares.

[45CSR13 Permit No. R13-1830 condition 4.4.7., (91E, B542E)]

- 6.4.6. The permittee shall keep records of the calculated heat content of the OSBL Flare (B542E) on a 3-hour average basis. At least 90% of the data for each semi-annual period shall be available at all times.

[45CSR13 Permit No. R13-1830 condition 4.4.8.]

6.5. Reporting Requirements

- 6.5.1. The permittee shall comply with the following sections from 40CFR §§60.565(l) and (m):

(l) Each owner or operator subject to the provisions of this subpart shall notify the Administrator of the specific provisions of § 60.562, § 60.560(d), or § 60.560(e), as applicable, with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial startup required by § 60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of § 60.562 with which he or she will comply or becomes subject to § 60.562 for the first time (i.e., the owner or operator can no longer meet the requirements of this subpart by complying with the uncontrolled threshold emission rate cutoff provision in § 60.560 (d) or (e)), then the owner or operator shall notify the Administrator 90 days before implementing a change and, upon implementing a change, a performance test shall be performed as specified in § 60.564.

(m) The requirements of this subsection remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves alternative reporting requirements or means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with this subsection, provided that they comply with the requirements established by the State

[45CSR16, 40 CFR §§60.565(l) and (m), (91E, B542E)]

- 6.5.2. The permittee shall report any emergency emissions to the ISBL (91E) or the OSBL (B542E) flare systems to the West Virginia Division of Air Quality. The facility must provide the following information in the report: date of the occurrence, amount and type of materials vented to the flare, time that emissions to the flare started, time that emissions to the flare ended, and the reason for emergency emissions to the flare.

[45CSR13 Permit No. R13-1830 condition 4.5.1.]

- 6.5.3. The permitted facility shall comply with the certification and reporting requirements of Sections 5.1 and 5.2 of 45CSR21. Section 5.2 of this rule is stated as follows:

Reports of excess emissions. -- Except as provided in section 45CSR§21- 9.3., the owner or operator of any facility containing sources subject to 45CSR21-5. shall, for each occurrence of excess emissions expected to last more than 7 days, within 1 business day of becoming aware of such occurrence, supply the Director by letter with the following information:

- a. The name and location of the facility;
- b. The subject sources that caused the excess emissions;

- c. The time and date of first observation of the excess emissions; and
- d. The cause and expected duration of the excess emissions.
- e. For sources subject to numerical emission limitations, the estimated rate of emissions (expressed in the units of the applicable emission limitation) and the operating data and calculations used in determining the magnitude of the excess emissions; and
- f. The proposed corrective actions and schedule to correct the conditions causing the excess emissions.

[45CSR13 Permit No. R13-1830 condition 4.5.2., (91E, B542E)]

6.6. Compliance Plan

- 6.6.1. Reserved.

7.0 ISBL Flare - Compliance Assurance Monitoring (CAM) [emission point ID(s): 91E]

7.1. Limitations and Standards

- 7.1.1. In order to demonstrate compliance with the VOC limitations defined within permit condition 6.1.8 the ISBL flare shall comply with the CAM requirements defined within this section.
[40 CFR 64]

7.2. Monitoring Requirements

- 7.2.1. The permittee shall implement a CAM program for the ISBL flare based on the following performance indicators:
- The flare shall be operated with each of its pilot lights operating at all times when emissions could be routed to the control device. The permittee shall continuously monitor each pilot for the presence of a pilot flame by using a thermocouple or any other equivalent device to detect the presence of a flame. This monitoring equipment shall be installed, calibrated, maintained, and operated according to manufacturer's specifications. Continuous monitoring for CAM shall be considered equivalent to at least one recorded measurement every fifteen (15)-minute period.
 - The flare shall be operated with no visible emissions during routine intermittent venting of the production unit and ancillary equipment except as allowed in Condition 7.2.3. No visible emission in this context shall mean, visible emissions for no more than 5 minutes within any consecutive 2 hour period using Method 22.

[40 CFR 64, 45CSR§30-5.1.c.]

- 7.2.2. **Proper Maintenance.** The permittee shall maintain monitoring at all times, including maintaining necessary spare parts for routine repairs of the monitoring equipment.

[40 CFR §64.7(b), 45CSR§30-5.1.c.]

- 7.2.3. **Response to Excursions or Exceedances.** In accordance with the operation of the ISBL Flare an excursion shall be defined as any period in which any of the flare's pilot lights are not detected. Additionally, an excursion shall also be recorded if visible emissions are detected for greater than 5 minutes within any consecutive 2 hour period, that are not related to a documented malfunction, startup, or shutdown condition.

- Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or below the applicable emission limitation or standard, as applicable.
- Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, monitoring

results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process

[40 CFR §64.7(d), 45CSR§30-5.1.c.]

- 7.2.4. **Documentation of Need for Improved Monitoring** - After approval of monitoring under 40 C.F.R. Part 64, If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the result of compliance or performance testing/design evaluation document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Director and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[40 CFR §64.7(e), 45CSR§30-5.1.c.]

7.2.5. **Quality Improvement Plan (QIP)**

- a. Based on the results of a determination made under permit condition 7.2.3.b., 7.2.5.b., or 7.2.5.c. the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, it shall be developed, implemented, and modified as required according to 40 C.F.R. §§64.8(b) through (e). Refer to permit condition 7.5.1(b)(iii) for the reporting required when a QIP is implemented.
- b. If five (5) percent or greater of the time, is documented with no pilot light available during a calendar quarter, the permittee shall develop and implement a QIP. The Director may waive this QIP requirement upon a demonstration that the cause(s) of the excursions have been corrected, or may require flare assessment tests at any time to verify manufacturer's design specifications are being adhered to.
- c. If during any time period the permittee observes a visible emission (VE) excursion, which shall be defined as, the presence of visible emissions exceeding 5 minutes within any 2 hour time period the permittee shall develop and implement a QIP. Additionally, the observed emissions should not be counted towards the total if related to a pilot light excursion or during a startup, shutdown or malfunction (SSM) event.

In developing a QIP due to visible emission excursions, the source shall identify through process knowledge and flow monitoring data the type and amount of waste gas going to the flare at the time of each VE excursion. The data gathered shall be compared to the design criteria established within the manufacturer's design specification.

[40 CFR §64.8, 45CSR§30-5.1.c.]

- 7.2.6. **Continued Operation.** Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid

data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

[40 CFR §64.7(c), 45CSR§30-5.1.c.]

7.3. Testing Requirements

7.3.1. At any time opacity is observed from the ISBL flare, the operator(s) shall report the occurrence to the appropriate Environmental Staff as soon as practical. Braskem shall conduct an evaluation of when the excess opacity occurs and during what venting cycle and flare tip staging. During the excess opacity episode(s) the permittee shall be obligated to determine whether or not the control device is in compliance with the opacity limitations defined within 7.2.1.b of this permit.

[40 CFR 64, 45CSR§30-5.1.c.]

7.3.2. In order to verify a control efficiency based on pilot light availability and no visible emissions, a design analysis based on manufacturer's recommendations shall be conducted to determine the minimum gas heating value and tip velocity. The design analysis shall take into account each of the intermittent venting scenarios that can reasonably be expected to occur when operating the polypropylene production unit. This design analysis shall be submitted for approval within 150 days of permit issuance.

[40 CFR 64, 45CSR§30-5.1.c.]

7.4. Recordkeeping Requirements

7.4.1. As part of the CAM plan the permittee shall keep an up-to-date, readily-accessible record of the following information:

- a. All visible emission readings; and heat content determinations, flow rate measurements, and exit velocity determinations made during the flare assessment testing or design analysis,
- b. Continuous records of the pilot flame heat-sensing monitoring, and
- c. Records of all periods of operations during which the pilot flame is absent.

[40 CFR §64.9(b), 45CSR§30-5.1.c., (91E)]

7.4.2. **General Recordkeeping Requirements for 40 CFR Part 64 (CAM)**

The permittee shall comply with the recordkeeping requirements specified in permit conditions 3.4.1. and 3.4.2. The permittee shall maintain records of monitoring data, monitoring performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR §64.8 (condition 7.2.5.) and any activities maintained under 40 CFR Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

[40 CFR §64.9(b), 45CSR§30-5.1.c.]

7.5. Reporting Requirements

7.5.1. **General Reporting Requirements for 40 CFR Part 64 (CAM)**

- a. On and after the date specified in 40 C.F.R. §64.7(a) (condition 7.4.2) by which the permittee must use monitoring that meets the requirements of 40 C.F.R. 64, the permittee shall submit monitoring reports to the DAQ in accordance with permit condition 3.5.6.
- b. A report for monitoring under 40 C.F.R. 64 shall include, at a minimum, the information required under permit condition 3.5.8. and the following information, as applicable:
 - i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitoring downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) provided in accordance with 40 C.F.R. Part 75; and
 - iii. A description of the actions taken to implement QIP during the reporting period as specified in 40 C.F.R. §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR §64.9(a), 45CSR§30-5.1.c.]

7.6. Compliance Plan

- 7.6.1. Reserved.

8.0 Emergency Fire Pumps [emission point ID(s): EG-1E, EG-2E, EG-3E]

Note: Except for Condition 8.1.1. and as specified in Condition 8.1.4. and 8.4.6., the requirements of this section are applicable only to EG-1 and EG-2.

8.1. Limitations and Standards

8.1.1. The permittee is authorized to operate the Emergency Fire Pump compression ignition (CI) Reciprocating Internal Combustion Engines (RICE), emission units (EG-1, EG-2, and EG-3), within the following emission limits, in accordance with all terms and conditions of the 45CSR13 G60-C Class II General Permit. The maximum fuel consumption for any registered reciprocating internal combustion engine listed in the General Permit Registration application shall not exceed the fuel consumption recorded with registrant’s Class II General Permit Registration Application (i.e., 2.25 ft³/hr or 1.13E-3 MMft³/yr for each of E-1 and E-2 and 3.46 ft³/hr or 1.73E-3 MMft³/yr for E-3) without effecting a modification or administrative update. Compliance with the Maximum Yearly Fuel Consumption Limitation shall be determined using a twelve-month rolling total. A twelve-month rolling total shall mean the sum of the fuel consumption at any given time during the previous twelve consecutive calendar months.

Emission Unit	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tpy)
EG-1 Caterpillar 3406B-DIT (H9202A)	Nitrogen Oxides	10.23	2.56
	Carbon Monoxide	2.20	0.55
	Volatile Organic Compounds	0.83	0.21
	Sulfur Dioxide	0.68	0.17
	Particulate Matter-10	0.73	0.18
EG-2 Caterpillar 3406B-DIT (H9202B)	Nitrogen Oxides	10.23	2.56
	Carbon Monoxide	2.20	0.55
	Volatile Organic Compounds	0.83	0.21
	Sulfur Dioxide	0.68	0.17
	Particulate Matter-10	0.73	0.18
EG-3 Caterpillar 3408-DITA (H516)	Nitrogen Oxides	15.72	3.93
	Carbon Monoxide	3.39	0.85
	Volatile Organic Compounds	1.27	0.32
	Sulfur Dioxide	1.04	0.26
	Particulate Matter-10	1.12	0.28

[45CSR13, General Permit Registration G60-C019 and G60-C §5.1.1., §5.1.2. and §5.1.3.]

8.1.2. As stated in 40 C.F.R. §63.6603, the permittee must comply with the following requirements from Table 2d for existing stationary RICE located at area sources of HAP emissions

For each . . .	The permittee must meet the following requirements, except during periods of startup . . .	During periods of startup you must . . .
Emergency Stationary CI RICE ²	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

¹Sources have the option to utilize an oil analysis program as described in 40 CFR §63.6625(i) in order to extend the specified oil change requirement in Table 2d of 40 CFR Subpart ZZZZ.

²If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of 40 CFR Subpart ZZZZ, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[45CSR34, 40 CFR §§63.6603(a), 63.6625(h), and Table 2d - Item 4]

- 8.1.3. The permittee must demonstrate continuous compliance with each emission limitation and operating limitation in Table 2d to 40 CFR 63, Subpart ZZZZ that apply to the permittee according to methods specified in Table 6 to 40 CFR 63, Subpart ZZZZ.
- a. Table 6 states that for work or management practices the permittee shall operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or
 - b. Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

[45 CSR34, 40 CFR §63.6640(a) and Table 6 - Item 9]

- 8.1.4. The following requirements are taken verbatim (including paragraph numbering) from 40 CFR 63 Subpart ZZZZ, §63.6640(f):
- (f) For EG-1, EG-2, EG-3: If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f) (1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

- (1) For EG-1, EG-2, EG-3: There is no time limit on the use of emergency stationary RICE in emergency situations.
- (2) For EG-1, EG-2, EG-3: You may operate your emergency stationary RICE for the purposes specified in paragraph (f)(2)(i) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).
 - (i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.
- (3) For EG-3: Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.
- (4) For EG-1, EG-2: Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. *[Note: Since the emergency RICE are for fire pumps, (f)(4)(i) and (ii) are not included in this section.]*

[45CSR34, 40 CFR §63.6640(f)]

8.1.5. General requirements for complying with CFR 63 Subpart ZZZZ:

- a. You must be in compliance with the emission limitations, operating limitations, and other requirements in 40 CFR 63 Subpart ZZZZ that apply to you at all times.
- b. At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results,

review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[45CSR34, 40 CFR §63.6605]

8.1.6. You must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

[45CSR34, 40 CFR §63.6625(e)(3)]

8.1.7. The permittee shall comply with all General Provisions which apply according to Table 8 to 40 CFR, Part 63, except for §§63.7(b) and (c), 63.8(e), (f)(4), and (f)(6), and 63.9(b)-(e), (g) and (h) which do not apply per 40 CFR §63.6645(a)(5).

[45CSR34, 40 CFR §§63.6665 and 63.6645(a)(5)]

8.2. Monitoring Requirements

8.2.1. If you own or operate an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

[45CSR34, 40 CFR §63.6625(f)]

8.2.2. You have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2d to 40 CFR63 Subpart ZZZZ. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2d to 40 CFR63 Subpart ZZZZ. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[45CSR34, 40 CFR §63.6625(i)]

8.3. Testing Requirements

8.3.1. Reserved.

8.4. Recordkeeping Requirements

8.4.1. You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan.

[45 CSR34, 40 CFR §63.6655(e)]

- 8.4.2. You must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purpose specified in §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes.

[45 CSR34, 40 CFR §63.6655(f)]

- 8.4.3. If you must comply with the emission and operating limitations, the you must keep the following records:
- a. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted, according to the requirement in 40 CFR §63.10(b)(2)(xiv).
 - b. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
 - c. Records of all required maintenance performed on the air pollution control and monitoring equipment.
 - d. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR §63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[45 CSR34, 40 CFR §§63.6655(a)(1), (2), (4), and (5)]

- 8.4.4. Records of the monitoring required by Table 6 of subpart ZZZZ, item #9 (Condition 8.1.3.) shall be kept to show continuous compliance with each emission or operating limitation that applies to you.

[45 CSR34, 40 CFR §63.6655(d)]

- 8.4.5. The permittee shall comply with the following recordkeeping requirements:
- a. Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1). (See Condition 3.4.2.)
 - b. As specified in §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.
 - c. You must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1).

[45 CSR34, 40 CFR §§63.6660 and 63.10(b)(1)]

- 8.4.6. To demonstrate compliance with section 8.1.1., the registrant shall maintain records of the amount and type of fuel consumed in each engine and the hours of operation of each engine. Said records shall be maintained on site or in a readily accessible off-site location maintained by the registrant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized

representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official.
[45CSR13, General permit Registration G60-C019 and G60-C §5.4.1.]

8.5. Reporting Requirements

8.5.1. You must report each instance in which you did not meet each emission limitation or operating limitation in Table 2d to 40 CFR 63, Subpart ZZZZ that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650.

[45 CSR34, 40 CFR §63.6640(b)]

8.5.2. You must report each instance in which you did not meet the requirements in Table 8 to 40 CFR 63, Subpart ZZZZ that apply to you.

[45 CSR34, 40 CFR §63.6640(e)]

8.5.3. For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a continuous monitoring system (CMS) to comply with the emission or operating limitations in 40 CFR 63, Subpart ZZZZ, the Compliance report must contain the information in paragraphs (c)(1) through (4) of 40 CFR §63.6650 and the information in paragraphs (1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

[45 CSR34, 40 CFR §63.6650(d)]

8.5.4. You must report all deviations as defined in 40 CFR 63, Subpart ZZZZ in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A).

[45 CSR34, 40 CFR §63.6650(f)]

8.5.5. If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates for the purpose specified in 40 CFR §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in (1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

(ii) Date of the report and beginning and ending dates of the reporting period.

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v)-(vi) {Reserved}

(vii) Hours spent for operation for the purpose specified in 40 CFR §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in 40 CFR §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in 40 CFR §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

(2) The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR §63.13.

[45 CSR34, 40 CFR §63.6650(h)]

8.6. Compliance Plan

8.6.1. N/A

APPENDIX A
(Monthly Opacity Record - Certification of Data Accuracy)

APPENDIX A (Monthly Opacity Record)

Date of Observation: _____

Data Entered by: _____

Reviewed by: _____

Date Reviewed: _____

Describe the General Weather Conditions: _____

Stack/Vent ID/ Emission Point ID	Stack/Vent/Emission Point Description	Time of Observation	Visible Emissions? Yes/No	Consecutive Months of Visual Emissions	Comments

CERTIFICATION OF DATA ACCURACY

I, the undersigned, hereby certify that, based on information and belief formed after reasonable inquiry, all information contained in the attached _____, representing the period beginning _____ and ending _____, and any supporting documents appended hereto, is true, accurate, and complete.

Signature¹ _____
(please use blue ink) Responsible Official or Authorized Representative Date

Name & Title _____
(please print or type) Name Title

Telephone No. _____ Fax No. _____

- ¹ This form shall be signed by a "Responsible Official." "Responsible Official" means one of the following:
- a. For a corporation: The president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either:
 - (i) the facilities employ more than 250 persons or have a gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), or
 - (ii) the delegation of authority to such representative is approved in advance by the Director;
 - b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public entity: either a principal executive officer or ranking elected official. For the purposes of this part, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of U.S. EPA); or
 - d. The designated representative delegated with such authority and approved in advance by the Director.

Fact Sheet



For Draft/Proposed Renewal Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Number: **R30-09900010-2023**
Application Received: **February 22, 2022**
Plant Identification Number: **03-54-099-00010**
Permittee: **Braskem America, Inc.**
Facility Name: **Neal Plant / Kenova**
Mailing Address: **200 Big Sandy River Road, Kenova, WV 25530**

Physical Location: Kenova, Wayne County, West Virginia
UTM Coordinates: 360.60 km Easting • 4246.10 km Northing • Zone 17
Directions: From I-64 take Exit 1. Go south on US 52, approximately 2 miles to the stop sign and turn right. Then take another right at "T" intersection and then go 1/4 mile then turn left just after going through railroad underpass. Make a left after underpass and go one mile to the plant entrance on the right.

Facility Description

Braskem America, Inc. (Braskem) owns and operates a polypropylene resin manufacturing facility located in Kenova, WV; the facility is commonly referred to as the Neal Plant. The Neal Plant operates under SIC code 2821. The process to produce polypropylene resin includes a feed purification system, a polymerization process, and a product finishing and shipping area. The Neal Plant's process includes a catalyst preparation system, two reaction loops, a material recovery step, and product extrusion process. The Neal Plant also operates a number of boilers to supply steam to various areas of the facility. The facility has the potential to operate 24 hours a day, 7 days a week.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2021 Actual Emissions
Carbon Monoxide (CO)	74.91	18.77
Nitrogen Oxides (NO _x)	72.95	17.78
Particulate Matter (PM _{2.5})	90.11	48.87
Particulate Matter (PM ₁₀)	92.94	51.73
Total Particulate Matter (TSP)	103.85	62.63
Sulfur Dioxide (SO ₂)	1.04	0.25
Volatile Organic Compounds (VOC)	208.04	58.24

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2021 Actual Emissions
Hexane	1.48	0.47
Other HAPs	0.08	0.02
Total HAPs	1.56	0.49

Some of the above HAPs may be counted as PM or VOCs.

Title V Program Applicability Basis

This facility has the potential to emit 208.04 tons per year of VOCs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Braskem America, Inc.'s Neal Plant is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	To Prevent And Control Particulate Air Pollution From Combustion Of Fuel In Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR7	To Prevent And Control Particulate Matter Air Pollution From Manufacturing Processes And Associated Operations
	45CSR10	To Prevent And Control Air Pollution From The Emission Of Sulfur Oxides
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits For Construction, Modification, Relocation And Operation Of Stationary Sources Of Air Pollutants, Notification Requirements, Administrative

		Updates, Temporary Permits, General Permits, And Procedures For Evaluation
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	45CSR30	Operating permit requirement.
	45CSR16	Standards Of Performance For New Stationary Sources
	45CSR34	Emission Standards For Hazardous Air Pollutants
	40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
	40 CFR Part 60, Subpart VV	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which Construction, Reconstruction, or Modification Commenced After January 5, 1981, and on or Before November 7, 2006
	40 CFR Part 60, Subpart DDD	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 CFR Part 63, Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines
	40 CFR 64	Compliance Assurance Monitoring
	40 C.F.R. Part 82, Subpart F	Ozone depleting substances
State Only:	45CSR4	No objectionable odors.
	45CSR21	Regulation To Prevent And Control Air Pollution From The Emission Of Volatile Organic Compounds

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (if any)
R13-1830O	March 13, 2020	
G60-C019	August 3, 2010	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes to the permit were made since the latest permit modification MM01 (issued 05/19/2020):

1. Page 1 – the permittee mailing address was revised to change the name of the road from “Big Sandy Road” to “Big Sandy River Road”.
2. Permit Shield (condition 3.7.2) – the following reason for non-applicability of the 40 CFR 63, Subpart EEEE and Subpart FFFF was added to conditions 3.7.2, d and 3.7.2, e: “this Subpart only applies to major sources of HAPs, and the Neal Plant is not a major source of HAPs”.
3. Section 8.0 – 40 CFR 63 Subpart ZZZZ language was revised in accordance with the latest Subpart revision. Also, an applicable reporting requirement 40 CFR §63.6650(h) was added for Emergency Fire Pumps EG-1 and EG-2 (condition 8.5.5).

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

- a. **40 CFR 60 Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units:** Boiler #1 (B600) commenced construction prior to June 9, 1989 and has not undergone a modification or reconstruction. The addition of a low NOx burner in 1995 is not considered a modification under 40CFR60, Subpart A.

Boilers H-081 and H-082 each have maximum design heat inputs less than 10 MMBtu/hr.

- b. **40 CFR 60, Subpart DDD - Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry:** Tanks F-698, D103, D105, D106A, D106B, D107, D110A, D110B, F-8809A, F-8809B, F291, H-9209A tank, H-9209B tank, F1000, F290, F704, and F707 are not affected facilities as they are not included in the definitions of the affected sources (i.e., raw materials preparation, polymerization reaction, material recovery, product finishing, and product storage).
- c. **40 CFR 60, Subpart VVa - Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006:** The Neal Plant does not produce, as intermediates or final products, any of the chemicals listed in 40 CFR §60.489, and therefore is not included as an affected facility in the definition for “synthetic organic chemical manufacturing industry” per 40 CFR §60.481a.
- d. **40 CFR 63, Subpart EEEE - National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline):** The liquid materials handled and processed at the facility do not contain organic HAPs listed in Table 1 of this subpart in concentrations of five (5) percent by weight or greater as determined according to the procedures specified in 40 CFR §63.2354(c). Therefore in accordance with the definitions in 40 CFR §63.2406, the Neal Plant is not defined as “an organic liquids distribution” (OLD) operation. Also, this Subpart only applies to major sources of HAPs, and the Neal Plant is not a major source of HAPs.
- e. **40 CFR 63, Subpart FFFF - National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing:** Pursuant to 40 CFR §63.2435(b), organic chemical manufacturing process units (MCPUs) include the equipment necessary to operate a miscellaneous organic chemical manufacturing process as defined in 40 CFR §63.2550 that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of §63.2435. Although the Neal Plant meets the criteria in paragraphs (b)(1)

and (b)(3) it does not meet the criteria in paragraph (b)(2) in that it does not use, or generate any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in 40 CFR §63.2550. Therefore, the Neal Plant does not operate an MCPU subject to this subpart. Also, this Subpart only applies to major sources of HAPs, and the Neal Plant is not a major source of HAPs.

- f. **40 CFR 63, Subpart VVVVVV (GACT 6V) - *National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources***: The Neal Plant facility does not use as feedstock, generate as a byproduct, or produce as product in the chemical manufacturing process unit, any of the HAPs listed in Table 1 of this subpart and therefore does not meet the applicability condition in 40 CFR §63.11494(a)(2).
- g. **40 CFR Part 64 - Compliance Assurance Monitoring (CAM)** – there were no changes at the facility since the previous permit renewal was issued that required to re-evaluation of the CAM applicability.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: (Date of Notice Publication)

Ending Date: (Publication Date PLUS 30 Days)

Point of Contact

All written comments should be addressed to the following individual and office:

Natalya V. Chertkovsky-Veselova
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 41250
natalya.v.chertkovsky@wv.gov

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

(Choose) Not applicable.

OR

Describe response to comments that are received and/or document any changes to the final permit from the draft/proposed permit.

Division of Air Quality Permit Application Submittal

Please find attached a permit application for :

[Company Name; Facility Location]

- DAQ Facility ID (for existing facilities only):
- Current 45CSR13 and 45CSR30 (Title V) permits associated with this process (for existing facilities only):

• Type of NSR Application (check all that apply):

- Construction
- Modification
- Class I Administrative Update
- Class II Administrative Update
- Relocation
- Temporary
- Permit Determination

• Type of 45CSR30 (TITLE V) Application:

- Title V Initial
- Title V Renewal
- Administrative Amendment**
- Minor Modification**
- Significant Modification**
- Off Permit Change

**If the box above is checked, include the Title V revision information as ATTACHMENTS to the combined NSR/Title V application.

• Payment Type:

- Credit Card (Instructions to pay by credit card will be sent in the Application Status email.)
- Check (Make checks payable to: WVDEP – Division of Air Quality)

Mail checks to:
WVDEP – DAQ – Permitting
Attn: NSR Permitting Secretary
601 57th Street, SE
Charleston, WV 25304

Please wait until DAQ emails you the Facility ID Number and Permit Application Number. Please add these identifiers to your check or cover letter with your check.

• If the permit writer has any questions, please contact (all that apply):

- Responsible Official/Authorized Representative

- Name:
- Email:
- Phone Number:

- Company Contact

- Name:
- Email:
- Phone Number:

- Consultant

- Name:
- Email:
- Phone Number:



February 21, 2022

WVDEP – DAQ – Permitting
Attn: Title V Permitting Secretary
Division of Air Quality
601 57th Street S.E.
Charleston, West Virginia 25304

**Re: *Braskem America, Inc. Neal Plant – Kenova, West Virginia, Facility ID No. 099-00010
Title V Operating Permit Renewal Application***

To Whom it may Concern:

Braskem America, Inc. (Braskem) currently operates a polypropylene production facility located in Kenova, West Virginia; the facility is commonly referred to as the Neal Plant. The facility currently operates under Title V Operating Permit R30-09900010-2017 (MM01), issued October 24, 2017 by the West Virginia Department of Environmental Protection (WVDEP). The current Title V Operating Permit expires October 24, 2022; therefore, Braskem is required to submit a Title V Operating Permit renewal application by April 24, 2022. With this application, Braskem is requesting a renewal of the Title V Operating Permit for the Neal Plant in accordance with Title 45, Legislative Rule of the Division of Air Quality (DAQ) Series (CSR) 30-4.1.a.3.

Should you have any questions concerning the information provided herein, please contact Mr. Bernie Marshall, Lead Environmental Engineer, at (304) 453 - 5926.

Sincerely,
BRASKEM AMERICA, INC.

A handwritten signature in blue ink that reads "Laurence J. Kerrigan". The signature is written in a cursive style.

Laurence Kerrigan
Facilities Manager

Public version submitted via email
Confidential Business Information submitted as hardcopy

bcc: Mr. Bernie Marshall (Braskem) w/o Attachments
Mr. Gary Rabik (Braskem) w/o Attachments
Mr. Daniel Wheeler (Trinity)

BRASKEM AMERICA, INC. – NEAL PLANT
Kenova, West Virginia



Title V Operating Permit Renewal Application

Prepared By:

TRINITY CONSULTANTS
110 Polaris Parkway
Suite 200
Westerville, Ohio 43082
(614) 433-0733

February 2022

Project 153601.0163



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1. APPLICATION OVERVIEW

1.1 Introduction

Braskem America, Inc. (Braskem) owns and operates a polypropylene resin manufacturing facility located near Kenova, WV (Neal Plant). The facility currently operates under Title V Operating Permit R30-09900010-2017 (MM01), issued October 24, 2017 (most recently modified May 19, 2020), by the West Virginia Department of Environmental Protection (WVDEP). The current Title V Operating Permit expires October 24, 2022; therefore, Braskem is required to submit a Title V Operating Permit renewal application by April 24, 2022. With this application, Braskem is requesting a renewal of the Title V Operating Permit for the Neal Plant in accordance with Title 45, Legislative Rule of the Division of Air Quality (DAQ) Series (CSR) 30-4.1.a.3.

1.2 Brief Facility Description

The Neal Plant is a polypropylene resin manufacturing facility. The process to produce polypropylene resin includes a feed purification system, a polymerization processes, and a product finishing and shipping area. The Neal Plant's process includes a catalyst preparation system, two reaction loops, a material recovery step, and product extrusion process. The Neal Plant also operates a number of boilers to supply steam to various areas of the facility. A complete and detailed facility-wide process description was included in the January 2002 Title V Operating Application Update. A brief summary of each of these operations is provided below. Please refer to Attachment D for a comprehensive list of the emission units in operation at the facility.

1.2.1 Process Area 10 – Propylene and Propane Storage

Redacted Copy - Claim of Confidentiality

1.2.2 Process Area 11 - Distillation

Redacted Copy - Claim of Confidentiality

1.2.3 Process Area 15 – Nitrogen

Redacted Copy - Claim of Confidentiality

1.2.4 Process Area 16 – Railcar

Redacted Copy - Claim of Confidentiality

1.2.5 Process Area 91 – Polymerization

Redacted Copy - Claim of Confidentiality

1.2.6 Process Area 8 – Product Finishing and Shipping (FNS)

Redacted Copy - Claim of Confidentiality

1.2.7 OSBL Flare and ISBL Flare

The OSBL Flare manages the continuous fugitive equipment leaks and non-fugitive VOC emissions from Process Areas 10, 11, 15, and 16, and some emissions from Process Area 91. The ISBL Flare, while

primarily an emergency flare, does manage some of the intermittent non-fugitive VOC emissions from Process Area 91. Emissions due to the maintenance of equipment are also vented to the OSBL and ISBL Flares. In the event of an emergency, the process equipment may release to the appropriate flare. Startup, shutdown, and malfunction emissions, including emergency emissions, are not included in VOC loading limits or emission estimates.

1.2.8 Natural Gas-Fired Boilers

Natural gas fired boilers at the Neal Plant include B600 rated at 77 MMBtu/hr, B604 rated at 99.66 MMBtu/hr, H-081 rated at 6.3 MMBtu/hr, and H-082 rated at 6.3 MMBtu/hr.

1.3 Updates to Title V Operating Permit

Conditions 6.2.1, 6.4.1, 6.4.2 of Title V Operating Permit R30-09900010-2017 (MM01) require Braskem to maintain continuous records of the pilot flame heat-sensing monitoring data for the ISBL Flare and the OSBL Flare. Conditions 7.2.1, 7.2.6, and 7.4.1 establish similar requirements specifically for the ISBL Flare.

As part of this renewal application, Braskem requests a revision to these terms to clarify that pilot monitoring data must be available for at least 90% of the 15-minute hourly quadrants for each semi-annual period. This clarification is consistent with the data availability requirements already established for monitoring the heat content of the OSBL Flare in Condition 6.4.6 of Title V Operating Permit R30-09900010-2017 (MM01).

1.4 Organization of Application

This Title V Operating Permit renewal application contains the following elements:

- ▶ Section 2: Regulatory Applicability
- ▶ Section 3: WVDAQ Application Forms
- ▶ Attachment A: Area Map
- ▶ Attachment B: Plot Plan
- ▶ Attachment C: Process Flow Diagrams
- ▶ Attachment D: Equipment Table
- ▶ Attachment E: Emission Unit Forms
- ▶ Attachment G: Air Pollution Control Device Forms
- ▶ Appendix A: PTE Calculations
- ▶ Appendix B: Confidentiality Claims

2. REGULATORY APPLICABILITY

A key objective of a Title V operating permit application is to compile all applicable Clean Air Act derived requirements into one document. The requirements can be categorized as: (1) emission limits and work practice standards; and (2) testing, monitoring, recordkeeping, and reporting requirements. To compile a list of the requirements applicable to a facility, it is first necessary to determine which Federal and State air regulations apply to the facility as a whole, or to individual emission units. This section documents the applicability determinations made for Federal and State air quality regulations. Regulations potentially applicable to the Neal Plant are detailed in Section 2 in the “Applicable Requirements” forms provided by WVDEP.

Additional details on applicability for several regulations are presented in this section. Specifically, the remainder of this section summarizes the air permitting requirements and key air quality regulations that apply to the operation of the Neal Plant. Applicability or non-applicability of the following regulatory programs is addressed:

- ▶ New Source Review (NSR) Permitting;
- ▶ Title V of the 1990 Clean Air Act Amendments;
- ▶ New Source Performance Standards (NSPS);
- ▶ National Emission Standards for Hazardous Air Pollutants (NESHAP);
- ▶ Acid Rain Program;
- ▶ Compliance Assurance Monitoring (CAM);
- ▶ Risk Management Plan (RMP);
- ▶ Stratospheric Ozone Protection; and
- ▶ West Virginia State Implementation Plan (SIP) Regulations

This review is presented to supplement and/or add clarification to the information provided in the WVDEP Title V application forms which fulfill the requirement to include citations and descriptions of applicable statutory and administrative code requirements. In addition to providing a summary of applicable requirements, this section of the application also provides non-applicability determinations for certain regulations, allowing WVDEP to confirm that identified regulations are not applicable to the Neal Plant. Note that explanations of non-applicability are limited to those regulations for which there may be some question of applicability specific to the operations at the Neal Plant. Regulations that are categorically non-applicable are not discussed.

2.1 New Source Review Classification

Federal construction permitting programs regulate new sources of pollutants under Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NANSR). Chemical process plants are classified as one of the 28 listed source categories in Title 40 of the Code of Federal Regulations (CFR), Section 52.21(b)(1)(i)(a) with a 100 ton per year (tpy) “major” source PSD threshold. The Neal Plant is an existing “major” source with regard to PSD with facility-wide emissions of at least one PSD pollutant greater than 100 tpy. Specifically, facility-wide potential emissions of VOC are 208.04 tpy. In addition, the Neal Plant is located in Wayne County, which was, and continues to be, “in attainment” or “unclassifiable” with the National Ambient Air Quality Standards (NAAQS) for all criteria pollutants (see 40 CFR 81.349). Therefore, any physical change or change in the method of operation of the facility that would result in a significant net emission increase of a PSD-pollutant would require PSD review prior to the modification.

The applicability of NANSR is evaluated for proposed modification projects that result in an emission increase of a criteria pollutant for which the area is not in attainment with the NAAQS. Because Wayne County has been designated as “in attainment” or “unclassifiable” for all regulated NSR pollutants, the Neal Plant does not need to evaluate the applicability of NANSR.

2.2 Title V Operating Permit Program

The requirements of 40 CFR 70 establish the federal Title V operating permit program. West Virginia has incorporated the provisions of this federal program as part of SIP under 45CSR30. The major source thresholds with respect to the West Virginia Title V operating permit program regulations are 10 tons per year (tpy) of a single hazardous air pollutant (HAP), 25 tpy of any combination of HAPs, and 100 tpy of all other regulated pollutants. The potential emissions of at least one regulated pollutant exceed the corresponding threshold(s) at this facility. Therefore, the Neal Plant is classified as a major source for Title V purposes. As described in Section 1.1, Braskem is submitting this timely and complete renewal application by the submission deadline of April 24, 2022 (i.e., six months prior to the expiration of the current Title V Operating Permit) in accordance with 45CSR30-4.1.a.3.

2.3 New Source Performance Standards

The federal NSPS require new, modified, or reconstructed sources to control emissions to the level that is achievable by the best demonstrated technology as specified in the applicable provisions of the rule. The following summary describes the applicability and non-applicability of NSPS subparts relevant to the Neal Plant.

2.3.1 NSPS DDD – Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry

The raw material preparation, polymerization reaction, material recovery, product finishing, and product storage activities at the Neal Plant remain subject to the provisions of 40 CFR 60, Subpart DDD (NSPS DDD). As described in consent decree CO-R21-97-44 issued November 12, 1997 (CO-R21-97-44), Braskem achieves compliance with the requirements of 45CSR21 through compliance with NSPS DDD. The applicable emission standards for continuous and intermittent process vent streams at polypropylene facilities are provided in 40 CFR 60.562-1(a)(1) and 60.562-1(a)(2), respectively. Individual continuous vent streams that have uncontrolled emissions of less than their respective Calculated Threshold Emissions (CTE) are exempt from the control requirements of 40 CFR 60.562-1(a)(1) according to 40 CFR 60.562-1(a)(1)(ii). Therefore, VOC emissions from the FNS area and the DS503 vent are exempt from control requirements.

The samples analyzed by the Neal Plant’s gas chromatographs are released directly to atmosphere consistent with the provisions for sampling connection systems in 40 CFR 60.482-5(b)(1)¹.

For all other continuous and intermittent process vent streams, Braskem utilizes the control options provided in 40 CFR 60.562-1(a)(1)(i)(C) and 60.562-1(a)(2)(i). Therefore, non-exempt process vent streams are controlled utilizing the OSBL and ISBL Flares. The OSBL Flare controls both continuous and intermittent vent streams while the ISBL Flare controls only intermittent vent streams.

¹ Braskem controls back purges as well as the speed loops associated the facility analyzers. Only the sample streams to the analyzers are uncontrolled.

Since the OSBL Flare is used to comply with continuous vent stream standards provided in 40 CFR 60.562-1(a)(1)(i)(C), it is required to meet the provisions of 40 CFR 60.18. Furthermore, 40 CFR 60.562-1(a)(2)(i)(A) through 40 CFR 60.562-1(a)(2)(i)(C) specify the compliance provisions for the ISBL Flare. Emergency vent streams, as defined in 40 CFR 60.561, at the Neal Plant are exempt from the requirements of 40 CFR 60.562-1(a)(2).²

In addition to process vent requirements, NSPS DDD contains leak detection and repair (LDAR) standards in 40 CFR 60.562-2, which are discussed in the 40 CFR 60, Subpart VV (NSPS VV) section below.

Braskem demonstrates compliance with the NSPS DDD process vent requirements, include flare provisions, via the monitoring requirements of 40 CFR 60.563(a)(2), 60.563(b)(2), 60.563(c), 60.563(d), and with the recordkeeping and reporting requirements of 40 CFR 60.565(a)(3), (a)(5), (b)(2), (e), (g), (h), and (k). No additional performance testing is required for either flare.

Additionally, Braskem has determined that the following material storage tanks are not subject to the requirements of NSPS DDD since they do not meet the definitions of any of the affected facilities provided in 40 CFR 60.560(a)(1). This non-applicability determination refers to the following tanks: F-698, D103, D105, D106A, D106B, D107, D110A, D110B, F-8809A, F-8809B, F291, H-9209A tank, H-9209B tank, F1000, F290, F704, F707, D-115, and D-304. Please see Item 19 of the Title V renewal application general form for additional information.

2.3.2 NSPS VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

The Neal Plant is not a synthetic organic chemical manufacturing industry (SOCMI) facility; therefore, the Neal Plant is not directly subject to NSPS VV. However, Areas 11, 15, and 91 of the Neal Plant are required to comply with NSPS VV standards in 40 CFR 60.482-1 through 40 CFR 60.482-10 in accordance with 40 CFR 60.562-2(a) of NSPS DDD. Additionally, consent decree CO-R21-97-44 extends the LDAR requirements of NSPS DDD and NSPS VV to Areas 10 and 16. Since the process streams in Area 8 contain less than ten (10)-percent VOC and the majority of such streams are in neither gas nor liquid service, the LDAR requirements of NSPS DDD and NSPS VV do not apply to Area 8.

NSPS VV standards include work practices and monitoring requirements for certain LDAR equipment known to contribute to fugitive VOC emissions (e.g., valves, pumps, and compressors). As provided in 40 CFR 60.562-2(b), the Neal Plant may elect to comply with the alternative standards for valves provided in 40 CFR 60.483-1 and 40 CFR 60.483-2. In addition to these work practice standards, Braskem utilizes the OSBL Flare to control emissions from LDAR equipment. Therefore, Braskem complies with the control device requirements provided in 40 CFR 60.482-10(d), which requires compliance with the general requirements for flares provided in 40 CFR 60.18.

Braskem will continue to comply with the work practice standards and monitoring, recordkeeping, and reporting requirements of NSPS VV.

² The general standards and maintenance requirements provided in 40 CFR 60.11(c) specify that opacity standards (e.g., those provided for the OSBL Flare and ISBL Flare in 40 CFR 60.18(c)(1) and 40 CFR 60.562-1(a)(2)(i)(A), respectively) do not apply during periods of startup, shutdown, or malfunction. Additionally, emissions during SSM events in excess of the level of the applicable emission limit are not considered a violation of the applicable emission limit per 40 CFR 60.8(c).

2.3.3 NSPS VVa –Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry

As stated above, the Neal Plant is not a SOCOMI facility; therefore, the Neal Plant is not directly subject to 40 CFR 60, Subpart VVa (NSPS VVa). Additionally, NSPS DDD does not incorporate NSPS VVa. Therefore, the Neal Plant is not required to comply with the provisions of NSPS VVa. Please see Item 19 of the Title V renewal application general form for additional information.

2.3.4 NSPS Dc – Standards of Performance for Small Industrial-Commercial Steam Generating Units

The affected source under 40 CFR 60, Subpart Dc (NSPS Dc) is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989, and that has a maximum design heat input capacity of 100 million British thermal units per hour (MMBtu/hr) or less, but greater than or equal to 10 MMBtu/hr. NSPS Dc contains emission standards for SO₂ and PM.

As provided in 40 CFR 60.41c, a steam-generating unit is defined as:

“...a device that combusts any fuel and produces steam or heats water or any other heat transfer medium. This term includes any duct burner that combusts fuel and is part of a combined cycle system. This term does not include process heaters as defined in this subpart.”

NSPS Dc applies only to B064 at the Neal Plant.

A non-applicability determination with respect to 40 CFR 60, Subpart Dc was made pertaining to B600, a 77 MMBtu/hr natural gas-fired boiler constructed in 1961 before the 1989 applicability date. In 1995, a low NOX burner was added to B600; however, the addition is not considered a modification under NSPS since it did not result in an increase of air pollutants for which NSPS Dc provides standards under 40 CFR 60.42c and 40 CFR 60.43c. [Title V Permit Condition 3.7.2.a.]

A non-applicability determination with respect to 40 CFR 60, Subpart Dc was made for the H-081 and H-082 boilers since the rated capacity for each boiler is less than the applicability threshold of 10 MMBtu/hr provided in 40 CFR 60.40c(a). [Title V Permit Condition 3.7.2.a.]

B604 is subject to general recordkeeping and reporting requirements contained in 40 CFR 60.48c. These provisions require Braskem to notify WVDAQ in writing of the dates of construction and start-up. Additionally, Braskem maintains monthly records of the amount of natural gas combusted in B604 in accordance with 40 CFR 60.48c(g)(2).

2.3.5 NSPS IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

According to 40 CFR 60.4200(a)(2), owners and operators of compression-ignition internal combustion engines (CI ICEs) constructed after July 11, 2005, must comply with the standards of 40 CFR 60, Subpart IIII (NSPS IIII).

Braskem installed each CI ICE (i.e., EG-1, EG-2, and EG-3) before July 11, 2005. Therefore, these CI ICEs do not meet the applicability provisions of NSPS IIII and are not subject to NSPS IIII.

2.3.6 NSPS JJJJ – Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

Affected sources under 40 CFR 60, Subpart JJJJ (NSPS JJJJ) include spark-ignition internal combustion engines. The provisions of 40 CFR 60.4248 define spark-ignition as related to gasoline-fueled engines or any other type of engine with a spark plug. The ICEs installed at the Neal Plant are compression-ignition ICEs; therefore, they are not subject to NSPS JJJJ.

2.4 National Emission Standards for Hazardous Air Pollutants

Maximum achievable control technology (MACT)-based NESHAPs (located in 40 CFR 63) require sources that are “major” for HAPs to control emissions to the level achievable by the best demonstrated technology as specified in the applicable provisions. A major source is defined in 40 CFR 63.2 as:

“...any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit considering controls, in the aggregate, 10 tons per year or more of any hazardous air pollutant or 25 tons per year or more of any combination of hazardous air pollutants...”

Generally available control technology (GACT)-based NESHAPs (located in 40 CFR 63) require area (i.e., non-major) sources to control emissions to the level achievable by the use of generally available control technologies or management practices to reduce emissions of HAPs.

Although the Neal Plant has been historically classified as a major source with the potential to emit more than ten (10) tpy of a single HAP and 25 tpy of combined HAPs, the permanent shutdown of B602 in 2010 reduced potential emissions of HAPs to levels below the major source thresholds (refer to Appendix A for HAP PTE calculations). As such, the Neal Plant became an area source (i.e., non-major source) of HAPs since the shutdown of B602.

Braskem has evaluated the potential applicability of the GACT requirements for area sources and has determined that none of these subparts trigger any additional regulatory applicability for the Neal Plant.

2.4.1 40 CFR 63, Subpart FFFF – National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing

Braskem is not subject to the standards and provisions in the miscellaneous organic NESHAP (MON) provided in 40 CFR 63, Subpart FFFF since the Neal Plant became an area source of HAPs upon the permanent shutdown of B602. As described in 40 CFR 63.2435(a), 40 CFR 63, Subpart FFFF applies only to miscellaneous organic chemical manufacturing process units (MCPUs) at major sources of HAP emissions. Please note, historically, the Neal Plant has not been subject to the standards and provisions in 40 CFR 63, Subpart FFFF as the only major source of HAP emissions was B602 which is considered ancillary equipment. Per 40 CFR 63.2550, ancillary equipment is not part of an MCU. For additional information, please refer to the May 19, 2004 MON non-applicability letter from Jim Fain (Sunoco) to Jesse Hanshaw (WVDAQ).

2.4.2 40 CFR 63, Subpart EEEE – National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution

Braskem is not subject to the standards and provisions for organic liquids distribution (OLD) operations provided in 40 CFR 63, Subpart EEEE since the Neal Plant became an area source of HAPs upon the

permanent shutdown of B602. As described in 40 CFR 63.2334(a), 40 CFR 63, Subpart EEEE applies only to OLD operations at major sources of HAP emissions. Please note, historically, the Neal Plant has not been subject to the standards and provisions in 40 CFR 63, Subpart EEEE as the only major source of HAP emissions was B602. Additionally, the liquid materials handled and processed at the facility do not contain organic HAPs in concentrations of five (5) percent by weight or greater as determined according to the procedures specified in 40 CFR 63.2354(c). Therefore, the Neal Plant does not meet the definition of an OLD operation in 40 CFR 63.2406.

2.4.3 40 CFR 63, Subpart VVVVVV – National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources

The Neal Plant does not use as feedstock, generate as a byproduct, or produce as product in the chemical manufacturing process unit any of the HAPs listed in Table 1 of 40 CFR 63, Subpart VVVVVV (GACT 6V). Ancillary equipment (e.g., boilers) is not considered part of the chemical manufacturing process unit. Therefore, the Neal Plant is not subject to GACT 6V.

2.4.4 40 CFR 63, Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)

The Neal Plant became an Area Source of HAPs on January 4, 2010 with the permanent shutdown of the coal fired boiler B602. Per 40 CFR 63.6595(a), since EG-1 and EG-2 are existing stationary CI RICE less than 500 HP, the 40 CFR 63 Subpart ZZZZ compliance date for these engines was May 3, 2013. Since the facility became an area source of HAPs before the subpart compliance date, EG-1 and EG-2 are subject to the area source requirements of 40 CFR 63 Subpart ZZZZ.

Per 40 CFR 63.6595(a), since EG-3 is an existing emergency stationary RICE greater than 500 HP, the 40 CFR 63 Subpart ZZZZ compliance date for EG-3 was June 15, 2007. In keeping with the USEPA's policy of "once in always in" for MACT applicability since the facility became an area source of HAPs after the subpart compliance date, EG-3 is subject to the major source HAP requirements in 40 CFR 63 Subpart ZZZZ. Per 40 CFR 63.6590(b)(3)(iii) since EG-3 is an *"Existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii),"* it does not have to meet the requirements of 40 CFR 63 Subpart ZZZZ and of 40 CFR 63 Subpart A, including initial notification requirements.

RICE MACT requires the following for EG-1 and EG-2:

- ▶ Oil and filter change every 500 hours of operation or annually, whichever comes first
- ▶ Air cleaner inspection every 1,000 hours of operation or annually, whichever comes first, and replacement as necessary
- ▶ Inspection of all hoses and belts every 500 hours of operation or annually, whichever comes first, and replacement as necessary
- ▶ Maintain a log for the date of each oil/filter change and inspection
- ▶ Minimize idle time during startup to less than 30 minutes
- ▶ Install a non-resettable hour meter
- ▶ Maintain records of hours and purpose of operation

Braskem will continue to comply with all applicable requirements of RICE MACT for EG-1 and EG-2.

2.5 Acid Rain Regulations

Title IV (40 CFR 72 *et seq.*) of the Clean Air Act Amendments of 1990 established the Acid Rain Program to substantially reduce SO₂ and NO_x emissions from electric utility plants. Affected units are specifically listed in Tables 1 and 2 of 40 CFR 73.10 under Phase I and Phase II of the program. Under Phase III implementation, the Acid Rain Program applies to fossil fuel-fired combustion sources that drive generators for the purposes of generating electricity for sale. The Neal Plant is not a listed source in Tables 1 or 2 of 40 CFR 73.10, nor does the facility generate electricity. Accordingly, all subparts of the Acid Rain Program are categorically not applicable to the Neal Plant.

2.6 Compliance Assurance Monitoring

Under the CAM provisions of 40 CFR 64, facilities are required to prepare and submit monitoring plans for certain emission units with the application for the first renewal of the Title V Operating Permit. The CAM Plans provide an on-going and reasonable assurance of compliance with emission limits. Under the general applicability criteria, this regulation only applies to emission units that use a control device to achieve compliance with an emission limit and whose pre-controlled emission levels exceed the major source thresholds under the Title V permitting program.

Braskem has not installed any new units exhibiting uncontrolled emissions greater than 100 tons per year since the most recent renewal application; therefore, Braskem has concluded that a CAM analysis is not required as part of this renewal application.

2.7 Chemical Accident Prevention

Risk Management Plan (RMP) requirements are incorporated in the Neal Plant's Title V operating permit per Condition 3.1.8. According to Condition 3.1.8,

This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71. [40 C.F.R. 68]

The Neal Plant is subject to the RMP provisions for propane and propylene. Per 40 CFR 68.190, sources subject to RMP provisions are required to update and resubmit RMPs at least every 5 years following the initial submittal. The Neal Plant is in compliance with all requirements of 40 CFR 68.

2.8 Stratospheric Ozone Protection Regulations

The requirements provided in Title VI of the Clean Air Act, entitled Protection of Stratospheric Ozone, are contained in 40 CFR 82. Because Braskem maintains, services, or disposes appliances utilizing refrigerants, 40 CFR 82 Subpart F, *Recycling and Emissions Reduction*, applies to such activities at the Neal Plant. Subpart F generally requires persons completing the repairs, service, or disposal to be properly certified and follow specific work practices during repair, service, and disposal activities. All repairs, service, and disposal of ozone depleting substances from any chillers and air conditioners at the facility are completed by a certified technician.

2.9 West Virginia SIP Regulations

This section of the renewal application identifies specific West Virginia SIP regulations relevant to the Neal Plant.

2.9.1 45CSR2 – To Prevent and Control Particulate Matter Air Pollution From Combustion of Fuel in Indirect Heat Exchangers

This rule contains requirements for particulate matter emissions from the combustion of fuel in indirect heat exchangers.³ Pursuant to 45CSR2-3.1, the boilers at the Neal Plant shall not discharge smoke and/or particulate matter into the open air greater than ten (10) percent opacity based on a six minute block average.

Per 45CSR2-8.4.b:

“The owner or operator of a fuel burning unit(s) which combusts only natural gas shall be exempt from the requirements of subdivision 8.1.a and subsection 8.2.”

45CSR2-8.1.a and 8.2 specify the testing and monitoring requirements for the owner and operator of fuel burning units. Since the boilers at the Neal Plant combust only natural gas, Braskem is exempt from the testing and monitoring requirements of this rule.

A Type ‘b’ fuel burning unit, per the definitions provided in 45CSR2-2.10.b, is any fuel burning unit other than hand-fired or stoker-fired fuel burning units or units that generate steam or other vapor to produce electric power for sale. Therefore, the boilers at the Neal Plant are Type ‘b’ fuel burning units. Pursuant to 45CSR2-4.3, the allowable emission rate for these boilers shall be determined by the following formula:

$$R_e = \left(1 - \frac{H_{et} - H_e}{H_{et}}\right) \times R_{et}$$

Where,

R_e is the total allowable emission rate in pounds per hour for the new fuel burning unit(s);

H_{et} is the total design heat input in MMBtu/hr of the existing and new similar units;

R_{et} is the total allowable emission rate in pounds per hour corresponding to H_{et} ; and

H_e is the total design heat input in MMBtu/hr for the new fuel burning unit(s).

Furthermore, per 45CSR2-4.1.b, the product of 0.09 and the total design heat input in MMBtu of all similar fuel burning units at the Neal Plant shall not exceed 600 pounds per hour (lb/hr).

Braskem maintains records of operating schedules and monthly natural gas usage within the natural gas boilers. Furthermore, the boilers must also meet the requirements for start-ups, shutdowns, and malfunctions provided in 45CSR2-9.

³ The B101 propane heater at the Neal Plant is a process heater which does not meet the definition of “indirect heat exchanger” provided in 45CSR2-2.14. Therefore, B101 is not subject to the requirements of 45CSR2.

2.9.2 45CSR6 – To Prevent and Control Air Pollution from Combustion of Refuse

The provisions of 45CSR6 include emissions standards for particulate and opacity generated in incineration units. The OSBL Flare and ISBL Flare are subject to these provisions; however, compliance with the more stringent operating requirements for flares provided in NSPS A and NSPS DDD streamlines compliance with the particulate and opacity emission limits of 45CSR6.

2.9.3 45CSR7 – To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associated Operations

The material handling operations conducted in the FNS area as well as one operation in the Polymerization (A-91) area meet the definition of manufacturing processes contained in 45CSR7-2.20. Therefore, they are required comply with the standards provided in 45CSR7-3 and 45CSR7-4 for emissions of opacity and particulate matter, respectively. Braskem personnel conduct monthly visible emissions checks to demonstrate compliance with the standards of 45CSR7. In the event that visible emissions are observed at a given source during three (3) consecutive monthly checks, Braskem personnel will conduct an opacity observation in accordance with the testing requirements of 45CSR7A.

2.9.4 45CSR10 – To Prevent and Control Air Pollution from the Emission of Sulfur Oxides

This rule prevents and controls emissions of sulfur oxides (SO_x) from fuel burning sources, manufacturing process sources, and the combustion of refinery and/or process gas streams. According to Table 45-10A of 45CSR10, Wayne County is a priority III county. Braskem will comply with the hourly SO₂ emission limit calculated as specified in 45CSR10-3.3. This emission limit is calculated by multiplying 3.2 lb/MMBtu by the hourly heat input of a fuel burning unit to obtain an hourly SO₂ emission limit.

Per 45CSR10-10.3:

“The owner or operator of a fuel burning unit(s) which combusts natural gas, wood or distillate oil, alone or in combination, shall be exempt from the requirements of section 8...”

Because the boilers at the Neal Plant combust only natural gas, Braskem is exempt from the testing, monitoring, and reporting requirements of 45CSR10-8 and 45CSR10A.

2.9.5 45CSR13 – Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation

This rule is generally applicable to the Neal Plant. Currently, the Neal Plant has one construction permit R13-18300 and one general permit G60-C019. It should be noted that the Neal Plant does not hold a 45CSR14 or 45CSR19 permit nor is the Neal Plant required to have a 45CSR14 or 45CSR19 permit.

2.9.6 45CSR16 – Standards of Performance for New Stationary Sources

The provisions of 45CSR16 incorporate by reference the NSPS standards contained in 40 CFR 60. Braskem will continue to comply with NSPS DDD and NSPS VV as described in subsections 2.3.1 and 2.3.2 of this report.

2.9.7 45CSR21 – Regulation to Prevent and Control Air Pollution from the Emission of VOC

Operations at the Neal Plant are subject to the standards for VOC emissions provided in Section 37 – Leaks from Synthetic Organic Chemical, Polymer, and Resin Manufacturing Equipment and Section 38 – Manufacture of High-Density Polyethylene, Polypropylene, and Polystyrene Resins of 45CSR21. Specifically, the OSBL Flare and ISBL Flare are required to comply with the operating standards contained in 45CSR21-38.3.a.3. Braskem demonstrates compliance with Sections 37 and 38 of 45CSR21 through compliance with NSPS VV and NSPS DDD.⁴

Additionally, the parts washers at the Neal Plant are subject to the requirements of Section 30 – Solvent Metal Cleaning. Per guidance from WVDEP, these requirements are not considered substantive requirements. Therefore, the parts washers have been included in the insignificant activity list provided in the general application form.

2.9.8 45CSR22 – Air Quality Management Fee Program

This rule is generally applicable to the Neal Plant. In addition to permit to construct fees, 45CSR22-4.1a requires the Neal Plant to obtain a certificate to operate, which the Neal Plant obtains annually upon submittal of Certified Emission Statement.

2.9.9 45CSR28 – Air Pollutant Emissions Banking and Trading

Braskem requested credits per 45CSR28 in association with the permanent shutdown of B602 and its associated equipment.

2.9.10 45CSR31 – Confidential Information

Some of the information (e.g., process descriptions and process flow diagrams) contained in this application is confidential business information since the release of it to competitors would allow them to determine process technology and provide an unfair competitive advantage. Therefore, Braskem is submitting a Confidential Business Information Claim as Appendix B in accordance with 45CSR31.

2.9.11 45CSR34 – Emission Standards for Hazardous Air Pollutants

The provisions of 45CSR34 incorporate by reference the MACT standards contained in 40 CFR 63. As described in section 2.4.4 of this report, MACT ZZZZ is the only standard potentially applicable to operations at the Neal Plant.

⁴ As described in 45CSR21-37.1.a., the standards for equipment leaks apply to all equipment in VOC service at a polymer manufacturing facility. For Areas 10 and 16, Braskem demonstrates compliance with the standards of 45CSR21 through compliance with NSPS VV and NSPS DDD as described in CO-R21-97-44.

3. WVDAQ APPLICATION FOR A TITLE V OPERATING PERMIT RENEWAL

West Virginia Department of Environmental Protection, Division of Air Quality, application for a renewal of a Title V Operating Permit.

The permit application forms in Attachments A through G and the supplemental information provided in Appendices A and B are being submitted as required by WVDEP for this Title V Operating Permit renewal application.

11. Mailing Address		
Street or P.O. Box: 200 Big Sandy Road		
City: Kenova	State: WV	Zip: 25530
Telephone Number: 304-453-1371	Fax Number: 304-453-5916	

12. Facility Location (Physical Address)		
Street: 200 Big Sandy Road	City: Kenova	County: Wayne
UTM Easting: 360.60 km	UTM Northing: 4,246.10 km	<input checked="" type="checkbox"/> <input type="checkbox"/>
Directions: From I-64, take Exit #1. Go south on US-52 for two (2) miles to the stoplight at the "T" intersection. Turn right and go ¼ mile and turn left through railroad underpass. Make a left after underpass and go one (1) mile to the plant entrance on the right.		
Portable Source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Is facility located within a nonattainment area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, for what air pollutants?	
Is facility located within 50 miles of another state? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes, name the affected state(s). Kentucky Ohio	
Is facility located within 100 km of a Class I Area ¹ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes, name the area(s). Otter Creek (WV), Linville Gorge (NC), James River Face (VA), Dolly Sods (WV), and Great Smoky Mountains (NC/TN)	
If no, do emissions impact a Class I Area ¹ ? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
¹ Class I areas include Dolly Sods and Otter Creek Wilderness Areas in West Virginia, and Shenandoah National Park and James River Face Wilderness Area in Virginia.		

13. Contact Information		
Responsible Official: Laurence Kerrigan		Title: Facilities Manager
Street or P.O. Box: 200 Big Sandy Road		
City: Kenova	State: WV	Zip: 25530
Telephone Number: 304-453-7077	Cell Number:	
E-mail address: Laurence.kerrigan@braskem.com		
Environmental Contact: Bernie Marshall		Title: Lead Environmental Engineer
Street or P.O. Box: 200 Big Sandy Road		
City: Kenova	State: WV	Zip: 25530
Telephone Number: 304-453-5926	Cell Number:	
E-mail address: Bernard.marshall@braskem.com		
Application Preparer: Daniel Wheeler		Title: Managing Consultant
Company: Trinity Consultants		
Street or P.O. Box: 110 Polaris Parkway, Suite 200		
City: Westerville	State: OH	Zip: 43082
Telephone Number: 614-568-8851	Cell Number:	
E-mail address: dwheeler@trinityconsultants.com		

14. Facility Description

List all processes, products, NAICS and SIC codes for normal operation, in order of priority. Also list any process, products, NAICS and SIC codes associated with any alternative operating scenarios if different from those listed for normal operation.

Process	Products	NAICS	SIC
Propylene polymerization	Polypropylene resin pellets	325211	2821

Provide a general description of operations.
Please see Section 1.2 of the Title V Renewal Application Report.

- 15. Provide an **Area Map** showing plant location as **ATTACHMENT A**.
- 16. Provide a **Plot Plan(s)**, e.g. scaled map(s) and/or sketch(es) showing the location of the property on which the stationary source(s) is located as **ATTACHMENT B**. For instructions, refer to "Plot Plan - Guidelines."
- 17. Provide a detailed **Process Flow Diagram(s)** showing each process or emissions unit as **ATTACHMENT C**. Process Flow Diagrams should show all emission units, control equipment, emission points, and their relationships.

Section 2: Applicable Requirements

18. Applicable Requirements Summary	
Instructions: Mark all applicable requirements.	
<input checked="" type="checkbox"/> SIP	<input type="checkbox"/> FIP
<input checked="" type="checkbox"/> Minor source NSR (45CSR13)	<input type="checkbox"/> PSD (45CSR14)
<input type="checkbox"/> NESHAP (45CSR34)	<input type="checkbox"/> Nonattainment NSR (45CSR19)
<input checked="" type="checkbox"/> Section 111 NSPS	<input type="checkbox"/> Section 112(d) MACT standards
<input type="checkbox"/> Section 112(g) Case-by-case MACT	<input checked="" type="checkbox"/> 112(r) RMP
<input type="checkbox"/> Section 112(i) Early reduction of HAP	<input type="checkbox"/> Consumer/commercial prod. reqts., section 183(e)
<input type="checkbox"/> Section 129 Standards/Reqts.	<input checked="" type="checkbox"/> Stratospheric ozone (Title VI)
<input type="checkbox"/> Tank vessel reqt., section 183(f)	<input type="checkbox"/> Emissions cap 45CSR§30-2.6.1
<input type="checkbox"/> NAAQS, increments or visibility (temp. sources)	<input type="checkbox"/> 45CSR27 State enforceable only rule
<input checked="" type="checkbox"/> 45CSR4 State enforceable only rule	<input type="checkbox"/> Acid Rain (Title IV, 45CSR33)
<input type="checkbox"/> Emissions Trading and Banking (45CSR28)	<input checked="" type="checkbox"/> Compliance Assurance Monitoring (40CFR64)
<input type="checkbox"/> Cross-State Air Pollution Rule (45CSR43)	

19. Non Applicability Determinations
<p>List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.</p> <p>1. A non-applicability determination with respect to 40 CFR 60, Subpart Dc was made pertaining to B600, a 77 MMBtu/hr natural gas fired boiler constructed in 1961 before the 1989 applicability date. In 1995, a low NOx burner was added to B600; however, the addition is not considered a modification under 40 CFR 60, Subpart A since it did not result in an increase of air pollutants for which 40 CFR 60, Subpart Dc provides standards under 40 CFR 60.42c and 40 CFR 60.43c. [Title V Permit Condition 3.7.2.a.]</p> <p>2. A non-applicability determination with respect to 40 CFR 60, Subpart Dc was also made for the H-081 and H-082 boilers since their rated capacity is less than the applicability threshold of 10 MMBtu/hr provided in 40 CFR 60.40c (a). [Title V Permit Condition 3.7.2.a.]</p> <p>3. Braskem is not subject to the standards and provisions in 40 CFR 63, Subpart FFFF, the Miscellaneous Organic Chemical Manufacturing NESHAP or MON, because the Neal Plant became an area source of HAPs upon the permanent shutdown of the Coal Boiler (B602). As described in 40 CFR 63.2435(a), 40 CFR 63, Subpart FFFF applies only to miscellaneous organic chemical manufacturing process units (MCPUs) at major sources of HAP emissions. Please note, historically, the Neal Plant has not been subject to the standards and provisions in 40 CFR 63, Subpart FFFF as the only major source of HAP emissions was B602 which is considered ancillary equipment. Per 40 CFR 63.2550, ancillary equipment is not part of an MCU. For additional information, please refer to the May 19, 2004 MON non-applicability letter from Jim Fain (Sunoco) to Jesse Hanshaw (WVDEP).</p>
<input checked="" type="checkbox"/> Permit Shield

19. Non Applicability Determinations (Continued) - Attach additional pages as necessary.

List all requirements which the source has determined not applicable and for which a permit shield is requested. The listing shall also include the rule citation and the reason why the shield applies.

4. A non-applicability determination with respect to 40 CFR 60, Subpart DDD is instituted for the tanks listed below given that the definitions of affected facilities provided in 40 CFR 60.560(a)(1) and 40 CFR 60.561 (e.g., raw materials preparation, polymerization reaction, material recovery, product finishing, and product storage) do not include material storage tanks. This non-applicability determination refers to the following tanks: F-698, D103, D105, D106A, D106B, D107, D110A, D110B, F-8809A, F-8809B, F291, H-9209A tank, H-9209B tank, F1000, F290, F704, F707, D-115, and D-304.

5. Braskem is not subject to the standards and provisions in 40 CFR 63, Subpart EEEE because the Neal Plant became an area source of HAPs upon the permanent shutdown of B602. As described in 40 CFR 63.2334(a), 40 CFR 63, Subpart EEEE applies only to organic liquids distribution (OLD) operations at major sources of HAP emissions. Please note, historically, the Neal Plant has not been subject to the standards and provisions in 40 CFR 63, Subpart EEEE as the only major source of HAP emissions was B602. Additionally, the liquid materials handled and processed at the facility do not contain organic HAPs in concentrations of five (5) percent by weight or greater as determined according to the procedures specified in 40 CFR 63.2354(c). Therefore, the Neal Plant does not meet the definition of an OLD operation in 40 CFR 63.2406.

6. A non-applicability determination with respect to 40 CFR 60, Subpart VVa is instituted for all affected sources under 40 CFR 60, Subpart DDD given that the preamble to Subpart VVa in 72 FR 64860 states that the standards of Subpart VVa do not apply to affected sources under 40 CFR 60, Subpart DDD. In addition, Subpart DDD has not been amended to incorporate by reference the standards for equipment leaks provided in Subpart VVa. Additionally, the Neal Plant is not a synthetic organic chemical manufacturing industry (SOCMI) facility; therefore, the Neal Plant is not directly subject to 40 CFR 60, Subpart VVa.

7. A non-applicability determination with respect to 40 CFR 63, Subpart VVVVVV (GACT 6V) was instituted for all operations at the Neal Plant given that the facility does not use as feedstock, generate as a byproduct, or produce as product any of the HAPs listed in Table 1 of GACT 6V in the chemical manufacturing process unit. Ancillary equipment (e.g., boilers) are not considered part of the chemical manufacturing process unit. Therefore, the Neal Plant is not subject to this subpart.

Permit Shield

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

See attached pages.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See attached pages.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

20. Facility-Wide Applicable Requirements (Continued) - Attach additional pages as necessary.

List all facility-wide applicable requirements. For each applicable requirement, include the rule citation and/or permit with the condition number.

See attached pages.

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

See attached pages.

Are you in compliance with all facility-wide applicable requirements? Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

20. Facility-Wide Applicable Requirements

List all facility-wide applicable requirements. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements).

Open burning. The open burning of refuse by any person, firm, corporation, association or public agency is prohibited except as noted in 45 CSR 6-3.1. [45CSR§6-3.1., 45CSR13, R13-1830 condition 3.1.1.]

Open burning exemptions. The exemptions listed in 45 CSR 6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause, suffer, allow or permit any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible. [45CSR§6-3.2., 45CSR13, R13-1830 condition 3.1.2.]

Asbestos. The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health require a copy of this notice to be sent to them. [40 C.F.R. §61.145(b) and 45CSR34, 45CSR13, R13-1830 condition 3.1.3.]

Odor. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public. This requirement streamlines compliance with the incinerator requirements pertaining to odors of 45 CSR6-4.6. [45CSR§4-3.1 State-Enforceable only., 45CSR13, R13-1830 condition 3.1.4.]

Standby plan for reducing emissions. When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45 CSR 11. [45CSR§11-5.2]

Emission inventory. The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]

Ozone-depleting substances. For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

- a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
- b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.
- c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

Risk Management Plan. This stationary source, as defined in 40 C.F.R. § 68.3, is subject to Part 68. This stationary source shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. Part 68.10. This stationary source shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71. [40 C.F.R. 68]

Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary.

[45CSR13, R13-1830 condition 4.1.19.]

Permanent shutdown. A source which has not operated at least 500 hours in one 12-month period within the previous five (5) year time period may be considered permanently shut down, unless such source can provide to the Secretary, with reasonable specificity, information to the contrary. All permits may be modified or revoked and/or reapplication or application for new permits may be required for any source determined to be permanently shut down.

[45CSR13, R13-1830 condition 3.1.5.]

The permittee shall not cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process (es) that is required pursuant to condition 3.1.12 to have a full enclosure and be equipped with a particulate matter control device.

[45CSR§7-3.7, 45CSR13, R13-1830 condition 4.1.16.3.]

The permittee shall not cause, suffer, allow or permit any manufacturing process or storage structure generating fugitive particulate matter to operate that is not equipped with a system, which may include, but not be limited to, process equipment design, control equipment design or operation and maintenance procedures, to minimize the emissions of fugitive particulate matter. To minimize means such system shall be installed, maintained and operated to ensure the lowest fugitive particulate matter emissions reasonably achievable.

[45CSR§7-5.1, 45CSR13, R13-1830 condition 4.1.16.4.]

The permittee shall maintain particulate matter control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary particulate matter suppressants shall be applied in relation to stockpiling and general material handling to minimize particulate matter generation and atmospheric entrainment.

[45CSR§7-5.2, 45CSR13, R13-1830 condition 4.1.16.5.]

Permit Shield

For all facility-wide applicable requirements listed above, provide monitoring/testing / recordkeeping / reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number and/or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Stack testing. As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

- a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
- b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
- c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
- d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:
 1. The permit or rule evaluated, with the citation number and language.
 2. The result of the test for each permit or rule condition.
 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13, Permit No. R13-1830, Conditions 4.3.5., 4.3.6.]

Monitoring information. The permittee shall keep records of monitoring information that include the following:

- a. The date, place as defined in this permit and time of sampling or measurements;
- b. The date(s) analyses were performed;
- c. The company or entity that performed the analyses;
- d. The analytical techniques or methods used;
- e. The results of the analyses; and
- f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A., 45CSR13, Permit No. R13-1830, Condition 4.4.1.]

Retention of records. The permittee shall maintain and retain records of all required information (including monitoring data, support information, reports and notifications) required by this permit for a period of at least five (5) years from the date of each occurrence, monitoring sample, measurement, maintenance, corrective action, report, application, or record creation date. Such records shall be recorded in a form suitable and readily available for expeditious inspection and review. Support information includes all calibration and maintenance records and

all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by the permit.

a. For records required by Permit R13-1830, at a minimum, the most recent two (2) years of data shall be maintained on site. The remaining three (3) years of data may be maintained off site, but must remain accessible within a reasonable time.

b. For records required by 40 CFR 63 Subpart ZZZZ (EG-1, EG-2), at a minimum, the most recent two (2) years of data shall be retained on site. The remaining three (3) years of data may be retained off site.

Where appropriate, the permittee may maintain records in computerized form (e.g., on a computer, on computer floppy disks, CDs, DVDs, or magnetic tape disks), on microfilm, or on microfiche.

[45CSR§30-5.1.c.2.B., 45CSR13, R13-1830, 3.4.1., 45CSR34, 40 CFR §63.10(b)(1)]

Odors. For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received. Such record shall contain an assessment of the validity of the complaints as well as any corrective actions taken.

[45CSR§30-5.1.c. State-Enforceable only.]

Responsible official. Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete. [45CSR§§30-4.4. and 5.1.c.3.D.]

Confidential information. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31. [45CSR§30-5.1.c.3.E.]

Communications. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Section Chief
U. S. Environmental Protection Agency
Region III
Enforcement and Compliance Assurance Division Air Section (3ED21)
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement¹:

DEPAirQualityReports@wv.gov

¹For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

Certified emissions statement. The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality.

[45CSR§30-8.]

Compliance certification. The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:

DEPAirQualityReports@wv.gov

US EPA:

R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

Semi-annual monitoring reports. The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:

DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

Deviations. a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

[45CSR§30-5.1.c.3.B.]

New applicable requirements. If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

[45CSR§30-4.3.h.1.B.]

21. Active Permits/Consent Orders		
Permit or Consent Order Number	Date of Issuance MM/DD/YYYY	List any Permit Determinations that Affect the Permit (<i>if any</i>)
R13-18300	3/13/2020	
G60-C019	08/03/2010	

22. Inactive Permits/Obsolete Permit Conditions

Permit Number	Date of Issuance MM/DD/YYYY	Permit Condition Number
N/A		

Section 3: Facility-Wide Emissions

23. Facility-Wide Emissions Summary [Tons per Year]	
Criteria Pollutants	Potential Emissions
Carbon Monoxide (CO)	See Appendix A
Nitrogen Oxides (NO _x)	
Lead (Pb)	
Particulate Matter (PM _{2.5}) ¹	
Particulate Matter (PM ₁₀) ¹	
Total Particulate Matter (TSP)	
Sulfur Dioxide (SO ₂)	
Volatile Organic Compounds (VOC)	
Hazardous Air Pollutants ²	Potential Emissions
Regulated Pollutants other than Criteria and HAP	Potential Emissions

¹PM_{2.5} and PM₁₀ are components of TSP.
²For HAPs that are also considered PM or VOCs, emissions should be included in both the HAPs section and the Criteria Pollutants section.

Section 4: Insignificant Activities

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	1. Air compressors and pneumatically operated equipment, including hand tools.
<input checked="" type="checkbox"/>	2. Air contaminant detectors or recorders, combustion controllers or shutoffs.
<input checked="" type="checkbox"/>	3. Any consumer product used in the same manner as in normal consumer use, provided the use results in a duration and frequency of exposure which are not greater than those experienced by consumer, and which may include, but not be limited to, personal use items; janitorial cleaning supplies, office supplies and supplies to maintain copying equipment.
<input checked="" type="checkbox"/>	4. Bathroom/toilet vent emissions.
<input checked="" type="checkbox"/>	5. Batteries and battery charging stations, except at battery manufacturing plants.
<input checked="" type="checkbox"/>	6. Bench-scale laboratory equipment used for physical or chemical analysis, but not lab fume hoods or vents. Many lab fume hoods or vents might qualify for treatment as insignificant (depending on the applicable SIP) or be grouped together for purposes of description.
<input type="checkbox"/>	7. Blacksmith forges.
<input checked="" type="checkbox"/>	8. Boiler water treatment operations, not including cooling towers.
<input checked="" type="checkbox"/>	9. Brazing, soldering or welding equipment used as an auxiliary to the principal equipment at the source.
<input type="checkbox"/>	10. CO ₂ lasers, used only on metals and other materials which do not emit HAP in the process.
<input checked="" type="checkbox"/>	11. Combustion emissions from propulsion of mobile sources, except for vessel emissions from Outer Continental Shelf sources.
<input type="checkbox"/>	12. Combustion units designed and used exclusively for comfort heating that use liquid petroleum gas or natural gas as fuel.
<input checked="" type="checkbox"/>	13. Comfort air conditioning or ventilation systems not used to remove air contaminants generated by or released from specific units of equipment.
<input checked="" type="checkbox"/>	14. Demineralized water tanks and demineralizer vents.
<input checked="" type="checkbox"/>	15. Drop hammers or hydraulic presses for forging or metalworking.
<input type="checkbox"/>	16. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boilers delivering the steam.
<input type="checkbox"/>	17. Emergency (backup) electrical generators at residential locations.
<input type="checkbox"/>	18. Emergency road flares.
<input checked="" type="checkbox"/>	19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO _x , SO ₂ , VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units. Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis: See attached table.

24. Insignificant Activities (Check all that apply)

19. Emission units which do not have any applicable requirements and which emit criteria pollutants (CO, NO_x, SO₂, VOC and PM) into the atmosphere at a rate of less than 1 pound per hour and less than 10,000 pounds per year aggregate total for each criteria pollutant from all emission units.
Please specify all emission units for which this exemption applies along with the quantity of criteria pollutants emitted on an hourly and annual basis:

Emission Unit ID	Emission Unit Description	Tank Size (gal)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
F-698	Used Oil Tank	16,500	0.004	0.018
D103	Hydraulic Oil Guard	106	0.00003	0.0001
D105	Oil/Grease Mixing Tank	580	0.00015	0.0006
D106A	Catalyst Tank	264	0.00007	0.0003
D106B	Catalyst Tank	264	0.00007	0.0003
D107	Hydraulic Oil Surge Drum	238	0.00006	0.0003
D110A	Donor Storage Tank	238	0.00006	0.0003
D110B	Donor Storage Tank	238	0.00006	0.0003
D-115	Grindsted Tank	300	2.22E-5	7.70E-5
D-304	Atmer Tank	350	1.20E-5	4.04E-5
F-8809A	Peroxide Tank	30	0.00001	0.0000
F-8809B	Peroxide Tank	30	0.00001	0.0000
	F-8809A/B Peroxide Tank Loading	3.3 gal/hr	0.00001	0.0000
	Parts Washers	N/A	0.84	3.68
F291	Diesel Storage Tank	1000	5.82E-5	2.55E-4
H-9209-A	Diesel Storage Tank	370	2.40E-5	1.05E-4
H-9209-B	Diesel Storage Tank	370	2.40E-5	1.05E-4
F1000	Diesel Storage Tank	1000	5.37E-5	2.35E-4
F290	Diesel Storage Tank	528	3.20E-5	1.40E-4
F704	Diesel Storage Tank	1000	6.74E-5	2.95E-4
F707	Gasoline Tank	1000	0.02040	0.0894

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	<p>20. Emission units which do not have any applicable requirements and which emit hazardous air pollutants into the atmosphere at a rate of less than 0.1 pounds per hour and less than 1,000 pounds per year aggregate total for all HAPs from all emission sources. This limitation cannot be used for any source which emits dioxin/furans nor for toxic air pollutants as per 45CSR27.</p> <p>Please specify all emission units for which this exemption applies along with the quantity of hazardous air pollutants emitted on an hourly and annual basis: Refer to the Table presented in Item 19</p>
<input type="checkbox"/>	21. Environmental chambers not using hazardous air pollutant (HAP) gases.
<input type="checkbox"/>	22. Equipment on the premises of industrial and manufacturing operations used solely for the purpose of preparing food for human consumption.
<input type="checkbox"/>	23. Equipment used exclusively to slaughter animals, but not including other equipment at slaughterhouses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
<input checked="" type="checkbox"/>	24. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
<input checked="" type="checkbox"/>	25. Equipment used for surface coating, painting, dipping or spray operations, except those that will emit VOC or HAP.
<input checked="" type="checkbox"/>	26. Fire suppression systems.
<input checked="" type="checkbox"/>	27. Firefighting equipment and the equipment used to train firefighters.
<input type="checkbox"/>	28. Flares used solely to indicate danger to the public.
<input type="checkbox"/>	29. Fugitive emission related to movement of passenger vehicle provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
<input type="checkbox"/>	30. Hand-held applicator equipment for hot melt adhesives with no VOC in the adhesive formulation.
<input checked="" type="checkbox"/>	31. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning or machining wood, metal or plastic.
<input type="checkbox"/>	32. Humidity chambers.
<input checked="" type="checkbox"/>	33. Hydraulic and hydrostatic testing equipment.
<input checked="" type="checkbox"/>	34. Indoor or outdoor kerosene heaters.
<input checked="" type="checkbox"/>	35. Internal combustion engines used for landscaping purposes.
<input type="checkbox"/>	36. Laser trimmers using dust collection to prevent fugitive emissions.
<input checked="" type="checkbox"/>	37. Laundry activities, except for dry-cleaning and steam boilers.
<input checked="" type="checkbox"/>	38. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
<input checked="" type="checkbox"/>	39. Oxygen scavenging (de-aeration) of water.
<input type="checkbox"/>	40. Ozone generators.

24. Insignificant Activities (Check all that apply)	
<input checked="" type="checkbox"/>	41. Plant maintenance and upkeep activities (e.g., grounds-keeping, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, installing insulation, and paving parking lots) provided these activities are not conducted as part of a manufacturing process, are not related to the source's primary business activity, and not otherwise triggering a permit modification. (Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must still get a permit if otherwise requested.)
<input checked="" type="checkbox"/>	42. Portable electrical generators that can be moved by hand from one location to another. "Moved by Hand" means that it can be moved without the assistance of any motorized or non-motorized vehicle, conveyance, or device.
<input checked="" type="checkbox"/>	43. Process water filtration systems and demineralizers.
<input checked="" type="checkbox"/>	44. Repair or maintenance shop activities not related to the source's primary business activity, not including emissions from surface coating or de-greasing (solvent metal cleaning) activities, and not otherwise triggering a permit modification.
<input checked="" type="checkbox"/>	45. Repairs or maintenance where no structural repairs are made and where no new air pollutant emitting facilities are installed or modified.
<input checked="" type="checkbox"/>	46. Routing calibration and maintenance of laboratory equipment or other analytical instruments.
<input type="checkbox"/>	47. Salt baths using nonvolatile salts that do not result in emissions of any regulated air pollutants. Shock chambers.
<input type="checkbox"/>	48. Shock chambers.
<input type="checkbox"/>	49. Solar simulators.
<input checked="" type="checkbox"/>	50. Space heaters operating by direct heat transfer.
<input type="checkbox"/>	51. Steam cleaning operations.
<input checked="" type="checkbox"/>	52. Steam leaks.
<input type="checkbox"/>	53. Steam sterilizers.
<input checked="" type="checkbox"/>	54. Steam vents and safety relief valves.
<input type="checkbox"/>	55. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and nonvolatile aqueous salt solutions, provided appropriate lids and covers are utilized.
<input checked="" type="checkbox"/>	56. Storage tanks, vessels, and containers holding or storing liquid substances that will not emit any VOC or HAP. Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids should be based on size limits such as storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.
<input type="checkbox"/>	57. Such other sources or activities as the Director may determine.
<input checked="" type="checkbox"/>	58. Tobacco smoking rooms and areas.
<input checked="" type="checkbox"/>	59. Vents from continuous emissions monitors and other analyzers.

Section 5: Emission Units, Control Devices, and Emission Points

25. Equipment Table
Fill out the Title V Equipment Table and provide it as ATTACHMENT D .
26. Emission Units
For each emission unit listed in the Title V Equipment Table , fill out and provide an Emission Unit Form as ATTACHMENT E .
For each emission unit not in compliance with an applicable requirement, fill out a Schedule of Compliance Form as ATTACHMENT F .
27. Control Devices
For each control device listed in the Title V Equipment Table , fill out and provide an Air Pollution Control Device Form as ATTACHMENT G .
For any control device that is required on an emission unit in order to meet a standard or limitation for which the potential pre-control device emissions of an applicable regulated air pollutant is greater than or equal to the Title V Major Source Threshold Level, refer to the Compliance Assurance Monitoring (CAM) Form(s) for CAM applicability. Fill out and provide these forms, if applicable, for each Pollutant Specific Emission Unit (PSEU) as ATTACHMENT H .

Section 6: Certification of Information

28. Certification of Truth, Accuracy and Completeness and Certification of Compliance

Note: This Certification must be signed by a responsible official as defined in 45CSR§30-2.38.

a. Certification of Truth, Accuracy and Completeness

I certify that I am a responsible official (as defined at 45CSR§30-2.38) and am accordingly authorized to make this submission on behalf of the owners or operators of the source described in this document and its attachments. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine and/or imprisonment.

b. Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

Responsible official (type or print)

Name:

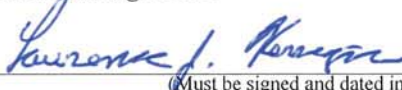
Laurence Kerrigan

Title:

Facilities Manager

Responsible official's signature:

Signature:



Signature Date:

2-21-22

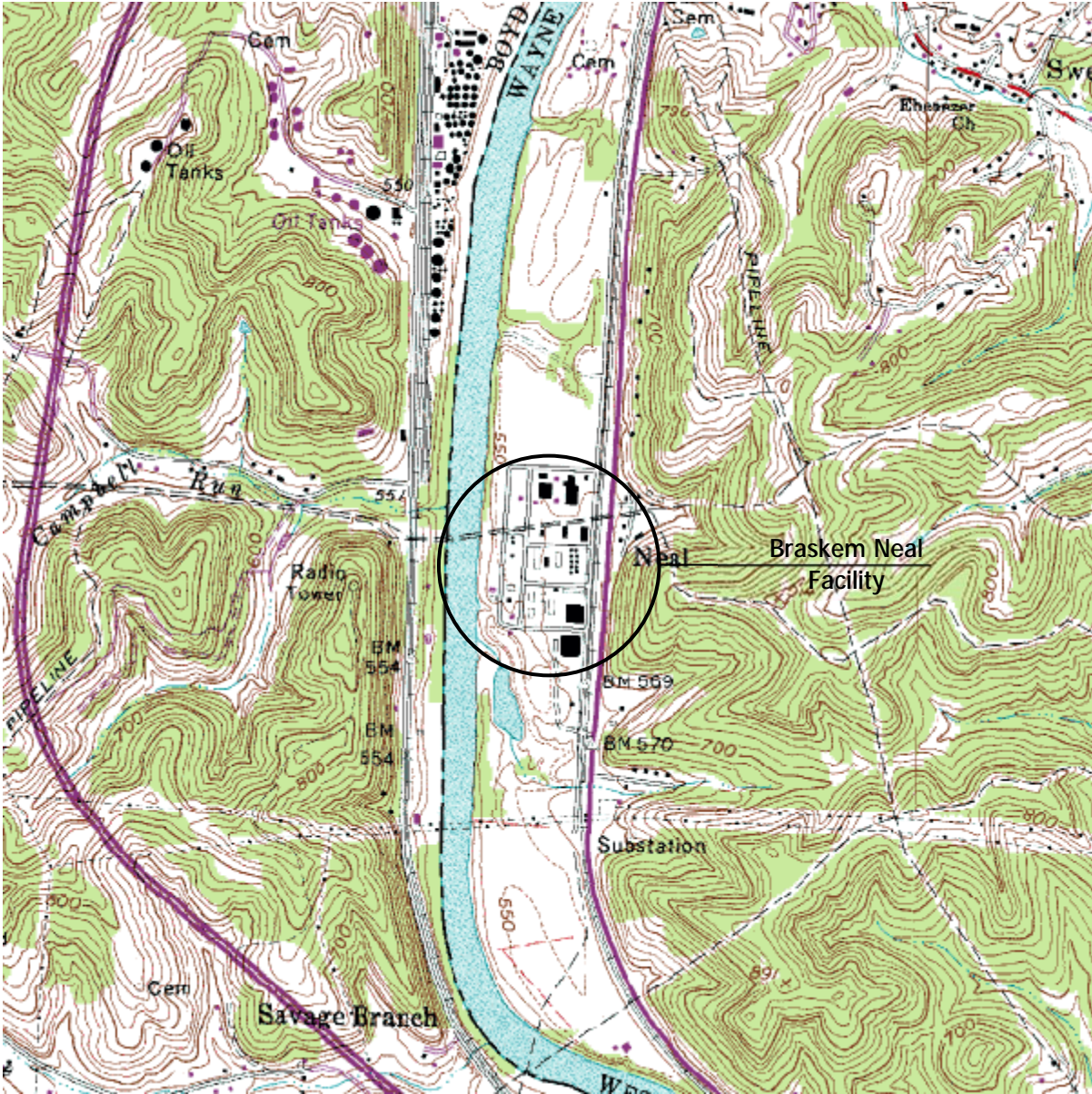
(Must be signed and dated in blue ink or have a valid electronic signature)

Note: Please check all applicable attachments included with this permit application:

<input checked="" type="checkbox"/>	ATTACHMENT A: Area Map
<input checked="" type="checkbox"/>	ATTACHMENT B: Plot Plan(s)
<input checked="" type="checkbox"/>	ATTACHMENT C: Process Flow Diagram(s)
<input checked="" type="checkbox"/>	ATTACHMENT D: Equipment Table
<input checked="" type="checkbox"/>	ATTACHMENT E: Emission Unit Form(s)
<input type="checkbox"/>	ATTACHMENT F: Schedule of Compliance Form(s)
<input checked="" type="checkbox"/>	ATTACHMENT G: Air Pollution Control Device Form(s)
<input type="checkbox"/>	ATTACHMENT H: Compliance Assurance Monitoring (CAM) Form(s)

All of the required forms and additional information can be found and downloaded from, the DEP website at www.dep.wv.gov/daq, requested by phone (304) 926-0475, and/or obtained through the mail.


ATTACHMENT A: AREA MAP



ATTACHMENT B: PLOT PLAN


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REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
--	2	ADDED 2007 ADDITION TO AREA 11	10/15/07	-----
--	1	ADDED CONSTRUCTION TRAILER AREA	2/19/07	-----

	PLOT PLAN OF SUNOCO CHEMICAL - 2007 SHEET 1 OF 2			
	NEAL PLANT 200 BIG SANDY RD. KENOVA, WV. 25530	SIZE: D	EQUIP. NO.: -----	DWG. NO.: G-6175
SCALE: 1"=100'-0"		DWN. BY: L.RUNYON	DATE: 03/14/07	SHEET: 1 OF 2

Redacted Copy - Claim of Confidentiality


REVISIONS				
BY	REV	DESCRIPTION	DATE	APPROVED
--	--	-----	-----	-----
LR	1	ADDED SUBSTATION FILL AREA	07/31/02	-----

	PLOT PLAN OF SUNOCO CHEMICAL - 2007 SHEET 2 OF 2			
	NEAL PLANT 200 BIG SANDY RD. KENOVA, WV. 25530	SIZE: D	EQUIP. NO.: -----	DWG. NO.: G-6175
SCALE: 1"=100'-0"		DWN. BY: LRUNYON	DATE: 03/14/01	SHEET: 2 OF 2

ATTACHMENT C: PROCESS FLOW DIAGRAMS

Redacted Copy - Claim of Confidentiality

REVISIONS				
REV	BY	DESCRIPTION	DATE	APPROVED

	PROCESS FLOW DIAGRAM			
	NEAL PLANT 200 BIG SANDY RD. KENDVA, WV. 25530			
SIZE: D	EQUIP. NO.:	DWG. NO.:	REV.:	
SCALE: NONE	DWN. BY:	DATE:	SHEET:	

ATTACHMENT D: EQUIPMENT TABLE

ATTACHMENT D - Title V Equipment Table
(includes all emission units at the facility except those designated as insignificant activities in Section 4, Item 24 of the General Forms)

Emission Unit ID ¹	Emission Point ID ¹	Emission Unit Description	Year Installed/ Modified	Design Capacity	Control Device ¹
		Please refer to Table D-1			

¹For 45CSR13 permitted sources, the numbering system used for the emission points, control devices, and emission units should be consistent with the numbering system used in the 45CSR13 permit. For grandfathered sources, the numbering system should be consistent with registrations or emissions inventory previously submitted to DAQ. For emission points, control devices, and emissions units which have not been previously labeled, use the following 45CSR13 numbering system: 1S, 2S, 3S,... or other appropriate description for emission units; 1C, 2C, 3C,... or other appropriate designation for control devices; 1E, 2E, 3E, ... or other appropriate designation for emission points.

Table D-1. Emission Units Table

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
001 Utilities					
001-02	01E	B600 -Natural Gas Steam Boiler: Model# 1VP-10B, Serial# 6380	1961	77 MMBtu/hr	Low NO _x Burners (Installed in 1995)
B604	75E	Boiler #4 - Natural Gas Steam Boiler: Babcock & Wilcox Model # FM 103-79	2011	99.66 MMBtu/hr	Inherent Flue Gas Recirculation
001-03	70E	H-081: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3226	2019	6.3 MMBtu/hr	NA
001-04	70E	H-082: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3227	1993	6.3 MMBtu/hr	NA
Cooling Tower	Fugitive	Facility Cooling Tower			NA
EG-1	EG-1E	H9202A Emergency Generator	1988	330 hp	NA
EG-2	EG-2E	H9202B Emergency Generator	1988	330 hp	NA
EG-3	EG-3E	H516 Emergency Generator	1998	507 hp	NA
002 Raw Material Prep (Areas 10, 11, 15, & 16)					
B101	B101E	Nitrogen Heater	1960	300 TPY Propane (1.7 MMBtu/hr)	NA
OSBL Flare	B542E	OSBL Flare	Const. - 10/6/60 Modif. - 5/1/88	40,000 lb/hr	APCD
LDAR Components (A-10, A-11, A-15, and A-16)	Fugitive	Raw Material Prep Fugitive Emissions	--	--	Fugitive
Unpaved Roads	Fugitive	Facility-Wide Unpaved Roads	1960	--	NA
Paved Roads	Fugitive	Facility-Wide Paved Roads	1960	--	NA
003 Polymerization (Area 11)					
ISBL Flare	91E	ISBL Flare	1988	366,000 lb/hr	APCD
DS503	82E	DS503 Vent	1988	-	NA
LDAR Components (A-91)	Fugitive	Poly Fugitive Emissions	--	--	Fugitive
005 Product Finishing (Area 8)					
L-8903	76E	L-8903 Feeder #2	2014	75,000 lb/hr	Filter #2
L-8904	77E	L-8904 Feeder #3	2014	75,000 lb/hr	Filter #3
L-8905	78E	L-8905 Feeder #5	2014	75,000 lb/hr	Filter #5
L-8906	79E	L-8906 Feeder #6	2014	75,000 lb/hr	Filter #6
L-8907	80E	L-8907 Feeder #7	2014	75,000 lb/hr	Filter #7
L-8908	81E	L-8908 Feeder #4	2014	75,000 lb/hr	Filter #4
Filter #2	76E	L-8903 Feeder #2 Bag Filter	2014	--	APCD
Filter #3	77E	L-8904 Feeder #3 Bag Filter	2014	--	APCD
Filter #5	78E	L-8905 Feeder #5 Bag Filter	2014	--	APCD
Filter #6	79E	L-8906 Feeder #6 Bag Filter	2014	--	APCD
Filter #7	80E	L-8907 Feeder #7 Bag Filter	2014	--	APCD
Filter #4	81E	L-8908 Feeder #4 Bag Filter	2014	--	APCD
L-8829	74E	L-8829 Blender/Conveyor	1994	75,000 lb/hr	G-8830 Bag Filter
G-8830	74E	L-8829 Blender/Conveyor Bag Filter	2011	--	APCD
L-8856	56E	WPB Pellet Dryer	1994	75,000 lb/hr	NA
G-738	58E	WPB South Dust Collector	--	--	APCD
Matcon-Buls Loading Booth	58E	Matcon-Buls Loading Booth (2nd Floor)	1988	1,500 lb/hr	G-738 - South Dust Collector
Drum Weigh Station	58E	Drum Weigh Station (3rd Floor)	1988	1,500 lb/hr	G-738 - South Dust Collector
L-739	58E	L-739 Additive Mixer/Blender (3rd Floor)	1988	1,500 lb/hr	G-738 - South Dust Collector
Matcon-Buls Unloading Booth	58E	Matcon-Buls Unloading Booth (3rd Floor)	1988	1,500 lb/hr	G-738 - South Dust Collector
Unnamed Cyclone #2	71E	Portable Blower Unit #2 - Unnamed Cyclone #2	--	--	APCD
Portable Blower Unit #2	71E	Portable Blower Unit #2	1980	8,000 lb/hr	Unnamed Cyclone #2
L-816B	68E	WP2 Extruder	1980	1,000 lb/hr	NA
WP2 Pellet Loading Hopper	69E	WP2 Pellet Loading Hopper	1980	1,000 lb/hr	NA

Table D-1. Emission Units Table

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
006 Product Storage (Area 8)					
G-9001	24E	G-9001 Silos Bag Filter	--	--	APCD
D-9003	24E	D-9003 Pellet Silo	1990	75,000 lb/hr	G-9001 - Bag Filter
D-9002	24E	D-9002 Pellet Silo	1990	75,000 lb/hr	G-9001 - Bag Filter
G-9002	26E	G-9002 Silo/Blender Bag Filter	--	--	APCD
D-9001	26E	D-9001 Pellet Silo	1990	75,000 lb/hr	G-9002 - Bag Filter
D-9004	26E	D-9004 Pellet Silo	1990	75,000 lb/hr	G-9002 - Bag Filter
G-9003	72E	G-9003 Blenders Bag Filter	--	--	APCD
D-9005	72E	D-9005 Pellet Silo	1994	75,000 lb/hr	G-9003 - Bag Filter
D-9012	72E	D-9012 Pellet Silo	1994	75,000 lb/hr	G-9003 - Bag Filter
G-9004	38E	G-9004 Blenders Bag Filter	--	--	APCD
D-9006	38E	D-9006 Pellet Silo	1994	75,000 lb/hr	G-9004 - Bag Filter
D-9011	38E	D-9011 Pellet Silo	1994	75,000 lb/hr	G-9004 - Bag Filter
G-9501	42E	Flotriator Bag Filter	--	--	APCD
L-9501	42E	Flotriator	1984	60,000 lb/hr	G-9501 - Bag Filter
G-9005	49E	G-9005 Blenders Bag Filter	--	--	APCD
D-9007	49E	D-9007 Pellet Silo	1994	75,000 lb/hr	G-9005 - Bag Filter
D-9010	49E	D-9010 Pellet Silo	1994	75,000 lb/hr	G-9005 - Bag Filter
G-9006	50E	G-9006 Blenders Bag Filter	--	--	APCD
D-9008	50E	D-9008 Pellet Silo	1994	75,000 lb/hr	G-9006 - Bag Filter
D-9009	50E	D-9009 Pellet Silo	1994	75,000 lb/hr	G-9006 - Bag Filter
G-9503	51E	Pelletron Bag Filter	--	--	APCD
L-9503	51E	Pelletron	1994	60,000 lb/hr	G-9503 - Bag Filter
G-0908	59E	Returned Rail Car Unloading Cyclone Cartridge Filter	--	--	APCD
G-0911	59E	Returned Rail Car Unloading Cyclone Bag Filter	--	--	G-0908 - Cartridge Filter
G-0904	59E	Returned Rail Car Unloading Cyclone	1980	5,479 lb/hr	G-0911 - Bag Filter
D-670 (SB-1)	60E	SB-1 Super Blender	1978	5,479 lb/hr	NA
D-672 (SB-2)	61E	SB-2 Super Blender	1981	5,479 lb/hr	NA
SB-3	62E	Truck Loading Pellet Silo	1979	33,000 lb/hr	NA

ATTACHMENT E: EMISSION UNIT FORMS

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Group 001	Emission unit name: Utilities	List any control devices associated with this emission unit:
--	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Please refer to Table E-1. General EU Data Group 001

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: MM/DD/YYYY	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
-----------------------------------	-----------------------------------	------------------------------------

Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Please refer to Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Please refer to Appendix A for emission calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Please refer to Table E-1. General EU Data Group 001



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Please refer to Table E-1. General EU Data Group 001



Yes



No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Group 002	Emission unit name: Raw Material Prep (Areas 10, 11, 15, and 16)	List any control devices associated with this emission unit:
--	---	---

Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Please refer to Table E-2. General EU Data Group 002

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: MM/DD/YYYY	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Please refer to Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Please refer to Appendix A for emission calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Please refer to Table E-2. General EU Data Group 002



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Please refer to Table E-2. General EU Data Group 002



Yes



No

If no, complete the **Schedule of Compliance Form** as ATTACHMENT F.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Group 003	Emission unit name: Polymerization (Area 91)	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Please refer to Table E-3. General EU Data Group 003

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: MM/DD/YYYY	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Please refer to Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Please refer to Appendix A for emission calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Please refer to Table E-3. General EU Data Group 003



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Please refer to Table E-3. General EU Data Group 003

Yes No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Group 005	Emission unit name: Product Finishing (Area 8)	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Please refer to Table E-4. General EU Data Group 005

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: MM/DD/YYYY	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Please refer to Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Please refer to Appendix A for emission calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Please refer to Table E-4. General EU Data Group 005



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Please refer to Table E-4. General EU Data Group 005



Yes



No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

ATTACHMENT E - Emission Unit Form

Emission Unit Description

Emission unit ID number: Group 006	Emission unit name: Product Storage (Area 8)	List any control devices associated with this emission unit:
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Provide a description of the emission unit (type, method of operation, design parameters, etc.; for engines, please indicate compression or spark ignition, lean or rich, four or two stroke, non-emergency or emergency, certified or not certified, as applicable)

Please refer to Table E-5. General EU Data Group 006

Manufacturer:	Model number:	Serial number:
Construction date: MM/DD/YYYY	Installation date: MM/DD/YYYY	Modification date(s): MM/DD/YYYY

Design Capacity (examples: furnaces - tons/hr, tanks – gallons, boilers – MMBtu/hr, engines - hp):

Maximum Hourly Throughput:	Maximum Annual Throughput:	Maximum Operating Schedule:
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Fuel Usage Data (fill out all applicable fields)

Does this emission unit combust fuel? <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, is it? <input type="checkbox"/> Indirect Fired <input type="checkbox"/> Direct Fired
Maximum design heat input and/or maximum horsepower rating:	Type and Btu/hr rating of burners:

List the primary fuel type(s) and if applicable, the secondary fuel type(s). For each fuel type listed, provide the maximum hourly and annual fuel usage for each.

Describe each fuel expected to be used during the term of the permit.

Fuel Type	Max. Sulfur Content	Max. Ash Content	BTU Value

<i>Emissions Data</i>		
Criteria Pollutants	Potential Emissions	
	PPH	TPY
Carbon Monoxide (CO)	Please refer to Appendix A	
Nitrogen Oxides (NO _x)		
Lead (Pb)		
Particulate Matter (PM _{2.5})		
Particulate Matter (PM ₁₀)		
Total Particulate Matter (TSP)		
Sulfur Dioxide (SO ₂)		
Volatile Organic Compounds (VOC)		
Hazardous Air Pollutants	Potential Emissions	
	PPH	TPY
Regulated Pollutants other than Criteria and HAP	Potential Emissions	
	PPH	TPY

List the method(s) used to calculate the potential emissions (include dates of any stack tests conducted, versions of software used, source and dates of emission factors, etc.).

Please refer to Appendix A for emission calculations.

Applicable Requirements

List all applicable requirements for this emission unit. For each applicable requirement, include the underlying rule/regulation citation and/or construction permit with the condition number. (Note: Title V permit condition numbers alone are not the underlying applicable requirements). If an emission limit is calculated based on the type of source and design capacity or if a standard is based on a design parameter, this information should also be included.

Please refer to Table E-5. General EU Data Group 006



Permit Shield

For all applicable requirements listed above, provide monitoring/testing/recordkeeping/reporting which shall be used to demonstrate compliance. If the method is based on a permit or rule, include the condition number or citation. (Note: Each requirement listed above must have an associated method of demonstrating compliance. If there is not already a required method in place, then a method must be proposed.)

Please refer to Table E-5. General EU Data Group 006



Yes



No

If no, complete the **Schedule of Compliance Form** as **ATTACHMENT F**.

Table E-1. Group 001 Utilities

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule
001-02	01E	Boiler #1 -Natural Gas Steam Boiler: Model# 1VP-10B, Serial# 6380	Low NO _x Burners (Installed in 1995)	Combustion Engineering, Inc.	1VP-10B	6380	1961	1961	1995	77 MMBtu/hr	77	MMBtu/hr	674,520	MMBtu/yr	8,760
B604	75E	Boiler #4 - Natural Gas Steam Boiler: Babcock & Wilcox Model # FM 103-79	Inherent Flue Gas Recirculation	Babcock & Wilcox	FM 103-79	N/A	2011	2011	N/A	99.66 MMBtu/hr	99.66	MMBtu/hr	873,022	MMBtu/yr	8,760
001-03	70E	H-081: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3226	NA	Nebraska Boiler	NS-A-20	D-3226	2019	2019		6.3 MMBtu/hr	6.3	MMBtu/hr	55,188	MMBtu/yr	8,760
001-04	70E	H-082: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3227	NA	Nebraska Boiler	NS-A-20	D-3227	1993	1993		6.3 MMBtu/hr	6.3	MMBtu/hr	55,188	MMBtu/yr	8,760

Table E-1. Group 001 Utilities

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule
EG-1	EG-1E	H9202A Emergency Generator	NA	Caterpillar	3406 B-DIT			1988		330 hp	2.25	ft ³ /hr	1.13E-03	MMft ³ /yr	500
EG-2	EG-2E	H9202B Emergency Generator	NA	Caterpillar	3406 B-DIT			1988		330 hp	2.25	ft ³ /hr	1.13E-03	MMft ³ /yr	500
EG-3	EG-3E	H516 Emergency Generator	NA	Caterpillar	3408 DITA			1998		507 hp	3.46	ft ³ /hr	1.73E-03	MMft ³ /yr	500
Cooling Tower	Fugitive	Facility Cooling Tower	NA					1961							8,760

Table E-1. Group 001 Utilities

Emission Unit ID	Emission Point ID	Emission Unit Description	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?	Direct / Indirect?	Type and Rating of Burners (Btu/hr)	Fuel Types	Usage	Max. Sulfur Content	Max. Ash Content	BTU Value
001-02	01E	Boiler #1 -Natural Gas Steam Boiler: Model# 1VP-10B, Serial# 6380	<p>45CSR2-3.1, R13-1830 Condition 4.1.14. opacity shall not exceed 10%</p> <p>45CSR2-4.1.b., R13-1830 Condition 4.1.14. 6.93 lb/hr PM</p> <p>45CSR2-9.1, 45CSR2-9.2, R13-1830 Condition 4.1.14. opacity provisions for SSM</p> <p>45CSR10-3.3.f., R13-1830 Condition 4.1.17. 246.4 lb/hr SO₂</p>	<p>45CSR2A-7.1.a.1, 45CSR2A-7.1.b, 45CSR2-8.3.c., R13-1830 Condition 4.1.14. records of fuel usage, operating schedule</p> <p>45CSR2-8.1.b., R13-1830 Condition 4.1.14. PM testing, as requested by WVDEP</p> <p>45CSR2-9.3, R13-1830 Condition 4.1.14. malfunction reports</p> <p>45CSR2-10.1, 45CSR10-9.1, R13-1830 Conditions 4.1.14. and 4.1.17. exceptions for fuel shortages</p>	Y	Indirect	77 MMBtu/hr	Natural Gas	661.3 MMscf/yr 75 Mscf/hr	NA	NA	1,020 Btu/scf
B604	75E	Boiler #4 - Natural Gas Steam Boiler: Babcock & Wilcox Model # FM 103-79	<p>45CSR2-3.1, R13-1830 Condition 4.1.14. opacity shall not exceed 10%</p> <p>45CSR2-9.1, 45CSR2-9.2, R13-1830 Condition 4.1.14. opacity provisions for SSM</p> <p>45CSR2-4.1.b., R13-1830 Condition 4.1.14. 8.97 lb/hr PM</p> <p>R13-1830 Condition 4.1.8. fire only natural gas maximum heat input 99.66 MMBtu/hr maximum natural gas usage: 700.06 mmscf/12 month prod. utilize flue gas recirculation</p> <p>R13-1830 Condition 4.1.8.5. comply with recordkeeping and reporting requirements of NSPS Dc</p> <p>R13-1830 Condition 4.1.1.75E 0.76 lb/hr, 3.32 tpy PM/PM₁₀/PM_{2.5} 0.03 lb/hr, 0.15 tpy SO₂ 4.98 lb/hr, 21.83 tpy NO_x 3.99 lb/hr, 17.46 tpy CO 0.35 lb/hr, 1.53 tpy VOC</p>	<p>45CSR2-10.1, R13-1830 Condition 4.1.14. exceptions for fuel shortages</p> <p>R13-1830 Condition 4.4.4., 40 CFR 60.48c(g)(2), 45CSR2-8.3 records of monthly, rolling 12-month natural gas usage and records of operating hours</p> <p>R13-1830 Condition 4.4.5. malfunction reports records of startup/shutdown/malfunction occurrences and duration</p> <p>45CSR2-8.1.b., R13-1830 Condition 4.1.14. PM testing, as requested by WVDEP</p> <p>R13-1830 Condition 4.1.1.75E CO testing, as requested by WVDEP NO_x testing, as requested by WVDEP</p>	Y	Indirect	99.66 MMBtu/hr	Natural Gas	873 MMscf/yr 100 Mscf/hr	NA	NA	1,000 Btu/scf
001-03	70E	H-081: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3226	<p>45CSR2-3.1, R13-1830 Condition 4.1.14. opacity shall not exceed 10%</p> <p>45CSR2-9.1, 45CSR2-9.2, R13-1830 Condition 4.1.14. opacity provisions for SSM</p> <p>R13-1830 Condition 4.1.5. fire only natural gas maximum steam production per boiler: 5,000 lb/hr, or maximum heat input per boiler: 6.3 MMBtu/hr</p>	<p>45CSR2-10.1, R13-1830 Condition 4.1.14. exceptions for fuel shortages</p> <p>R13-1830 Condition 4.4.4. records of monthly, rolling 12-month natural gas usage</p>	Y	Indirect	6.3 MMBtu/hr	Natural Gas	46.8 MMscf/yr 6.2 Mscf/hr	NA	NA	1,020 Btu/scf
001-04	70E	H-082: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3227	<p>R13-1830 Condition 4.1.6. maximum usage per boiler: 46.8 x 10⁶ ft³ of natural gas per year</p> <p>R13-1830 Condition 4.1.1.70E 0.09 lb/hr, 0.36 tpy PM₁₀ 0.01 lb/hr, 0.02 tpy SO₂ 1.24 lb/hr, 4.68 tpy NO_x 1.04 lb/hr, 3.94 tpy CO 0.14 lb/hr, 0.26 tpy VOC</p>		Y	Indirect	6.3 MMBtu/hr	Natural Gas	46.8 MMscf/yr 6.2 Mscf/hr	NA	NA	1,020 Btu/scf

Table E-1. Group 001 Utilities

Emission Unit ID	Emission Point ID	Emission Unit Description	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?	Direct / Indirect?	Type and Rating of Burners (Btu/hr)	Fuel Types	Usage	Max. Sulfur Content	Max. Ash Content	BTU Value	
EG-1	EG-1E	H9202A Emergency Generator	<p>The permittee will comply with all terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.1.1. operate according to manufacturer's recommendations</p> <p>Condition 5.1.2. emissions shall not exceed PTE listed in general permit registration</p> <p>Condition 5.1.3. rolling, 12-month fuel consumption shall not exceed limit listed in general permit registration</p> <p>40 CFR 63, Subpart ZZZZ Table 2c. -Change oil and filter every 500 hours of operation or annually, whichever comes first -Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary -Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary -Maintain a log for the date of each oil/filter change and inspection -Minimize idle time during startup to less than 30 minutes. -Install a non-resettable hour meter -Maintain records of hours and purpose of operation</p>	<p>The permittee will comply with all terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.4.1. maintain records of fuel type, hours of operation</p>	Y	Direct		Diesel	1.13E-03 MMR ³ /yr 2.25 ft ³ /hr				19,300 Btu/lb
EG-2	EG-2E	H9202B Emergency Generator	<p>The permittee will comply with all terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.1.1. operate according to manufacturer's recommendations</p> <p>Condition 5.1.2. emissions shall not exceed PTE listed in general permit registration</p> <p>Condition 5.1.3. rolling, 12-month fuel consumption shall not exceed limit listed in general permit registration</p> <p>40 CFR 63, Subpart ZZZZ Table 2c. -Change oil and filter every 500 hours of operation or annually, whichever comes first -Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary -Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary -Maintain a log for the date of each oil/filter change and inspection -Minimize idle time during startup to less than 30 minutes. -Install a non-resettable hour meter -Maintain records of hours and purpose of operation</p>	<p>The permittee will comply with all terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.4.1. maintain records of fuel type, hours of operation</p>	Y	Direct		Diesel	1.13E-03 MMR ³ /yr 2.25 ft ³ /hr				19,300 Btu/lb
EG-3	EG-3E	H516 Emergency Generator	<p>The permittee will comply with all applicable terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.1.1. operate according to manufacturer's recommendations</p> <p>Condition 5.1.2. emissions shall not exceed PTE listed in general permit registration</p> <p>Condition 5.1.3. rolling, 12-month fuel consumption shall not exceed limit listed in general permit registration</p>	<p>The permittee will comply with all applicable terms and conditions of the Class II General Permit G60-C which include the following.</p> <p>Condition 5.4.1. maintain records of fuel type, hours of operation</p>	Y	Direct		Diesel	1.73E-03 MMR ³ /yr 3.46 ft ³ /hr				19,300 Btu/lb
Cooling Tower	Fugitive	Facility Cooling Tower			N								

Table E-2. Group 002 Raw Material Preparation (A-10, A-11, A-15 and A-16)

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule
B101	B101E	Nitrogen Heater	NA				1960	1960		300 TPY Propane (1.7 MMBtu/hr)	1.7	MMBtu/hr	14,892	MMBtu/yr	8,760
OSBL Flare ^a	B542E	OSBL Flare	APCD				10/6/1960	10/6/1960	5/1/1988	40,000 lb/hr ^b	40,000	lb/hr	175,200	tpy	8,760
LDAR Components (A-10, A-11, A-15, and A-16)	Fugitive	Raw Material Prep Fugitive Emissions	Fugitive				--	--		--	--				8,760
Facility-Wide Unpaved Roadways	Fugitive	Facility-Wide Unpaved Roads	NA				1960	1960		--	--				8,760
Facility-Wide Paved Roadways	Fugitive	Facility-Wide Paved Roads	NA				1960	1960		--	--				8,760

a. Although the OSBL Flare is a control device, it is included here since the applicable permit limits as well as regulatory requirements apply to the flare.

b. The OSBL Flare is designed to remain smokeless up to a capacity of 40,000 lb/hr.

Table E-2. Group 002 Raw Material Preparation (A-10, A-11, A-15 and A-16)

Emission Unit ID	Emission Point ID	Emission Unit Description	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?	Direct / Indirect?	Type and Rating of Burners (Btu/hr)	Fuel Types	Usage	Max. Sulfur Content	Max. Ash Content	BTU Value			
B101	B101E	Nitrogen Heater			Y	Indirect	1.7 MMBtu/hr	Propane	57,600 gal/yr 6.58 gal/hr	NA	NA	91,500 Btu/gal			
OSBL Flare ^a	B542E	OSBL Flare	<p>45CSR21-37, 45CSR21-38, 45CSR16, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.10., 4.1.11., 4.1.12., and 4.1.13. incorporation of NSPS DDD as well as NSPS VV</p> <p>40 CFR 60.562-1(a)(1)(i)(C), R13-1830 Conditions 4.1.11. control continuous and intermittent VOC emissions in a flare meeting the requirements of 40 CFR 60.18; opacity standards do not apply during periods of startup, shutdown, or malfunction</p> <p>45CSR6-4.1 and 4.3, R13-1830 Condition 4.1.15 compliance with NSPS A and DDD and R13-1830 limits streamlines compliance with 45CSR6-4.1 and 4.3</p> <p>R13-1830 Condition 4.1.1.B542E and 91E combined 108.57 lb/hr, 29.99 tpy VOC 77.06 lb/hr, 19.56 tpy CO 14.21 lb/hr, 3.82 tpy NO_x 7.91 lb/hr, 2.02 tpy PM₁₀</p> <p>R13-1830 Condition 4.1.2. maximum non-SSM VOC load to OSBL Flare and ISBL Flare: 5,000,000 pounds per year (combined)</p> <p>R13-1830 Condition 4.1.18. emissions associated with the analyzer speed loops must be controlled by the flares.</p>	<p>45CSR16, 40 CFR 60.563(a)(2), (b)(2), 60.563(c), (d) operate monitoring equipment according to manufacturer's specifications continuously monitor and record the presence of the flare or each pilot light operate flares according to their designs monthly monitoring of car-sealed valves capable of diverting vent streams from flare</p> <p>45CSR16, 40 CFR 60.565(e) records of pilot light monitoring records of extinguished flare events</p> <p>45CSR16, 40 CFR 60.565(g), (h), (i) records of changes in feedstock, catalyst, or product recovery equipment records of any change in process operation that increases the uncontrolled emission rate of the process line results of performance tests</p> <p>45CSR16, 40 CFR 60.565(k) semiannual reporting of extinguished flare events, diverted vent stream events</p> <p>R13-1830 Condition 4.2.2 Monitor heat content of OSBL flare gas using GC analyzer as a 3-hr rolling average. Monitor net heating value of the gas as outlined in 40 CFR 60.564(a)(3) and 40 CFR 60.564(f)</p> <p>R13-1830 Condition 4.4.7 Maintain 12-month rolling total of VOC loading to OSBL flare Maintain 12-month rolling total combined VOC loading to both flares</p> <p>R13-1830 Condition 4.4.8 Maintain records of 3-hr average calculated heat content of the OSBL Flare. Have at least 90% of the data during each semi-annual period</p> <p>R13-1830 Condition 4.5.1 emergency reports</p> <p>R13-1830 Condition 4.5.2 excess emission reports</p>	N										While the OSBL Flare (control device) burns fuel, the actual emission sources do not. Therefore, fuel burning information has not been included in Table E-2.
LDAR Components (A-10, A-11, A-15, and A-16)	Fugitive	Raw Material Prep Fugitive Emissions	<p>45CSR16, 45CSR37, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.10., 4.1.11., 4.1.12., and 4.1.13. Per 40 CFR 60.562-2, incorporation of NSPS VV</p> <p>CO-R21-97-44 Extension of LDAR requirements to Areas 10 and 16</p>	<p>45CSR16, 45CSR37, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.10., 4.1.11., 4.1.12., and 4.1.13. Per 40 CFR 60.562-2, incorporation of monitoring, recordkeeping, and reporting requirements of NSPS VV.</p>	N										
Facility-Wide Unpaved Roadways	Fugitive	Facility-Wide Unpaved Roads			N										
Facility-Wide Paved Roadways	Fugitive	Facility-Wide Paved Roads			N										

a. Although the OSBL Flare is a control device, it is included here since the applicable permit limits as well as regulatory requirements apply to the flare.

b. The OSBL Flare is designed to remain smokeless up to a capacity of 40,000 lb/hr.

Table E-3. Group 003 Polymerization (A-91)

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?
ISBL Flare ^a	91E	ISBL Flare	APCD				1988	1988		366,000 lb/hr	366,000	lb/hr	1,603,080	tpy	8,760	<p>45CSR21-38, 45CSR16, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.11., 4.1.12., and 4.1.13. incorporation of NSPS DDD</p> <p>40 CFR 60.562-1(a)(2)(i), R13-1830 Condition 4.1.11. control intermittent VOC emissions in a flare that is</p> <p>A. designed for no visible emissions (except for periods of 5 minutes during 2 consecutive hours),</p> <p>B. operated with a flame present at all times, and</p> <p>C. designed to maintain a stable flame;</p> <p>opacity standards do not apply during periods of startup, shutdown, or malfunction</p> <p>45CSR6-4.1 and 4.3, R13-1830 Condition 4.1.15 compliance with NSPS DDD and R13-1830 limits streamlines compliance with 45CSR6-4.1 and 4.3</p> <p>R13-1830 Condition 4.1.1.91E and B542E combined 108.57 lb/hr, 29.99 tpy VOC 77.06 lb/hr, 19.56 tpy CO 14.21 lb/hr, 3.82 tpy NO_x 7.91 lb/hr, 2.02 tpy PM₁₀</p> <p>R13-1830 Condition 4.1.3. maximum non-SSM VOC load to ISBL Flare and OSBL Flare: 5,000,000 pounds per year (combined)</p> <p>R13-1830 Condition 4.1.5. hourly polypropylene resin production limit: 75,000 lb/hr rolling, 12-month polypropylene resin production limit: 325,000 tpy</p>	<p>45CSR16, 40 CFR 60.563(a)(2), (b)(2), 60.563(c), (d) operate monitoring equipment according to manufacturer's specifications continuously monitor and record the presence of the flare or each pilot light operate flares according to their designs monthly monitoring of car-sealed valves capable of diverting vent streams from flare</p> <p>45CSR16, 40 CFR 60.565(e) records of pilot light monitoring records of extinguished flare events</p> <p>45CSR16, 40 CFR 60.565(g) and (h) records of changes in feedstock, catalyst, or product recovery equipment records of any change in process operation that increases the uncontrolled emission rate of the process line</p> <p>45CSR16, 40 CFR 60.565(k) semiannual reporting of extinguished flare events, diverted vent stream events</p> <p>R13-1830 Condition 4.4.7 Maintain 12-month rolling total of VOC loading to ISBL flare Maintain 12-month rolling total combined VOC loading to both flares</p> <p>R13-1830 Condition 4.5.1 emergency reports</p> <p>R13-1830 Condition 4.5.2 excess emission reports</p>	While the ISBL Flare (control device) burns fuel, the actual emission sources do not. Therefore, fuel burning information has not been included in Table E-3.
DS503	82E	DS503 Vent	None				1988	1988		-	-	-	-	-	8,760	<p>40 CFR 60.562-1(a)(1)(ii) Exempt from control requirements since actual emissions are less than CTE</p>	<p>40 CFR 60.564(d) Calculations of actual emissions and CTE</p>	N
LDAR Components (A-91)	Fugitive	Poly Fugitive Emissions	Fugitive				--	--		--	--				8,760	<p>45CSR16, 45CSR37, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.10., 4.1.11., 4.1.12., and 4.1.13. Per 40 CFR 60.562-2, incorporation of NSPS VV</p>	<p>45CSR16, 45CSR37, 40 CFR 60, Subpart DDD, R13-1830 Conditions 4.1.10., 4.1.11., 4.1.12., and 4.1.13. Per 40 CFR 60.562-2, incorporation of monitoring, recordkeeping, and reporting requirements of NSPS VV.</p>	N

^a Although the ISBL Flare is a control device, it is included here since the applicable permit limits as well as regulatory requirements apply to the flare.

Table E-4. Group 005 - Product Finishing (A-8)

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?
L-8903	76E	L-8903 Feeder #2	Filter #2	K-Tron	KML-T80V		1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	<p>45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%</p> <p>45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1.</p> <p>R13-1830 Condition 4.1.1.76E, 77E, 78E, 79E, 80E, 81E 0.01 lb/hr, 0.01 tpy PM₁₀</p>	<p>45CSR7-9.1, R13-1830 Condition 4.5.3. notification of opacity exceedances</p> <p>R13-1830 Condition 4.2.1. monthly visible emissions checks</p> <p>R13-1830 Condition 4.3.4. procedures for opacity observations</p> <p>R13-1830 Condition 4.4.1. records of monitoring</p> <p>R13-1830 Condition 4.4.2. records of maintenance of air pollution control equipment</p> <p>R13-1830 Condition 4.4.3. records of malfunction of air pollution control equipment</p> <p>R13-1830 Condition 4.4.6. records of monthly visible emissions checks</p>	N
L-8904	77E	L-8904 Feeder #3	Filter #3	K-Tron	KML-T50V		1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760			N
L-8905	78E	L-8905 Feeder #5	Filter #5	K-Tron	K2ML-T35		1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760			N
L-8906	79E	L-8906 Feeder #6	Filter #6				1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760			N
L-8907	80E	L-8907 Feeder #7	Filter #7				1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760			N
L-8908	81E	L-8908 Feeder #4	Filter #4	K-Tron	KML-T50V		1994	1994	2014	75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760			N
L-8829	74E	L-8829 Blender/Conveyor	G-8830 Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	<p>45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%</p> <p>45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1.</p> <p>R13-1830 Condition 4.1.1.74E 0.01 lb/hr, 0.04 tpy PM₁₀</p>	N	
Matcon-Buls Loading Booth	58E	Matcon-Buls Loading Booth (2nd Floor)	G-738 - South Dust Collector				1988	1988		1,500 lb/hr	1,500	lb/hr	6,570	tpy	8,760		N	
Drum Weigh Station	58E	Drum Weigh Station (3rd Floor)	G-738 - South Dust Collector				1988	1988		1,500 lb/hr	1,500	lb/hr	6,570	tpy	8,760		N	
L-739	58E	L-739 Additive Mixer/Blender (3rd Floor)	G-738 - South Dust Collector				1988	1988		1,500 lb/hr	1,500	lb/hr	6,570	tpy	8,760		N	
Matcon-Buls Unloading Booth	58E	Matcon-Buls Unloading Booth (3rd Floor)	G-738 - South Dust Collector				1988	1988		1,500 lb/hr	1,500	lb/hr	6,570	tpy	8,760		N	
Portable Blower Unit #2	71E	Portable Blower Unit #2	Unnamed Cyclone #2				1980	1980		8,000 lb/hr	8,000	lb/hr	35,040	tpy	8,760	<p>45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%</p> <p>45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1.</p> <p>R13-1830 Condition 4.1.1.71E 0.80 lb/hr, 3.50 tpy PM₁₀</p>	N	
L-8856	56E	WPB Pellet Dryer	NA				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760		<p>45CSR7-9.1, R13-1830 Condition 4.5.3. notification of opacity exceedances</p> <p>R13-1830 Condition 4.2.1. monthly visible emissions checks</p> <p>R13-1830 Condition 4.3.4. procedures for opacity observations</p> <p>R13-1830 Condition 4.4.1. records of monitoring</p> <p>R13-1830 Condition 4.4.6. records of monthly visible emissions checks</p>	N
L-816B	68E	WP2 Extruder	NA				1980	1980		1,000 lb/hr	1,000	lb/hr	4,380	tpy	8,760			N
WP2 Pellet Loading Hopper	69E	WP2 Pellet Loading Hopper	NA				1980	1980		1,000 lb/hr	1,000	lb/hr	4,380	tpy	8,760			N

Table E-5. Group 006 Product Storage (A-8)

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	Manufacturer	Model #	Serial #	Construction Date	Installation Date	Modification Date	Design Capacity	Maximum Hourly Throughput	Unit	Maximum Annual Throughput	Unit	Maximum Operating Schedule	Applicable Requirements	Compliance Demonstration	Does this Unit Combust Fuel?
D-9003	24E	D-9003 Pellet Silo	G-9001 - Bag Filter				1990	1990		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%	45CSR7-9.1, R13-1830 Condition 4.5.3. notification of opacity exceedances	N
D-9002	24E	D-9002 Pellet Silo	G-9001 - Bag Filter				1990	1990		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.24E 0.02 lb/hr, 0.09 tpy PM ₁₀	R13-1830 Condition 4.2.1. monthly visible emissions checks R13-1830 Condition 4.3.4. procedures for opacity observations	N
D-9001	26E	D-9001 Pellet Silo	G-9002 - Bag Filter				1990	1990		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%	R13-1830 Condition 4.4.1. records of monitoring	N
D-9004	26E	D-9004 Pellet Silo	G-9002 - Bag Filter				1990	1990		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.26E 0.02 lb/hr, 0.09 tpy PM ₁₀	R13-1830 Condition 4.4.2. records of maintenance of air pollution control equipment R13-1830 Condition 4.4.3. records of malfunction of air pollution control equipment	N
D-9005	72E	D-9005 Pellet Silo	G-9003 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%	R13-1830 Condition 4.4.6. records of monthly visible emissions checks	N
D-9012	72E	D-9012 Pellet Silo	G-9003 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.72E 0.02 lb/hr, 0.09 tpy PM ₁₀		N
D-9006	38E	D-9006 Pellet Silo	G-9004 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N
D-9011	38E	D-9011 Pellet Silo	G-9004 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.38E 0.02 lb/hr, 0.09 tpy PM ₁₀		N
L-9501	42E	Flotriator	G-9501 - Bag Filter				1984	1984		60,000 lb/hr	60,000	lb/hr	262,800	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N
D-9007	49E	D-9007 Pellet Silo	G-9005 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.42E 0.02 lb/hr, 0.09 tpy PM ₁₀		N
D-9010	49E	D-9010 Pellet Silo	G-9005 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N
D-9008	50E	D-9008 Pellet Silo	G-9006 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.49E 0.02 lb/hr, 0.09 tpy PM ₁₀		N
D-9009	50E	D-9009 Pellet Silo	G-9006 - Bag Filter				1994	1994		75,000 lb/hr	75,000	lb/hr	325,000	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N
L-9503	51E	Pelletron	G-9503 - Bag Filter				1994	1994		60,000 lb/hr	60,000	lb/hr	262,800	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.50E 0.02 lb/hr, 0.09 tpy PM ₁₀		N
G-0904	59E	Returned Rail Car Unloading Cyclone	G-0911 - Bag Filter / G-0908 - Cartridge Filter				1980	1980		5,479 lb/hr	5,479	lb/hr	23,998	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N
D-670 (SB-1)	60E	SB-1 Super Blender	NA				1978	1978		5,479 lb/hr	5,479	lb/hr	23,998	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.51E 3.14 lb/hr, 13.75 tpy PM ₁₀	45CSR7-9.1, R13-1830 Condition 4.5.3. notification of opacity exceedances R13-1830 Condition 4.2.1. monthly visible emissions checks R13-1830 Condition 4.3.4. procedures for opacity observations	N
D-672 (SB-2)	61E	SB-2 Super Blender	NA				1981	1981		5,479 lb/hr	5,479	lb/hr	23,998	tpy	8,760	45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%	R13-1830 Condition 4.4.1. records of monitoring R13-1830 Condition 4.4.6. records of monthly visible emissions checks	N
SB-3	62E	Truck Loading Pellet Silo	NA				1979	1979		33,000 lb/hr	33,000	lb/hr	144,540	tpy	8,760	45CSR7-4.1, Condition 4.1.1. Compliance with R13-1830 limits streamlines compliance with 45CSR7-4.1. R13-1830 Condition 4.1.1.60E 0.55 lb/hr, 2.40 tpy PM ₁₀		N
																45CSR7-3.1, R13-1830 Condition 4.1.16 opacity shall not exceed 20%		N

ATTACHMENT G: AIR POLLUTION CONTROL DEVICE FORMS

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: OSBL Flare	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: ISBL Flare	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H – Included in 2010 renewal application**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #2	List all emission units associated with this control device. Please refer to Table G-1.
---	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #3	List all emission units associated with this control device. Please refer to Table G-1.
---	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #4	List all emission units associated with this control device. Please refer to Table G-1.
---	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #5	List all emission units associated with this control device. Please refer to Table G-1.
---	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #6	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Filter #7	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-8830	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-738	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: Unnamed Cyclone #2	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9001	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9002	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9003	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9004	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9005	List all emission units associated with this control device. Please refer to Table G-1.
--	---

Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9006	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9501	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-9503	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-0908	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

ATTACHMENT G - Air Pollution Control Device Form

Control device ID number: G-0911	List all emission units associated with this control device. Please refer to Table G-1.
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Manufacturer:	Model number:	Installation date:
Please refer to Table G-1.		

Type of Air Pollution Control Device: Refer to Forms Data Spreadsheet, Attachment G

<input type="checkbox"/> Baghouse/Fabric Filter	<input type="checkbox"/> Venturi Scrubber	<input type="checkbox"/> Multiclone
<input type="checkbox"/> Carbon Bed Adsorber	<input type="checkbox"/> Packed Tower Scrubber	<input type="checkbox"/> Single Cyclone
<input type="checkbox"/> Carbon Drum(s)	<input type="checkbox"/> Other Wet Scrubber	<input type="checkbox"/> Cyclone Bank
<input type="checkbox"/> Catalytic Incinerator	<input type="checkbox"/> Condenser	<input type="checkbox"/> Settling Chamber
<input type="checkbox"/> Thermal Incinerator	<input type="checkbox"/> Flare	<input type="checkbox"/> Other (describe) _____
<input type="checkbox"/> Wet Plate Electrostatic Precipitator	<input type="checkbox"/> Dry Plate Electrostatic Precipitator	

List the pollutants for which this device is intended to control and the capture and control efficiencies.

Pollutant	Capture Efficiency	Control Efficiency
Please refer to Table G-1.		

Explain the characteristic design parameters of this control device (flow rates, pressure drops, number of bags, size, temperatures, etc.).

Please refer to Table G-1.

Is this device subject to the CAM requirements of 40 C.F.R. 64? Yes No

If Yes, **Complete ATTACHMENT H**

If No, **Provide justification.**

Describe the parameters monitored and/or methods used to indicate performance of this control device.

Please refer to Table G-1.

Table G-1. Air Pollution Control Device Information

Emission Point ID	Control Device ID	Control Device Description	Emission Unit IDs	Manufacturer	Model #	Installation Date	Type	Controlled Pollutants	Capture Efficiency	Control Efficiency	Characteristic Design Parameters	CAM Required?	Parameters / Methods Indicating Performance
B542E	OSBL Flare	OSBL Flare	Maintenance bleeds and emergency relief (A-10, A-11, A-16); Pump seal pots (A-10, A-11); J1101 (A-11); P302, P501, P503 compressor seal vents (A-91); J1001, J1003 compressor seal vents (A-10); J1401A, B, C, D unloading compressor seal vents (A-16); FAA-1002 [JA-1001 discharge pot], FAA-1003 [JA-1003 discharge pot] (A-10); back purge and speed loops on analyzers ARA-101 through ARA-106 (A-11); back purge and speed loop vents on analyzers ARA-111, AR201, AR321, AR321A, AR321B (A-91); DA-1A-105 A/B dryer regenerations (A-11)	John Zink	STF-S-18C	Const. - 10/6/60 Modif. - 5/1/88	Flare	VOC	100%	98%	max flow: 6,000 cfm, avg flow: 0.1 cfm @ 70F, flare tip diameter: 18", flare gas temp: 70F	Yes	Continuous monitoring of each pilot light flame
91E	ISBL Flare	ISBL Flare	D601 and D602 blowdown vessels and emergency relief (A-91)	John Zink	STF-U-20	3/1/1988	Flare	VOC	100%	98%	Four-stage combustion (3 burners in stage 1, 5 burners in stage 2, 10 burners in stage 3, U-20 burner in stage 4), max flow: 41,422 cfm, flare gas temp: 70F	Yes	Continuous monitoring of each pilot light flame
76E	Filter #2	L-8903 Feeder #2 Bag Filter	L-8903 Feeder #2	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
77E	Filter #3	L-8904 Feeder #3 Bag Filter	L-8904 Feeder #3	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
78E	Filter #5	L-8905 Feeder #5 Bag Filter	L-8905 Feeder #5	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
79E	Filter #6	L-8906 Feeder #6 Bag Filter	L-8906 Feeder #6	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
80E	Filter #7	L-8907 Feeder #7 Bag Filter	L-8907 Feeder #7	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
81E	Filter #4	L-8908 Feeder #4 Bag Filter	L-8908 Feeder #4	Filters Unlimited		2014	Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
74E	G-8830	G-8830 Bag Filter	L-8829			2011	Fabric Filter	Total Particulate	100%	99%		No	Monthly visible emissions checks
58E	G-738	WPB South Dust Collector	Matcon-Buls Loading Booth, Drum Weigh Station, L-739, Matcon-Buls Unloading Booth	Mikropul	25S-10-TR-c-30	1991	Baghouse/Fabric Filter	Total Particulate	100%	98%		No	Monthly visible emissions checks
71E	Unnamed Cyclone #2	Portable Blower Unit #2 - Unnamed Cyclone #2	Portable Blower Unit #2				Multiclone	Total Particulate	100%	80%		No	Monthly visible emissions checks
24E	G-9001	G-9001 Silos Bag Filter	D-9002, D-9003 Pellet Silos	Allied Flotronics			Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
26E	G-9002	G-9002 Silo/Blender Bag Filter	D-9001, D-9004 Pellet Silos	Allied Flotronics			Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
72E	G-9003	G-9003 Blenders Bag Filter	D-9005, D-9012 Pellet Silos	Allied Flotronics	FTFR 54-96 VAC/PRES	6/5/1987	Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
38E	G-9004	G-9004 Blenders Bag Filter	D-9006, D-9011 Pellet Silos	Allied Flotronics			Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
42E	G-9501	Flotriator Bag Filter	L-9501				Multiclone	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
49E	G-9005	G-9005 Blenders Bag Filter	D-9007, D-9010 Pellet Silos	Allied Flotronics	FTFR 54-96 VAC/PRES	6/5/1987	Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
50E	G-9006	G-9006 Blenders Bag Filter	D-9008, D-9009 Pellet Silos	Allied Flotronics			Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
51E	G-9503	Pelletron Bag Filter	L-9503		100-PJD		Baghouse/Fabric Filter	Total Particulate	100%	98%		No	Monthly visible emissions checks
59E ^a	G-0908	Returned Rail Car Unloading Cyclone Cartridge Filter	G-0904	Allied Flotronics		10/7/1986	Baghouse/Fabric Filter	Total Particulate	100%	99.9%		No	Monthly visible emissions checks
	G-0911	Returned Rail Car Unloading Cyclone Bag Filter		Allied Flotronics	FTFR 36-48	11/6/1986	Baghouse/Fabric Filter	Total Particulate	100%	98%			

^a Emissions from the returned railcar unloading cyclone (G-0904) are routed to the bag filter (G-0911) which vents to the cartridge filter (G-0908) which ultimately vents to emission point 59E.

APPENDIX A. PTE CALCULATIONS

**Potential Emissions Calculations
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3	EMERGENCY GENERATORS PTE
4	ISBL FLARE AND OSBL FLARE PTE
5	LDAR EQUIPMENT PTE
6	COOLING TOWER PTE
7	PARTS WASHERS PTE
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10.A	VMT CALCULATIONS
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Table 1-Emissions Summary

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	PM ₁₀ lb/hr	PM _{2.5} lb/hr	PM lb/hr	SO _x lb/hr	NO _x lb/hr	CO lb/hr	VOC lb/hr	Lead lb/hr	Total HAPs lb/hr	Hexane ^a lb/hr	PM ₁₀ tons/yr	PM _{2.5} tons/yr	PM tons/yr	SO _x tons/yr	NO _x tons/yr	CO tons/yr	VOC tons/yr	Lead tons/yr	Total HAPs tons/yr	Hexane ^a tons/yr
001 - Utilities																							
001-02	01E	Boiler #1 -Natural Gas Steam Boiler: Model# 1VP-10B, Serial# 6380	Low NO _x Burners 1995	0.57	0.57	0.57	0.05	7.55	6.34	0.42	3.8E-05	0.14	0.14	2.51	2.51	2.51	0.20	33.06	27.77	1.82	1.7E-04	0.62	0.60
B604	75E	Boiler #4 - Natural Gas Steam Boiler: Babcock & Wilcox Model # FM 103-79	Inherent Flue Gas Recirculation	0.76	0.76	0.76	0.03	4.98	3.99	0.35	5.0E-05	0.19	0.18	3.32	3.32	3.32	0.15	21.83	17.46	1.53	2.2E-04	0.82	0.79
001-03	70E	H-081: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3226	NA	0.04	0.04	0.04	0.00	0.53	0.45	0.03	2.7E-06	0.01	0.01	0.18	0.18	0.18	0.01	2.34	1.97	0.13	1.2E-05	0.04	0.04
001-04	70E	H-082: Nebraska Natural Gas Steam Boiler, Model# NS-A-20, Serial# D-3227	NA	0.04	0.04	0.04	0.00	0.53	0.45	0.03	2.7E-06	0.01	0.01	0.18	0.18	0.18	0.01	2.34	1.97	0.13	1.2E-05	0.04	0.04
Water Intake and Fire Pumps	EG-1, EG-2, and EG-3	IC Engines	NA	2.57	2.57	2.57	2.39	36.18	7.80	2.93	NA	0.03	NA	0.64	0.64	0.64	0.60	9.04	9.04	0.73	NA	0.01	NA
Cooling Towers	Fugitive	Cooling Tower	NA	4.90	4.90	4.90	NA	NA	NA	0.81	NA	NA	NA	21.45	21.45	21.45	NA	NA	NA	3.55	NA	NA	NA
002 - Raw Material Prep																							
Analyzer Building 111	Insignificant Activity	Material Prep Analyzer Area Analyzer Building 111	NA	NA	NA	NA	NA	NA	NA	0.01	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.04	NA	NA	NA
B101	B101E	Nitrogen Heater	NA	6.3E-03	6.3E-03	6.3E-03	0.01	0.12	0.07	0.01	NA	1.5E-03	1.5E-03	0.03	0.03	0.03	0.06	0.52	0.30	0.04	NA	6.7E-03	6.4E-03
OSBL Flare	B542E	OSBL Flare	NA	0.23	0.23	0.23	1.8E-04	0.44	1.87	3.96	1.5E-07	5.4E-04	5.4E-04	1.01	1.01	1.01	0.001	1.91	8.20	17.36	6.6E-07	2.4E-03	2.4E-03
LDAR Components	Fugitive	Distillation Area (A-11)	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA
LDAR Components	Fugitive	Nitrogen Heater Area (A-15)	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA
LDAR Components	Fugitive	Railroad Unloading Area (A-RR)	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA
LDAR Components	Fugitive	Propylene Storage Area (A-10)	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA
LDAR Components	Fugitive	Raw Material Prep Total	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Included in Facility-Wide LDAR Emissions	NA	NA
Facility-Wide Paved Roadways	Fugitive	Facility-Wide Paved Roadways	NA	0.26	0.07	1.30	NA	NA	NA	NA	NA	NA	NA	1.16	0.29	5.71	NA	NA	NA	NA	NA	NA	NA
Facility-Wide Unpaved Roadways	Fugitive	Facility-Wide Unpaved Roadways	NA	0.50	0.05	1.95	NA	NA	NA	NA	NA	NA	NA	2.19	0.22	8.54	NA	NA	NA	NA	NA	NA	NA
Parts Washers	Insignificant Activity	Emissions from Parts Washers	NA	NA	NA	NA	NA	NA	NA	0.84	NA	1.7E-03	NA	NA	NA	NA	NA	NA	NA	3.68	NA	NA	NA

Table 1-Emissions Summary

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	PM ₁₀ lb/hr	PM _{2.5} lb/hr	PM lb/hr	SO _x lb/hr	NO _x lb/hr	CO lb/hr	VOC lb/hr	Lead lb/hr	Total HAPs lb/hr	Hexane ^a lb/hr	PM ₁₀ tons/yr	PM _{2.5} tons/yr	PM tons/yr	SO _x tons/yr	NO _x tons/yr	CO tons/yr	VOC tons/yr	Lead tons/yr	Total HAPs tons/yr	Hexane ^a tons/yr
003 - Polymerization																							
Analyzer Building 60	Insignificant Activity	Polymerization Area Analyzer Building 60	NA	NA	NA	NA	NA	NA	NA	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.56E-04	NA	NA	NA
Analyzer Building 68	Insignificant Activity	Polymerization Area Analyzer Building 68	NA	NA	NA	NA	NA	NA	NA	0.00	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.66E-04	NA	NA	NA
ISBL Flare	91E	ISBL Flare	NA	0.23	0.23	0.23	1.8E-04	0.44	1.87	3.96	1.5E-07	5.4E-04	5.4E-04	1.01	1.01	1.01	0.00	1.91	8.20	17.36	6.6E-07	2.4E-03	2.4E-03
Facility-Wide LDAR Components	Fugitive	Facility-Wide LDAR Emissions	NA	NA	NA	NA	NA	NA	NA	34.45	NA	NA	NA	NA	NA	NA	NA	NA	NA	150.91	NA	NA	NA
D103	Insignificant Activity	Hydraulic Oil Guard	NA	NA	NA	NA	NA	NA	NA	2.7E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.18E-04	NA	NA	NA
D105	Insignificant Activity	Oil/Grease Mixing Tank	NA	NA	NA	NA	NA	NA	NA	1.5E-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.43E-04	NA	NA	NA
D106A	Insignificant Activity	Catalyst Tank	NA	NA	NA	NA	NA	NA	NA	6.7E-05	NA	2.3E-05	0.00	NA	NA	NA	NA	NA	NA	2.93E-04	NA	1.03E-04	3.51E-05
D106B	Insignificant Activity	Catalyst Tank	NA	NA	NA	NA	NA	NA	NA	6.7E-05	NA	2.3E-05	0.00	NA	NA	NA	NA	NA	NA	2.93E-04	NA	1.03E-04	3.51E-05
D107	Insignificant Activity	Hydraulic Oil Surge Drum	NA	NA	NA	NA	NA	NA	NA	6.0E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.64E-04	NA	NA	NA
D110A	Insignificant Activity	Donor Storage Tank	NA	NA	NA	NA	NA	NA	NA	6.0E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.64E-04	NA	NA	NA
D110B	Insignificant Activity	Donor Storage Tank	NA	NA	NA	NA	NA	NA	NA	6.0E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.64E-04	NA	NA	NA
D-115	Insignificant Activity	Grindsted Tank	NA	NA	NA	NA	NA	NA	NA	2.2E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.70E-05	NA	NA	NA
D-304	Insignificant Activity	Atmer Tank	NA	NA	NA	NA	NA	NA	NA	1.2E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.04E-05	NA	NA	NA
F-698	Insignificant Activity	Used Oil Tank	NA	NA	NA	NA	NA	NA	NA	4.2E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.83E-02	NA	NA	NA
F291	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	5.8E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.55E-04	NA	NA	NA
H-9209-A	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	2.4E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.05E-04	NA	NA	NA
H-9209-B	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	2.4E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.05E-04	NA	NA	NA
F1000	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	5.4E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.35E-04	NA	NA	NA
F290	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	3.2E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.40E-04	NA	NA	NA
F704	Insignificant Activity	Diesel Tank	NA	NA	NA	NA	NA	NA	NA	6.7E-05	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.95E-04	NA	NA	NA
F707	Insignificant Activity	Gasoline Tank	NA	NA	NA	NA	NA	NA	NA	2.0E-02	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.94E-02	NA	NA	NA
DS503	82E	DS503 Vent	NA	NA	NA	NA	NA	NA	NA	1.7E+00	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.51E+00	NA	NA	NA

Table 1-Emissions Summary

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	PM ₁₀ lb/hr	PM _{2.5} lb/hr	PM lb/hr	SO _x lb/hr	NO _x lb/hr	CO lb/hr	VOC lb/hr	Lead lb/hr	Total HAPs lb/hr	Hexane ^a lb/hr	PM ₁₀ tons/yr	PM _{2.5} tons/yr	PM tons/yr	SO _x tons/yr	NO _x tons/yr	CO tons/yr	VOC tons/yr	Lead tons/yr	Total HAPs tons/yr	Hexane ^a tons/yr	
005 - Product Finishing																								
L-8903	76E	L-8903 Feeder #2	Filter #2																					
L-8904	77E	L-8904 Feeder #3	Filter #3																					
L-8905	78E	L-8905 Feeder #5	Filter #5	0.001	0.001	0.001	NA	NA	NA	NA	NA	NA	NA	0.01	0.01	0.01	NA	NA	NA	NA	NA	NA	NA	NA
L-8906	79E	L-8906 Feeder #6	Filter #6																					
L-8907	80E	L-8907 Feeder #7	Filter #7																					
L-8908	81E	L-8908 Feeder #4	Filter #4																					
L-8829	74E	L-8829 Blender/Conveyor	G-8830 - Bag Filter	0.01	0.01	0.01	NA	NA	NA	NA	NA	NA	NA	0.04	0.04	0.04	NA	NA	NA	NA	NA	NA	NA	NA
L-8856	56E	WPB Pellet Dryer	NA	5.00	5.00	5.00	NA	NA	NA	NA	NA	NA	NA	21.90	21.90	21.90	NA	NA	NA	NA	NA	NA	NA	NA
Additives Prep	58E	Matcon-Buls Loading Booth (2nd Floor) Matcon-Buls Unloading Booth (3rd Floor) Drum Weigh Station (3rd Floor) L-739 Additive Mixer/Blender (3rd Floor)	G-738 - South Dust Collector	0.18	0.18	0.18	NA	NA	NA	NA	NA	NA	NA	0.79	0.79	0.79	NA	NA	NA	NA	NA	NA	NA	NA
L-816B	68E	WP2 Extruder	NA	0.12	0.12	0.12	NA	NA	NA	NA	NA	NA	NA	0.53	0.53	0.53	NA	NA	NA	NA	NA	NA	NA	NA
WP2 Pellet Loading Hopper	69E	WP2 Pellet Loading Hopper	NA	0.12	0.12	0.12	NA	NA	NA	NA	NA	NA	NA	0.53	0.53	0.53	NA	NA	NA	NA	NA	NA	NA	NA
Portable Blower Unit #2	71E	Portable Blower Unit #2	NA	0.80	0.80	0.80	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	3.50	3.50	3.50	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	NA
F-8809A	Insignificant Activity	Peroxide Tank	NA	NA	NA	NA	NA	NA	NA	7.6E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.33E-05	NA	NA	NA	NA
F-8809B	Insignificant Activity	Peroxide Tank	NA	NA	NA	NA	NA	NA	NA	7.6E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.33E-05	NA	NA	NA	NA
	Insignificant Activity	F-8809A/B Peroxide Tank Loading	NA	NA	NA	NA	NA	NA	NA	7.6E-06	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.33E-05	NA	NA	NA	NA
VOC Emissions from Product Finishing	Fugitive	VOC Emissions from Product Finishing	NA	NA	NA	NA	NA	NA	NA	0.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.57	NA	NA	NA	NA

Table 1-Emissions Summary

Emission Unit ID	Emission Point ID	Emission Unit Description	Control Device	PM ₁₀ lb/hr	PM _{2.5} lb/hr	PM lb/hr	SO _x lb/hr	NO _x lb/hr	CO lb/hr	VOC lb/hr	Lead lb/hr	Total HAPs lb/hr	Hexane ^a lb/hr	PM ₁₀ tons/yr	PM _{2.5} tons/yr	PM tons/yr	SO _x tons/yr	NO _x tons/yr	CO tons/yr	VOC tons/yr	Lead tons/yr	Total HAPs tons/yr	Hexane ^a tons/yr
006 - Product Storage																							
D-9002 D-9003	24E	D-9002 Pellet Silo D-9003 Pellet Silo	G-9001 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-9001 D-9004	26E	D-9001 Pellet Silo D-9004 Pellet Silo	G-9002 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-9006 D-9011	38E	D-9006 Pellet Silo D-9011 Pellet Silo	G-9004 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
L-9501	42E	Flotriator	G-9501 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-9007 D-9010	49E	D-9007 Pellet Silo D-9010 Pellet Silo	G-9005 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-9008 D-9009	50E	D-9008 Pellet Silo D-9009 Pellet Silo	G-9006 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
L-9503	51E	Pelletron	G-9503 - Bag Filter	3.14	3.14	3.14	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	13.75	13.75	13.75	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
G-0904	59E	Returned Rail Car Unloading Cyclone	G-0911 - Bag Filter G-0908 - Cartridge Filter	0.55	0.55	0.55	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	2.40	2.40	2.40	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-670 (SB-1)	60E	SB-1 Super Blender	NA	0.55	0.55	0.55	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	2.40	2.40	2.40	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-672 (SB-2)	61E	SB-2 Super Blender	NA	0.55	0.55	0.55	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	2.40	2.40	2.40	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
SB-3	62E	Truck Loading Pellet Silo	NA	2.38	2.38	2.38	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	10.42	10.42	10.42	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
D-9005 D-9012	72E	D-9005 Pellet Silo D-9012 Pellet Silo	G-9003 - Bag Filter	0.02	0.02	0.02	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA	0.09	0.09	0.09	NA	NA	NA	Included in VOC Emissions from Product Storage and Loading	NA	NA	NA
VOC Emissions from Product Storage and Loading	Fugitive	VOC Emissions from Product Storage and Loading	NA	NA	NA	NA	NA	NA	NA	0.36	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.57	NA	NA	NA
Total Potential Emissions:				23.64	22.99	26.13	2.49	50.77	22.83	50.27	0.00	0.39	0.34	92.94	90.11	103.85	1.04	72.95	74.91	208.04	4.08E-04	1.56	1.48

^a Hexane is the single largest HAP emitted.

Table 2.A-NG AND Propane Emissions

Pollutant	Natural Gas Combustion [AP-42, Table 1.4-1 and Table 1.4-2 (7/98), FIRE v6.25] (lb/mmscf)	Propane Combustion Emission Factors [AP-42 Table 1.5-1] (lb/10 ³ gal)	Gas Boiler (ton/yr)	H-081 East FNS Gas Boiler (ton/yr)	H-082 West FNS Gas Boiler (ton/yr)	B-101 Nitrogen Furnace (Propane) (ton/yr)
CO	84	7.5	27.77	1.97	1.97	0.30
NO _x	100	13	33.06	2.34	2.34	0.52
NH ₃	3.2	NA	1.06	0.07	0.07	NA
SO ₂	0.6	1.59	0.20	0.01	0.01	0.06
Lead	0.0005	NA	1.65E-04	1.17E-05	1.17E-05	NA
PM	7.6	0.7	2.51	0.18	0.18	0.03
PM ₁₀	7.6	0.7	2.51	0.18	0.18	0.03
PM _{2.5}	7.6	0.7	2.51	0.18	0.18	0.03
VOC	5.5	1	1.82	0.13	0.13	0.04
TOC	11	1	3.64	0.26	0.26	0.04

Potential fuel consumption:	661.3	46.8	46.8	79.4
Fuel combusted units:	mmscf	mmscf	mmscf	10³ gal

AP-42 (10/96) propane heating value (Btu/gal)	91,500
AP-42 (7/98) natural gas heating value (Btu/scf)	1,020
AP-42 (10/96) diesel heating value (Btu/lb)	19,300
Equivalent natural gas combusted in B-101 (mmscf)	7.1
Diesel density (lb/gal):	7.1

HAPs	CAS No.	Natural Gas Combustion [AP-42, Sec. 1.4, Table 1.4-3 and Table 1.4-4 (7/98)] (lb/mmscf)	Diesel Combustion [AP-42, Sec. 3.3, Table 3.3-2(10/96)] (lb/MMBtu)	Gas Boiler Emissions (ton/yr)	Hourly HAPs for iSTEPS	H081 East FNS Gas Boiler (ton/yr)	H021 West FNS Gas Boiler (ton/yr)	B-101 Nitrogen Furnace (ton/yr)
2-Methylnaphthalene	91-57-6	2.4E-05	NA	7.94E-06	1.81E-06	5.62E-07	5.62E-07	8.55E-08
3-Methylchloranthrene*	56-49-5	1.8E-06	NA	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
7,12-Dimethylbenz(a)anthracene*	57-97-6	1.6E-05	NA	5.29E-06	1.21E-06	3.74E-07	3.74E-07	5.70E-08
Acenaphthene	83-32-9	1.8E-06	NA	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Acenaphthylene	203-96-8	1.8E-06	NA	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Anthracene	120-12-7	2.4E-06	1.87E-06	7.94E-07	1.81E-07	5.62E-08	5.62E-08	8.55E-09
Benzo(a)anthracene*	56-55-3	1.8E-06	1.68E-06	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Benzene	71-43-2	2.1E-03	9.33E-04	6.94E-04	1.59E-04	4.91E-05	4.91E-05	7.48E-06
Benzo(a)pyrene*	50-32-8	1.2E-06	1.88E-07	3.97E-07	9.06E-08	2.81E-08	2.81E-08	4.27E-09
Benzo(b)fluoranthene*	205-99-2	1.8E-06	9.91E-08	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Benzo(g,h,i)perylene	191-24-2	1.2E-06	4.89E-07	3.97E-07	9.06E-08	2.81E-08	2.81E-08	4.27E-09
Benzo(k)fluoranthene*	205-82-3	1.8E-06	1.55E-07	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Chrysene*	218-01-9	1.8E-06	3.53E-07	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Dibenzo(a,h)anthracene*	53-70-3	1.2E-06	5.83E-07	3.97E-07	9.06E-08	2.81E-08	2.81E-08	4.27E-09
Dichlorobenzene	25321-22-6	1.2E-03	NA	3.97E-04	9.06E-05	2.81E-05	2.81E-05	4.27E-06
Fluoranthene*	206-44-0	3.0E-06	7.61E-06	9.92E-07	2.26E-07	7.02E-08	7.02E-08	1.07E-08
Fluorene	86-73-7	2.8E-06	NA	9.26E-07	2.11E-07	6.55E-08	6.55E-08	9.97E-09
Formaldehyde (HCOH)	50-00-0	7.5E-02	1.18E-03	2.48E-02	5.66E-03	1.76E-03	1.76E-03	2.67E-04
Hexane	110-54-3	1.8	NA	5.95E-01	1.36E-01	4.21E-02	4.21E-02	6.41E-03
Indeno(1,2,3-cd)pyrene*	193-39-5	1.8E-06	3.75E-07	5.95E-07	1.36E-07	4.21E-08	4.21E-08	6.41E-09
Naphthalene	91-20-3	6.1E-04	8.48E-05	2.02E-04	4.60E-05	1.43E-05	1.43E-05	2.17E-06
Phenanthrene	85-01-8	1.7E-05	2.94E-05	5.62E-06	1.28E-06	3.98E-07	3.98E-07	6.05E-08
Pyrene	129-00-0	5.0E-06	NA	1.65E-06	3.77E-07	1.17E-07	1.17E-07	1.78E-08
Toluene	108-88-3	3.4E-03	4.09E-04	1.12E-03	2.57E-04	7.96E-05	7.96E-05	1.21E-05
Arsenic	7440-38-2	2.0E-04	NA	6.61E-05	1.51E-05	4.68E-06	4.68E-06	7.12E-07
Beryllium	7440-41-7	1.2E-05	NA	3.97E-06	9.06E-07	2.81E-07	2.81E-07	4.27E-08
Cadmium	7440-43-9	1.1E-03	NA	3.64E-04	8.30E-05	2.57E-05	2.57E-05	3.92E-06
Chromium	7440-47-3	1.4E-03	NA	4.63E-04	1.06E-04	3.28E-05	3.28E-05	4.99E-06
Cobalt	7440-48-4	8.4E-05	NA	2.78E-05	6.34E-06	1.97E-06	1.97E-06	2.99E-07
Lead	7439-92-1	5.0E-04	NA	1.65E-04	3.77E-05	1.17E-05	1.17E-05	1.78E-06
Manganese	7439-96-5	3.8E-04	NA	1.26E-04	2.87E-05	8.89E-06	8.89E-06	1.35E-06
Mercury	7439-97-6	2.6E-04	NA	8.60E-05	1.96E-05	6.08E-06	6.08E-06	9.26E-07
Nickel	7440-02-0	2.1E-03	NA	6.94E-04	1.59E-04	4.91E-05	4.91E-05	7.48E-06
Selenium	7782-49-2	2.4E-05	NA	7.94E-06	1.81E-06	5.62E-07	5.62E-07	8.55E-08
POM	-	8.8E-05	NA	2.92E-05	6.66E-06	2.06E-06	2.06E-06	3.14E-07
1,3-Butadiene	106-99-0	NA	3.91E-05	NA	NA	NA	NA	NA
Acetaldehyde	75-07-0	NA	7.67E-04	NA	NA	NA	NA	NA
Polycyclic Aromatic Compounds Category (PACs)	-	NA	1.10E-05	NA	NA	NA	NA	NA
Xylenes	-	NA	2.85E-04	NA	NA	NA	NA	NA
Propylene	115-07-1	NA	2.58E-03	NA	NA	NA	NA	NA
Acrolein	107-02-8	NA	9.25E-05	NA	NA	NA	NA	NA

Table 2.B-B604 Emission Calcs

EMISSION FACTORS

Client Supplied

NO _x with 15% Flue Gas Recirculation (FGR)	0.05 lb/MMBtu
CO	0.04 lb/MMBtu
VOC	0.0035 lb/MMBtu
Hydrocarbons (Total Organic Compounds)	0.008 lb/MMBtu
SO ₂	0.00035 lb/MMBtu

Boiler Specifications (Babcock & Wilcox Power Generation Group, Inc.) B&W Model FM 103-79 as contained in Proposal No.P55-5437 (Rev-2B) dated March 29, 2011
 Boiler Specifications (Babcock & Wilcox Power Generation Group, Inc.) B&W Model FM 103-79 as contained in Proposal No.P55-5437 (Rev-2B) dated March 29, 2011
 Boiler Specifications (Babcock & Wilcox Power Generation Group, Inc.) B&W Model FM 103-79 as contained in Proposal No.P55-5437 (Rev-2B) dated March 29, 2011
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AP-42 "Natural Gas Combustion 1.4" - Emission Factors and Data

Lead	0.0005 lb/mmscf
PM (Total)	7.6 lb/mmscf

AP-42 "Natural Gas Combustion 1.4" (7/98), Table 1.4-2
 AP-42 "Natural Gas Combustion 1.4" (7/98), Table 1.4-2

CALCULATIONS

Process Data and Assumptions

Natural Gas Heating Value, H	1000 BTU/scf
Heat Input Capacity, I	99.66 MMBtu/hr

Boiler Specifications (Babcock & Wilcox Power Generation Group, Inc.) B&W Model FM 103-79 as contained in Proposal No.P55-5437 (Rev-2B) dated March 29, 2011
 Boiler Specifications (Babcock & Wilcox Power Generation Group, Inc.) B&W Model FM 103-79 as contained in Proposal No.P55-5437 (Rev-2B) dated March 29, 2011

^a The hourly natural gas consumption rate reflects the boiler's capability to operate at 110% of the Maximum Capacity Rating (MCR).

EMISSION CALCULATION

	Potential Hourly Emissions (lb/hr)	Potential Daily Emissions ^b (lb/day)	Annual Emissions	
			(lb/yr)	(tpy)
NO _x , with FGR	4.98	119.59	43,651.08	21.83
CO	3.99	95.67	34,920.86	17.46
VOC	0.35	8.37	3,055.58	1.53
PM/PM ₁₀ /PM _{2.5} (Total) ^c	0.76	18.18	6,634.96	3.32
SO ₂	0.03	0.84	305.56	0.15
Hydrocarbons (Total Organic Compounds)	0.80	19.13	6,984.17	3.49
Lead	4.98E-05	1.20E-03	0.44	2.18E-04

^b Daily emissions are based maximum combustion rate and 24 hours per day.

^c As described in footnote c to AP-42, Section 1.4, Table 1.4-2, all PM is assumed to be less than 1 micron in aerodynamic diameter.

Table 2.C-B604 HAP Emission Calcs

Table N-2. B604 HAP Emissions Calculations

HAPs	CAS No.	Natural Gas Emission Factor ^a (lb/MMscf)	HAP Emissions lb/hr	HAP Emissions (tons/yr)	
2-Methylnaphthalene	91-57-6	2.4E-05	2.4E-06	1.05E-05	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
3-Methylchloranthrene	56-49-5	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
7,12-Dimethylbenz(a)anthracene	57-97-6	1.6E-05	1.6E-06	6.98E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Acenaphthene	83-32-9	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Acenaphthylene	203-96-8	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Anthracene	120-12-7	2.4E-06	2.4E-07	1.05E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benz(a)anthracene	56-55-3	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benzene	71-43-2	2.1E-03	2.1E-04	9.17E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benzo(a)pyrene	50-32-8	1.2E-06	1.2E-07	5.24E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benzo(b)fluoranthene	205-99-2	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benzo(g,h,i)perylene	191-24-2	1.2E-06	1.2E-07	5.24E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Benzo(k)fluoranthene	205-82-3	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Chrysene	218-01-9	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Dibenzo(a,h)anthracene	53-70-3	1.2E-06	1.2E-07	5.24E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Dichlorobenzene	25321-22-6	1.2E-03	1.2E-04	5.24E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Fluoranthene	206-44-0	3.0E-06	3.0E-07	1.31E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Fluorene	86-73-7	2.8E-06	2.8E-07	1.22E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Formaldehyde (HCOH)	50-00-0	7.5E-02	7.5E-03	3.27E-02	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Hexane	110-54-3	1.8E+00	1.8E-01	7.86E-01	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Indeno(1,2,3-cd)pyrene	193-39-5	1.8E-06	1.8E-07	7.86E-07	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Naphthalene	91-20-3	6.1E-04	6.1E-05	2.66E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Phenanthrene	85-01-8	1.7E-05	1.7E-06	7.42E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Pyrene	129-00-0	5.0E-06	5.0E-07	2.18E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Toluene	108-88-3	3.4E-03	3.4E-04	1.48E-03	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Arsenic	7440-38-2	2.0E-04	2.0E-05	8.73E-05	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Beryllium	7440-41-7	1.2E-05	1.2E-06	5.24E-06	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Cadmium	7440-43-9	1.1E-03	1.1E-04	4.80E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Chromium	7440-47-3	1.4E-03	1.4E-04	6.11E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Cobalt	7440-48-4	8.4E-05	8.4E-06	3.67E-05	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Lead	7439-92-1	5.0E-04	5.0E-05	2.18E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Manganese	7439-96-5	3.8E-04	3.8E-05	1.66E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Mercury	7439-97-6	2.6E-04	2.6E-05	1.13E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Nickel	7440-02-0	2.1E-03	2.1E-04	9.17E-04	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Selenium	7782-49-2	2.4E-05	2.4E-06	1.05E-05	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
Polycyclic Organic Matter (POM)		8.8E-05	8.8E-06	3.85E-05	=Annual NG Consumption [MMscf/yr] × EF [lb/MMscf] ÷ 2000 [lb/ton]
		Total HAPs	1.88E-01	8.24E-01	

^a Emission factors from AP-42, Tables 1.4-2, 1.4-3, and 1.4-4 (7/98).

Table 3-Generator Emissions

H9202A Generator Emissions - Diesel

Number of Generators:	1	
Hours/Day Operated:	3	
Annual Hours of Operation:	500	hr/yr
Generator Capacity (Output):	330	hp
Fuel:	Diesel	

Daily hours of operation assumes that the generator would operate for no more than 3 hours during a fire emergency. The limited hours of operation for this emergency generator will be enforceable under a general permit registration. Horsepower rating reported on unit nameplate for Caterpillar engine H-9202 A/B

Pollutant	Diesel Emission Factor (lb/hp-hr)	Combined Potential Emissions (lb/hr)	Potential Emissions (tpy)	Potential Emissions (lb/day)	Emission Factor Source
NO _x	0.031	10.23	2.56	30.69	AP-42, Table 3.3-1 (10/96)
CO	6.68E-03	2.20	0.55	6.61	AP-42, Table 3.3-1 (10/96)
PM ₁₀ /PM _{2.5} ^a	2.20E-03	0.73	0.18	2.18	AP-42, Table 3.3-1 (10/96)
SO _x	2.05E-03	0.68	0.17	2.03	AP-42, Table 3.3-1 (10/96)
TOC	2.51E-03	0.83	0.21	2.49	AP-42, Table 3.3-1 (10/96)
HAPs ^{b,c}	2.71E-05	8.95E-03	2.24E-03	2.68E-02	AP-42, Table 3.3-2 (10/96)
Formaldehyde ^b	8.26E-06	2.73E-03	6.81E-04	8.18E-03	AP-42, Table 3.3-2 (10/96)

Note:

AP-42 Section 3.3 is applicable for diesel IC engines.

^a As provided in the footnote to AP-42 Table 3.3-1, all PM is assumed to be less than 1 µm in size.

^b The HAP emission factors are converted from lb/MMBtu using a default brake specific fuel consumption of 7,000 Btu/hp-hr provided in the footnote to AP-42 Table 3.3-1.

^c Total HAP emissions are calculated as the sum of all speciated HAP emission factors provided in AP-42 Table 3.3-2.

H9202B Generator Emissions - Diesel

Number of Generators:	1	
Hours/Day Operated:	3	
Annual Hours of Operation:	500	hr/yr
Generator Capacity (Output):	330	hp
Fuel:	Diesel	

Daily hours of operation assumes that the generator would operate for no more than 3 hours during a fire emergency. The limited hours of operation for this emergency generator will be enforceable under a general permit registration. Horsepower rating reported on unit nameplate for Caterpillar engine H-9202 A/B

Pollutant	Diesel Emission Factor (lb/hp-hr)	Combined Potential Emissions (lb/hr)	Potential Emissions (tpy)	Potential Emissions (lb/day)	Emission Factor Source
NO _x	0.031	10.23	2.56	30.69	AP-42, Table 3.3-1 (10/96)
CO	6.68E-03	2.20	0.55	6.61	AP-42, Table 3.3-1 (10/96)
PM ₁₀ /PM _{2.5} ^a	2.20E-03	0.73	0.18	2.18	AP-42, Table 3.3-1 (10/96)
SO _x	2.05E-03	0.68	0.17	2.03	AP-42, Table 3.3-1 (10/96)
TOC	2.51E-03	0.83	0.21	2.49	AP-42, Table 3.3-1 (10/96)
HAPs ^{b,c}	2.71E-05	8.95E-03	2.24E-03	2.68E-02	AP-42, Table 3.3-2 (10/96)
Formaldehyde ^b	8.26E-06	2.73E-03	6.81E-04	8.18E-03	AP-42, Table 3.3-2 (10/96)

Note:

AP-42 Section 3.3 is applicable for diesel IC engines.

^a As provided in the footnote to AP-42 Table 3.3-1, all PM is assumed to be less than 1 µm in size.

^b The HAP emission factors are converted from lb/MMBtu using a default brake specific fuel consumption of 7,000 Btu/hp-hr provided in the footnote to AP-42 Table 3.3-1.

^c Total HAP emissions are calculated as the sum of all speciated HAP emission factors provided in AP-42 Table 3.3-2.

H516 Generator Emissions - Diesel

Number of Generators:	1	
Hours/Day Operated:	3	
Annual Hours of Operation:	500	hr/yr
Generator Capacity (Output):	507	hp
Fuel:	Diesel	

Daily hours of operation assumes that the generator would operate for no more than 3 hours during a fire emergency. The limited hours of operation for this emergency generator will be enforceable under a general permit registration. Horsepower rating provided for Caterpillar engine in October 21, 2009, email summarizing generator inventories

Pollutant	Diesel Emission Factor (lb/hp-hr)	Combined Potential Emissions (lb/hr)	Potential Emissions (tpy)	Potential Emissions (lb/day)	Emission Factor Source
NO _x	0.031	15.72	3.93	47.15	AP-42, Table 3.3-1 (10/96)
CO	6.68E-03	3.39	0.85	10.16	AP-42, Table 3.3-1 (10/96)
PM ₁₀ /PM _{2.5} ^a	2.20E-03	1.12	0.28	3.35	AP-42, Table 3.3-1 (10/96)
SO _x	2.05E-03	1.04	0.26	3.12	AP-42, Table 3.3-1 (10/96)
TOC	2.51E-03	1.27	0.32	3.82	AP-42, Table 3.3-1 (10/96)
HAPs ^{b,c}	2.71E-05	1.37E-02	3.44E-03	4.12E-02	AP-42, Table 3.3-2 (10/96)
Formaldehyde ^b	8.26E-06	4.10E-03	1.05E-03	1.26E-02	AP-42, Table 3.3-2 (10/96)

Note:

AP-42 Section 3.3 is applicable for diesel IC engines.

^a As provided in the footnote to AP-42 Table 3.3-1, all PM is assumed to be less than 1 µm in size.

^b The HAP emission factors are converted from lb/MMBtu using a default brake specific fuel consumption of 7,000 Btu/hp-hr provided in the footnote to AP-42 Table 3.3-1.

^c Total HAP emissions are calculated as the sum of all speciated HAP emission factors provided in AP-42 Table 3.3-2.

Table 4-Flare Emissions

Emission Factors from AP-42 "Industrial Flares 13.5"		
VOC	0.66	lb/mmBTU
CO	0.31	lb/mmBTU
NO _x	0.068	lb/mmBTU
CO ₂	117.65	lb/mmBTU
N ₂ O	0.0022	lb/mmBTU
CH ₄	0.077	lb/mmBTU
PM as Soot	274	µg/L
Heating Value of Propylene	0.021032	mmBTU/lb

AP-42 "Industrial Flares 13.5" Table 13.5-
AP-42 "Industrial Flares 13.5" Table 13.5-

PM EF Conversion		
1 lb/ft ³ =	16018463.37	µg/L
Feed Gas Heat Value	450	BTU/ft ³
PM as Soot	0.038011692	lb/mmBTU

= 1 lb/ft³ x 453592370 µg/lb ÷ 28.316846
AP-42 "Industrial Flares 13.5" pg. 13.5-4 (= Soot Concentration [µg/L] ÷ Unit Conve

Flare Fuel Burning	OSBL Flare ^a	ISBL Flare	Units
Fuel Load	2,500,000	2,500,000	lb/yr
Annual Hours of Operation	NA	NA	hr/yr
VOC	17.351	17.351	ton/yr
CO	8.150	8.150	ton/yr
NO ₂	1.788	1.788	ton/yr
CO ₂	3092.941	3092.941	ton/yr
N ₂ O	0.057	0.057	ton/yr
CH ₄	2.024	2.024	ton/yr
PM as Soot	0.999	0.999	ton/yr

^a This is a subset of the OSBL Flare emissions not including D1105 A/B, Analyzer Speed Loops, and Analyzer Ba

Emission Factors from AP-42 "Natural Gas Combustion 1.4"		
VOC	5.5	lb/mmscf
CO	40	lb/mmscf
NO _x	94	lb/mmscf
PM	7.6	lb/mmscf
PM ₁₀	7.6	lb/mmscf
SO ₂	0.6	lb/mmscf
Lead	0.0005	lb/mmscf
NH ₃	3.2	lb/mmscf
CH ₄	2.3	lb/mmscf
N ₂ O	2.2	lb/mmscf
CO ₂	120000	lb/mmscf
Hexane	1.8	lb/mmscf

Flare Pilot	OSBL	ISBL	Units
Natural Gas	2,623	2,623	mscf / yr
VOC	0.007	0.007	ton/yr
CO	0.052	0.052	ton/yr
NO _x	0.123	0.123	ton/yr
PM	0.010	0.010	ton/yr
PM ₁₀	0.010	0.010	ton/yr
SO ₂	0.001	0.001	ton/yr
Lead	0.000	0.000	ton/yr
NH ₃	0.004	0.004	ton/yr
CH ₄	0.003	0.003	ton/yr
N ₂ O	0.003	0.003	ton/yr
CO ₂	157.35	157.35	ton/yr
Hexane	0.002	0.002	ton/yr

Total Flare Emissions	OSBL (ton/yr)	ISBL (ton/yr)
VOC	17.359	17.359
CO	8.202	8.202
NO _x	1.911	1.911
PM	1.009	1.009
PM ₁₀	1.009	1.009
SO ₂	0.001	0.001
Lead	6.56E-07	6.56E-07
NH ₃	0.004	0.004
Hexane	0.002	0.002

Table 5-LDAR Emissions

Components		Total # of Components ^a	Average SOCOMI Emission Factor (kg/hr/component)	Average SOCOMI Emission Factor (lb/hr/component)	Total VOC Emission Rate (lb/hr)	Total VOC Emission Rate (tpy)	Efficiency of LDAR Program ^b	Total VOC with LDAR program (tpy)
Pumps	Light Liquid	0	0.0199	0.0439	0.000	0.00	0.00	0.00
	True HL	25	0.0086	0.0190	0.475	2.08	0.00	2.08
	Heavy Liquid ^c	24	0.0199	0.0439	1.053	4.61	0.00	4.61
Valves	Gas	932	0.0060	0.0132	12.267	53.73	0.87	6.98
	Light Liquid	2,039	0.0040	0.0089	18.116	79.35	0.84	12.70
	Heavy Liquid	66	0.0002	0.0005	0.033	0.15	0.00	0.15
Pressure Relief Valves		5	0.1040	0.2293	1.146	5.02	0.00	5.02
Compressors ^d		3	0.2280	0.5027	1.508	6.60	0.93	0.46
Connectors	Gas	2,547	0.0018	0.0040	10.276	45.01	0.00	45.01
	Light Liquid	3,918	0.0018	0.0040	15.807	69.23	0.00	69.23
	Heavy Liquid	264	0.0018	0.0040	1.065	4.67	0.00	4.67
Total					61.746	270.448		150.911

^a The inventory of fugitive components was provided in a 3/26/10 email from BKM.

^b Unless otherwise specified, control efficiencies are provided for units subject to monthly monitoring and a leak definition of 10,000 ppmv under 40 CFR 60, Subpart VV.

^c These heavy liquid pumps are light liquid pumps with dual mechanical seals. The inner seal vents to the ISBL Flare through a degassing pot. The outer seal, which is a heavy liquid seal, vents to the atmosphere. Braskem has conservatively utilized emission factors for light liquid service to estimate emissions from these heavy liquid seals.

^d Emissions from compressors are estimated using the average SOCOMI factor for compressor seals and the 93% control efficiency provided in the USEPA protocol for equipment leaks for units complying with the similar barrier fluid seal requirements established in the HON.

Table 6-Cooling Tower

Using Drift Factor based upon AP-42, Table 13.4-1 (Emission Factor Rating "D")

Cooling Tower	Circulation Rate (gpm)	lb PM ₁₀ /mgal at 12,000 ppm TDS	Maximum Conductivity (uMhos/cm)	Typical TDS (ppm)	Max Annual Hours	PM-10 Emissions (lb/hr)	PM-10 Emissions (tpy)
Neal Plant Cooling Tower ^a	19,300	0.019	3,815	2,671	8760	4.90	21.4

Cooling Tower	Circulation Rate (gpm)	Operating Hours	VOC Emission Factor ^b (lb/MMgal)	VOC Emissions (lb/hr)	VOC Emissions (tpy)
Neal Plant Cooling Tower ^a	19,300	8,760	0.7	0.81	3.6

^a Cooling tower data provided by Bob Leighty (Neal utilities) In a conversation with Shawn Hickman on 5/24/06 with the exception of the maximum conductivity which is obtained from the 2008 daily WTP logs.

^b AP-42, Section 5.1.3 (1/95), Table 5.1-2 controlled VOC emissions. Per agreement with Bernie Marshall, utilize controlled emission factor. Additionally, Bernie Marshall will be recommending that the facility conduct sampling to determine site-specific emission factor.

Table 7-Parts Washers

Material	Total Surface Area of Degreasers (ft ²)	Operating Hours (hr/yr)	Emission Factor ^a (lb/hr/ft ²)	Hourly VOC Emissions (lb/hr)	Annual VOC Emissions (tpy)
Crystal Clean 142+ Mineral Spirits	11	8,760	0.08	0.84	3.68

^a AP-42 Table 4.6-2 for cold cleaners. Represents emissions of nonmethane VOCs.

Table 8.A-FNS PM

Emission ID	Emission Point	Source Description	Control Device	Pollutants Emitted	Process Weight Rate (lb/hr)	Potential to Emit		Maximum Operating hours	PTE Note
						(lb/hr)	(tpy)		
D-9002 D-9003	24E	D-9002 Pellet Silo D-9003 Pellet Silo	G-9001 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1
D-9001 D-9004	26E	D-9001 Pellet Silo D-9004 Pellet Silo	G-9002 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1
D-9006 D-9011	38E	D-9006 Pellet Silo D-9011 Pellet Silo	G-9004 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1
L-9501	42E	Flotriator	G-9501 Bag Filter	Total Particulate	60,000	0.02	0.09	8760	1
D-9007 D-9010	49E	D-9007 Pellet Silo D-9010 Pellet Silo	G-9005 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1
D-9008 D-9009	50E	D-9008 Pellet Silo D-9009 Pellet Silo	G-9006 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1
L-9503	51E	Pelletron	G-9503 - Bag Filter	Total Particulate	60,000	3.14	13.75	8760	2
L-8903 L-8904 L-8905 L-8906 L-8907 L-8908	76E 77E 78E 79E 80E 81E	L-8903 Feeder #2 L-8904 Feeder #3 L-8905 Feeder #5 L-8906 Feeder #6 L-8907 Feeder #7 L-8908 Feeder #4	Filter #2 Filter #3 Filter #5 Filter #6 Filter #7 Filter #4	Total Particulate	75,000	0.001	0.01	8760	3
L-8829	74E	L-8829 Blender/Conveyor	G-8830 - Bag Filter	Total Particulate	75,000	0.01	0.04	8760	3
L-8856	56E	WPB Pellet Dryer	NA	Total Particulate	1,326,000	5.00	21.90	8760	2
Additives Prep	58E	Matcon-Buls Loading Booth (2nd Floor) Matcon-Buls Unloading Booth (3rd Floor) Drum Weigh Station (3rd Floor) L-739 Additive Mixer/Blender (3rd Floor)	G-738 - South Dust Collector	Total Particulate	1,500	0.18	0.79	8760	2
G-0904	59E	Returned Rail Car Unloading Cyclone	G-0911 - Bag Filter G-0908 - Cartridge Filter	Total Particulate	5,479	0.55	2.40	8760	2
D-670 (SB-1)	60E	SB-1 Super Blender	NA	Total Particulate	5,479	0.55	2.40	8760	2
D-672 (SB-2)	61E	SB-2 Super Blender	NA	Total Particulate	5,479	0.55	2.40	8760	2
SB-3	62E	Truck Loading Pellet Silo	NA	Total Particulate	33,000	2.38	10.42	8760	2
L-816B	68E	WP2 Extruder	NA	Total Particulate	1,000	0.12	0.53	8,760	2
WP2 Pellet Loading Hopper	69E	WP2 Pellet Loading Hopper	NA	Total Particulate	1,000	0.12	0.53	8,760	2
Portable Blower Unit #2	71E	Portable Blower Unit #2	Unnamed Cyclone #2	Total Particulate	8,000	0.80	3.50	8760	2
D-9005 D-9012	72E	D-9005 Pellet Silo D-9012 Pellet Silo	G-9003 - Bag Filter	Total Particulate	75,000	0.02	0.09	8760	1

PTE Determination Notes

1. Based on R13-1830K emission limit rounded up to nearest one hundredth spot. PTE is consistent with the emission limits specified in the current R13 permit (R13-1830K) and Title V permit.
2. Based on 10% of the allowed PWR emission limit defined in 45 CSR 7. PTE is consistent with the emission limits specified in the current R13 permit (R13-1830F) and Title V permit.
3. Based on PTE calculations submitted as part of the application for the Sock Filter project submitted in February 2014.

Table 8.B-FNS VOC

Neal FNS VOC Emissions

Polypropylene Finishing and Storage - Pellet Classifiers, Storage Silos, and Product Loading^a

Potential Hourly Production (lb/hr)	Potential Annual Production (lb/yr)	Polypropylene Pellet Emission Factor^b (lb VOC/MM lb pellets)	Potential Hourly VOC Emissions (lb/hr)	Potential Annual VOC Emissions (tpy)
75,000	650,000,000	9.67	0.73	3.14

^a. VOC emissions have been equally distributed in between VOC Emissions from Product Finishing and VOC Emissions from Product Storage and Loading. The VOC emissions from the Pellet Classifiers have been included in the VOC Emissions from Product Finishing and VOC Emissions from Product Storage and Loading.

^b. VOC emission factor based on April 1997 Beverage Can test at the Neal Plant

Table 9-Neal IA Tanks

Neal IA Tanks

Emission Unit	Emission Point	Emission Unit Description ^a	Tank Size (gal)	Potential Emissions (lb/hr)	Potential Emissions (tons/yr)
F-698	IEU/ De Minimis	Used Oil Tank	16,500	0.004	0.018
D103	IEU/ De Minimis	Hydraulic Oil Guard	106	0.00003	0.0001
D105	IEU/ De Minimis	Oil/Grease Mixing Tank	580	0.00015	0.0006
D106A	IEU/ De Minimis	Catalyst Tank	264	0.00007	0.0003
D106B	IEU/ De Minimis	Catalyst Tank	264	0.00007	0.0003
D107	IEU/ De Minimis	Hydraulic Oil Surge Drum	238	0.00006	0.0003
D110A	IEU/ De Minimis	Donor Storage Tank	238	0.00006	0.0003
D110B	IEU/ De Minimis	Donor Storage Tank	238	0.00006	0.0003
D-115	IEU/ De Minimis	Grindsted Tank	300	0.00002	0.0001
D-304	IEU/ De Minimis	Atmer Tank	350	0.00001	0.0000
F-8809A	IEU/ De Minimis	Peroxide Tank	30	0.00001	0.0000
F-8809B	IEU/ De Minimis	Peroxide Tank	30	0.00001	0.0000
		F-8809A/B Peroxide Tank Loading	3.3 gal/hr	0.00001	0.0000
F291	IEU/ De Minimis	Diesel Tank	1000	0.00006	0.0003
H-9209-A	IEU/ De Minimis	Diesel Tank	370	0.00002	0.0001
H-9209-B	IEU/ De Minimis	Diesel Tank	370	0.00002	0.0001
F1000	IEU/ De Minimis	Diesel Tank	1000	0.00005	0.0002
F290	IEU/ De Minimis	Diesel Tank	528	0.00003	0.0001
F704	IEU/ De Minimis	Diesel Tank	1000	0.00007	0.0003
F707		Gasoline Tank	1000	0.02040	0.0894
Total for Organic Tanks				0.025	0.111

^a VOC emissions calculated using Tanks 4.0 for Used Oil Tank, emissions for all other sources are scaled from the Used Oil Tank emissions based on tank size.

Table 10.A-Road Segments

Braskem Neal Road Segments

Segment ^a	Length ^a (ft)	Paved ^a	Number of Vehicles per Rd Segment per Day ^b				Average Wt. (lb/rd segment)	Number of Times Per Day Vehicles Travel Rd Segment ^b				VMT/day	VMT/yr
			Heavy Machinery	Work Trucks	Passenger Cars	Delivery Trucks		Heavy Machinery	Work Trucks	Passenger Cars	Delivery Trucks		
24	401	Yes	0.142857143	6	15		2.01	1	2	4		5.48	1999.85
25	567	Yes	0.142857143	6	15		2.01	1	2	4		7.75	2827.71
26	625	Yes	0.142857143	6	15		2.01	1	2	4		8.54	3116.97
27	625	Yes	0.142857143	6	15		2.01	1	2	4		8.54	3116.97
28	625	Yes	0.142857143	6	15		2.01	1	2	4		8.54	3116.97
29	591	Yes	0.142857143	6	15		2.01	1	2	4		8.08	2947.40
30	422	Yes	0.142857143	6	15	4	2.16	1	2	4	2	6.41	2337.96
31	709	Yes	0.142857143	6	30	4	2.10	1	2	4	2	18.82	6868.73
24A	149	Yes	0.142857143	6	15		2.01	1	2	4		2.04	743.09
24B	432	Yes	0.142857143	6	15		2.01	1	2	4		5.90	2154.45
25A	294	Yes	0.142857143	6	15		2.01	1	2	4		4.02	1466.22
25B	294	Yes	0.142857143	6	15		2.01	1	2	4		4.02	1466.22
26A	423	Yes	0.142857143	6	15		2.01	1	2	4		5.78	2109.56
26B	317	Yes	0.142857143	6	15		2.01	1	2	4		4.33	1580.93
26C	423	Yes	0.142857143	6	15		2.01	1	2	4		5.78	2109.56
26D	423	Yes	0.142857143	6	15		2.01	1	2	4		5.78	2109.56
27A	359	Yes	0.142857143	6	15		2.01	1	2	4		4.91	1790.39
27B	359	Yes	0.142857143	6	15		2.01	1	2	4		4.91	1790.39
27C	359	Yes	0.142857143	6	15		2.01	1	2	4		4.91	1790.39
29A	204	Yes	0.142857143	6	15		2.01	1	2	4		2.79	1017.38
31A	128	Yes	0.142857143	6	15		2.01	1	2	4		1.75	638.35
31B	65	Yes	0.142857143	6	15		2.01	1	2	4		0.89	324.16
31C	208	Yes	0.142857143	6	15		2.01	1	2	4		2.84	1037.33
Ave A	1585	Yes	0.142857143	6	15		2.01	1	2	4		21.66	7904.63
Ave B	1920	Yes	0.142857143	6	30	4	2.10	1	2	4	2	50.96	18600.78
Ave C	2858	Yes	0.142857143	6	15		2.01	1	2	4		39.05	14253.27
Gate Rd	68	Yes	0.142857143	6	15		2.01	1	2	4		0.93	339.13
N. Field Svc Rd	1563	No	0.142857143	6	5		2.01	1	2	4		9.52	3472.98
River House Svc. Rd	319	No	0.142857143	6	5		2.01	1	2	4		1.94	708.82
S. Field Svc Rd	2658	No	0.142857143	6	5		2.01	1	2	4		16.18	5906.07
S. Rail Svc Rd	1162	No	0.142857143	6	5		2.01	1	2	4		7.07	2581.96

	Heavy Machinery	Work Trucks	Passenger Cars	Delivery Trucks
Vehicle Wt (lb) ³	6000	4000	4000	6000

Footnotes:

^a The Segment Names, Length, & Paved/Unpaved designations were determined from the R-6202.dwg file provided by Braskem.

^b Vehicle per day data is based on information provided by Jim Fain and Melissa Essman and engineering estimates.

^c Vehicle weights of work trucks, passenger cars, and delivery trucks are based on typical vehicles. The heavy machinery vehicle weight is based on equivalent of the typical heavy machinery used at the facility, the Caterpillar skid steer loader weight. (5709 lb).

Table 10.B-Unpaved

Braskem Neal Unpaved Roads

The emissions from rolling stock per vehicle mile traveled (VMT) have been calculated using the equations provided in AP-42 for unpaved roads.

UNPAVED ROADS - source AP-42, Section 13.2.2, Revision Date 11/06.

$$E = k \left(\frac{s}{12} \right)^a \left(\frac{W}{3} \right)^b \left(\frac{365 - p}{365} \right)^P$$

	PM 2.5	PM 10	TSP
k	0.15	1.5	4.9
a	0.9	0.9	0.7
b	0.45	0.45	0.45
P	140	140	140

Nomenclature:
 E: Emission Factor
 k, a, and b: Particle Size Multiplier and exponents (dimensionless)
 s: Silt content of road surface material (%)
 W: Mean vehicle weight (tons)
 p: Mean # of days with at least 0.01 inches of

The potential annual emission rates are calculated assuming the facility operates 365 days. The value P is from AP-42, Figure 13.2.1-2 (Revision Date: 12/06).

Segment ID.	s	s Source	W	W Source	TSP Emission Factor (lbs/VMT)	TSP EF Source	PM ₁₀ Emission Factor (lbs/VMT)	PM10 EF Source	PM _{2.5} Emission Factor (lbs/VMT)	PM2.5 EF Source	VMT/yr	TSP Emissions (lbs/yr)	PM ₁₀ Emissions (lbs/yr)	PM _{2.5} Emissions (lbs/yr)	TSP Emissions (tpy)	PM ₁₀ Emissions (tpy)	PM _{2.5} Emissions (tpy)
N. Field Svc Rd	4.9	AP-42 Table 13.2.2-1 Western Surface Coal Mining Plant Road	2.01	Road Segments Worksheet	1.35	AP-42 Sec 13.2.2.2	0.35	AP-42 Sec 13.2.2.2	0.03	AP-42 Sec 13.2.2.2	3,473	4682.81	1198.41	119.84	2.34	0.60	0.06
River House Svc. Rd	4.9	AP-42 Table 13.2.2-1 Western Surface Coal Mining Plant Road	2.01	Road Segments Worksheet	1.35	AP-42 Sec 13.2.2.2	0.35	AP-42 Sec 13.2.2.2	0.03	AP-42 Sec 13.2.2.2	709	955.74	244.59	24.46	0.48	0.12	0.01
S. Field Svc Rd	4.9	AP-42 Table 13.2.2-1 Western Surface Coal Mining Plant Road	2.01	Road Segments Worksheet	1.35	AP-42 Sec 13.2.2.2	0.35	AP-42 Sec 13.2.2.2	0.03	AP-42 Sec 13.2.2.2	5,906	7963.47	2037.98	203.80	3.98	1.02	0.10
S. Rail Svc Rd	4.9	AP-42 Table 13.2.2-1 Western Surface Coal Mining Plant Road	2.01	Road Segments Worksheet	1.35	AP-42 Sec 13.2.2.2	0.35	AP-42 Sec 13.2.2.2	0.03	AP-42 Sec 13.2.2.2	2,582	3481.40	890.95	89.09	1.74	0.45	0.04
Total:											12669.83	17083.41	4371.92	437.19	8.54	2.19	0.22

Table 10.C-Paved

Braskem Neal Paved Roads

Nomenclature:

The emissions from rolling stock per vehicle mile traveled (VMT) have been calculated using the equations provided in AP-42 for paved roads.

PAVED ROADS - source AP-42 Section 13.2.1.3 Equation (2), Revision Date 1/11.

$$E = \left[k(sL)^{0.91}(W)^{1.02} + C \right] \cdot \left(1 - \frac{P}{4N} \right) \quad (\text{lbs/VMT})$$

Equation 2 has been modified to add the C factors from the November 2006 edition into the empirical equation to account for emissions from tire wear, brake wear, and exhaust.

AP-42 section 13.2.1.3 (1/11) provides the range of silt loadings 0.03- 400 grams/sq. meter. The potential annual emission rates are calculated assuming the facility operates 365 days.

	PM 2.5	PM 10	TSP
k	0.00054	0.0022	0.011
∩	0.00036	0.00047	0.00047
P	140	140	140
N	365	365	365

Segment ID	Paved/Un	sL	sL Source*	W	W Source	TSP Emission Factor (lbs/VMT)	TSP EF Source	PM10 Emission Factor (lbs/VMT)	PM10 EF Source	PM2.5 Emission Factor (lbs/VMT)	PM2.5 EF Source	VMT/yr	TSP Emissions (lbs/yr)	PM10 Emissions (lbs/yr)	PM2.5 Emissions (lbs/yr)	TSP Emissions (tpy)	PM10 Emissions (tpy)	PM2.5 Emissions (tpy)
24	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,000	250.97	50.87	12.93	0.13	0.03	0.01
25	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,828	354.87	71.93	18.28	0.18	0.04	0.01
26	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	3,117	391.17	79.29	20.15	0.20	0.04	0.01
27	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	3,117	391.17	79.29	20.15	0.20	0.04	0.01
28	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	3,117	391.17	79.29	20.15	0.20	0.04	0.01
29	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,947	369.89	74.98	19.06	0.18	0.04	0.01
30	P	7.4	AP-42 Table 13.2.1-4	2.165	Road Segments Worksheet	0.14	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.96E-03	AP-42 13.2.1.3	2,338	316.91	64.18	16.27	0.16	0.03	0.01
31	P	7.4	AP-42 Table 13.2.1-4	2.103	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.77E-03	AP-42 13.2.1.3	6,869	904.14	183.16	46.48	0.45	0.09	0.02
24A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	743	93.25	18.90	4.80	0.05	0.01	0.00
24B	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,154	270.38	54.81	13.93	0.14	0.03	0.01
25A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,466	184.01	37.30	9.48	0.09	0.02	0.00
25B	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,466	184.01	37.30	9.48	0.09	0.02	0.00
26A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,110	264.74	53.67	13.64	0.13	0.03	0.01
26B	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,581	198.40	40.22	10.22	0.10	0.02	0.01
26C	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,110	264.74	53.67	13.64	0.13	0.03	0.01
26D	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	2,110	264.74	53.67	13.64	0.13	0.03	0.01
27A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,790	224.69	45.55	11.58	0.11	0.02	0.01
27B	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,790	224.69	45.55	11.58	0.11	0.02	0.01
27C	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,790	224.69	45.55	11.58	0.11	0.02	0.01
29A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,017	127.68	25.88	6.58	0.06	0.01	0.00
31A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	638	80.11	16.24	4.13	0.04	0.01	0.00
31B	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	324	40.68	8.25	2.10	0.02	0.00	0.00
31C	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	1,037	130.18	26.39	6.71	0.07	0.01	0.00
Ave A	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	7,905	992.00	201.09	51.11	0.50	0.10	0.03
Ave B	P	7.4	AP-42 Table 13.2.1-4	2.103	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.77E-03	AP-42 13.2.1.3	18,601	2448.44	496.01	125.86	1.22	0.25	0.06
Ave C	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	14,253	1788.74	362.59	92.15	0.89	0.18	0.05
Gate Rd	P	7.4	AP-42 Table 13.2.1-4	2.007	Road Segments Worksheet	0.13	AP-42 13.2.1.3	0.03	AP-42 13.2.1.3	6.47E-03	AP-42 13.2.1.3	339	42.56	8.63	2.19	0.02	0.00	0.00
Total:												89558.33	11419.01	2314.25	587.85	5.71	1.16	0.29

* The lowest mean silt loading provided in Table 13.2.1-4 was used since none of the categories listed in the table describe the Neal Plant and it is not expected that the facility would have a high silt loading.

Table 11-DS503 Vent

PROCESS PARAMETERS

Maximum Flow Rate	92.80 SCFM
Maximum Concentration	4236.12 ppm

CONVERSION

Temperature Conversion	1.8 °R/K
Pressure Conversion	101.325 kPa/atm
Standard Temperature (T)	293.0 K
Standard Temperature (T)	527 °R
Standard Pressure (P)	101.3 kPa
Standard Pressure (P)	1.0 atm
Universal Gas Constant (R)	0.7302 (atm·cf)/(lbmol·°R)
Molar Volume @ STP	385.2 scf/lbmol
Molecular Weight of Nitrogen	28 lb/lbmole

NIST SP1038
NIST SP1038
Definition of "Standard Conditions" in 40 CFR 60.2
= Standard Temperature (293.0 K) x 1.8 (°R/K)
Definition of "Standard Conditions" in 40 CFR 60.2
= Standard Pressure (101.3 kPa) / 101.3 (kPa/atm)
Table 1-9, Values of the Gas-Law Constant - Perry's Chemical Engineer's Handbook - 7th Edition
Molar Volume (V/n) = R [0.7302 (atm·cf)/(lbmol·°R)] x T (527.4 °R) / P (1.0 atm); Ideal Gas Law at STP

EMISSION CALCULATION

Pollutants	Potential Hourly Emissions ^a (lb/hr)	Potential Daily Emissions ^b (lb/day)	Annual Emissions	
			(lb/yr) ^c	(tpy) ^d
VOC	1.71	41.15	15,019.58	7.51

^a Hourly Emission Rate (lb/hr) = Maximum Flow Rate (SCFM) x 60 (min/hr) / Molar Volume @ STP (ft³/lbmole) x Molecular Weight of Nitrogen (lb/lbmole) x [Maximum Concentration (ppm) / 10⁶]

^b Daily Emission Rate (lb/day) = Hourly Emission Rate (lb/hr) x 24 (hr/day)

^c Annual Emission Rate (lb/yr) = Hourly Emission Rate (lb/hr) x 8,760 (hr/yr)

^d Annual Emission Rate (tpy) = Annual Emission Rate (lb/yr) / 2,000 (lb/ton)

APPENDIX B. CONFIDENTIALITY CLAIMS

Confidential Business Information Claim

Company Name	Braskem America, Inc.
Company Address	200 Big Sandy Road, Kenova, WV 25530
Responsible Official	Laurence Kerrigan
Confidential Information Designee in State of WV	Name Laurence Kerrigan
	Title Facilities Manager
	Address 200 Big Sandy Road, Kenova, WV 25530
	Phone (304) 453-7077
	Fax (304) 453-5916
Person/Title <i>Submitting Confidential Information</i>	Same as above

Reason for Submittal of Confidential Information:
Title V operating permit renewal application

Identification of Confidential Information	Rationale for Confidential Claim	Confidential Treatment Time Period
Attachment B. Plot Plan, Attachment C. Process Flow Diagrams, and Process Description	<p>Release of the facility plot plan and the process flow diagrams would allow competitors to determine process technology and provide an unfair competitive advantage.</p> <p>Release of the specific information contained in the process description would allow competitors to determine process technology and production capacity and provide an unfair competitive advantage.</p> <p>Confidential information is distributed on a need-to-know basis. Braskem has implemented control measures to determine if diagrams/plot plans are not the originals. Additionally, distribution of confidential information to outside personnel needs to be approved by a supervisor. Upon distribution of the information, a transmittal letter accompanies it stating the following :</p>	Permanent

Identification of Confidential Information	Rationale for Confidential Claim	Confidential Treatment Time Period
	<p><i>The Documents accompanying this transmittal contain confidential information belonging to the sender, which may be legally privileged. The information is intended only for use of the individual or entity named above. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution or taking any action in reliance on the contents of this transmittal information is strictly prohibited.</i></p>	

Responsible Official Signature	<i>Louise J. Kerrigan</i>
Responsible Official Title	Facilities Manager
Date Signed	<i>2-21-22</i>

NOTE Must be signed and dated in **BLUE INK**.