Dominion Resource Services, Inc.
5000 Dominion Boulevard, Glen Allen, VA 23060
dom.com

Dominion®

March 31, 2015

BY: U.S. CERTIFIED MAIL, RETURN RECEIPT REQUESTED
7014 3490 0000 0448 3818

RECEIVED
APR 03 2015
WV DEP / DIV OF AIR QUALITY

William F. Durham
Director, Division of Air Quality
WVDEP
601 57th Street
Charleston, WV 25304

RE: **Dominion Transmission, Inc.**
Hastings Extraction Plant
Permit Determination Request

Dear Mr. Durham:

Dominion Transmission, Inc. (Dominion) is submitting this request for permit determination for the replacement of a boiler at our Hastings Extraction Plant, a natural gas extraction facility, located near Pine Grove, Wetzel County, West Virginia. The Cleaver Brooks 16.75 MMBtu/hr natural gas fired boiler (BL02) will be replaced with a Superior 25.2 MMBtu/hr natural gas fired boiler (BL03). The Cleaver Brooks boiler will be demolished and removed from site.

Based on potential emissions being below "stationary source" thresholds and the replacement boiler having "no substantive requirements of an emission control rule" as stated under West Virginia's R13 Regulations (§45-13-2), Dominion believes a permit is not necessary for the installation and operation of the replacement boiler (BL03).

If you require any additional information, please contact Rebekah Remick at 804-273-3536 or via email at Rebekah.J.Remick@dom.com.

Sincerely,

Amanda Tornabene

Amanda B. Tornabene
Director, Gas Environmental Services

RECEIVED
APR 0 3 2015
DIVISION OF AIR QUALITY

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475
www.dep.wv.gov/daq

PERMIT DETERMINATION FORM (PDF)

FOR AGENCY USE ONLY: PLANT I.D. # _____

PDF # _____ PERMIT WRITER: _____

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):
Dominion Transmissions, Inc.

2. NAME OF FACILITY (IF DIFFERENT FROM ABOVE):
Hastings Extraction Plant

3. NORTH AMERICAN INDUSTRY CLASSIFICATION SYSTEM (**NAICS**) CODE:
211112

4A. MAILING ADDRESS:
445 West Main Street, Clarksburg, WV 26301

4B. PHYSICAL ADDRESS:
Route 20, Pine Grove, WV 26419

5A. DIRECTIONS TO FACILITY (PLEASE PROVIDE **MAP** AS **ATTACHMENT A**):
From Clarksburg, take Route 20 North approximately 37 miles to Hastings. The Extraction Plant is on the left side of the road.

5B. NEAREST ROAD:
Route 20

5C. NEAREST CITY OR TOWN:
Pine Grove, WV

5D. COUNTY:
Wetzel

5E. UTM NORTHING (KM):
4377.66

5F. UTM EASTING (KM):
528.64

5G. UTM ZONE:
17

6A. INDIVIDUAL TO CONTACT IF MORE INFORMATION IS REQUIRED:
Rebekah (Becky) Remick

6B. TITLE:
Environmental Specialist III

6C. TELEPHONE:
804-273-3536

6D. FAX:
804-273-2964

6E. E-MAIL:
Rebekah.J.Remick@dom.com

7A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):
03-54-103-00009

7B. PLEASE LIST ALL CURRENT 45CSR13, 45CSR14, 45CSR19 AND/OR TITLE V (45CSR30) PERMIT NUMBERS ASSOCIATED WITH **THIS** PROCESS (FOR AN EXISTING FACILITY ONLY):
R13-2468D, R30-10300009-2011

7C. IS THIS PDF BEING SUBMITTED AS THE RESULT OF AN ENFORCEMENT ACTION? IF YES, PLEASE LIST: No

8A. TYPE OF EMISSION SOURCE (CHECK ONE):
☐ **NEW SOURCE** ☐ **ADMINISTRATIVE UPDATE**
☒ **MODIFICATION** ☐ **OTHER** (PLEASE EXPLAIN IN 11B)

8B. IF ADMINISTRATIVE UPDATE, DOES DAQ HAVE THE APPLICANT'S CONSENT TO UPDATE THE EXISTING PERMIT WITH THE INFORMATION CONTAINED HEREIN?
☐ **YES** ☐ **NO**

9. IS *DEMOLITION* OR PHYSICAL *RENOVATION* AT AN EXISTING FACILITY INVOLVED? ☒ **YES** ☐ **NO**

10A. DATE OF ANTICIPATED INSTALLATION OR CHANGE:
5/1/15

10B. DATE OF ANTICIPATED START-UP:
7/1/15

11A. PLEASE PROVIDE A **DETAILED PROCESS FLOW DIAGRAM** SHOWING EACH PROPOSED OR MODIFIED PROCESS EMISSION POINT AS **ATTACHMENT B**.

11B. PLEASE PROVIDE A **DETAILED PROCESS DESCRIPTION** AS **ATTACHMENT C**.

12. PLEASE PROVIDE **MATERIAL SAFETY DATA SHEETS (MSDS)** FOR ALL MATERIALS PROCESSED, USED OR PRODUCED AS **ATTACHMENT D**. FOR CHEMICAL PROCESSE, PLEASE PROVIDE A MSDS FOR EACH COMPOUND EMITTED TO AIR.

13A. **REGULATED AIR POLLUTANT EMISSIONS:**

⇒ **FOR A NEW FACILITY,** PLEASE PROVIDE PLANT WIDE EMISSIONS BASED ON THE POTENTIAL TO EMIT (PTE) FOR THE FOLLOWING AIR POLLUTANTS INCLUDING ALL PROCESSES.

⇒ **FOR AN EXISTING FACILITY,** PLEASE PROVIDE THE PROPOSED CHANGE IN EMISSIONS BASED ON THE PTE OF ALL PROCESS CHANGES FOR THE FOLLOWING AIR POLLUTANTS.

PTE FOR A GIVEN POLLUTANT IS TYPICALLY BEFORE AIR POLLUTION CONTROL DEVICES AND IS COLLECTED BASED ON THE MAXIMUM DESIGN CAPACITY OF PROCESS EQUIPMENT.

POLLUTANT	HOURLY PTE (LB/HR)	YEARLY PTE (TON/YR) (HOURLY PTE MULTIPLIED BY 8760 HR/YR) DIVIDED BY 2000 LB/TON
PM	0.12	0.53
PM_{10}	0.12	0.53
VOCs	0.63	2.76
CO	0.93	4.08
NO_x	0.73	3.20
SO_2	0.02	0.07
Pb	0.01	0.06
HAPs (AGGREGATE AMOUNT)	0.13	0.55
TAPs (INDIVIDUALLY)*		
OTHER (INDIVIDUALLY)*		

* ATTACH ADDITIONAL PAGES AS NEEDED

13B. PLEASE PROVIDE ALL **SUPPORTING CALCULATIONS** AS **ATTACHMENT E.**

CALCULATE AN HOURLY AND YEARLY PTE OF EACH PROCESS EMISSION POINT (SHOWN IN YOUR DETAILED PROCESS FLOW DIAGRAM) FOR ALL AIR POLLUTANTS LISTED ABOVE INCLUDING INDIVIDUAL HAP'S (LISTED IN SECTION 112[b] OF THE 1990 CAAA), TAP'S (LISTED IN 45CSR27), AND OTHER AIR POLLUTANTS (E.G. POLLUTANTS LISTED IN TABLE 45-13A OF 45CSR13, MINERAL ACIDS PER 45CSR7, ETC.).

14. **CERTIFICATION OF DATA**

I, BRIAN SHEPPARD (*TYPE NAME*) ATTEST THAT ALL THE REPRESENTATIONS CONTAINED IN THIS APPLICATION, OR APPENDED HERETO, ARE TRUE, ACCURATE, AND COMPLETE TO THE BEST OF MY KNOWLEDGE BASED ON INFORMATION AND BELIEF AFTER REASONABLE INQUIRY, AND THAT I AM A ***RESPONSIBLE OFFICIAL*** (*PRESIDENT, VICE PRESIDENT, SECRETARY OR TREASURER, GENERAL PARTNER OR SOLE PROPRIETOR*) OF THE APPLICANT.

SIGNATURE OF RESPONSIBLE OFFICIAL: Brian T. Sheppard

TITLE: VICE PRESIDENT, PIPELINE OPERATIONS DATE: 03 / 24 / 2015.

** THE DEFINITION OF THE PHRASE '***RESPONSIBLE OFFICIAL***' CAN BE FOUND AT 45CSR13, SECTION 2.23.

NOTE: PLEASE CHECK ENCLOSED ATTACHMENTS:

☒ **ATTACHMENT A** ☒ **ATTACHMENT B** ☒ **ATTACHMENT C** ☐ **ATTACHMENT D** ☒ **ATTACHMENT E**

RECORDS ON ALL CHANGES ARE REQUIRED TO BE KEPT AND MAINTAINED ON-SITE FOR TWO (2) YEARS.

THE PERMIT DETERMINATION FORM WITH THE INSTRUCTIONS CAN BE FOUND ON DAQ'S PERMITTING SECTION WEB SITE:

www.dep.wv.gov/daq

Attachment A

Facility Location

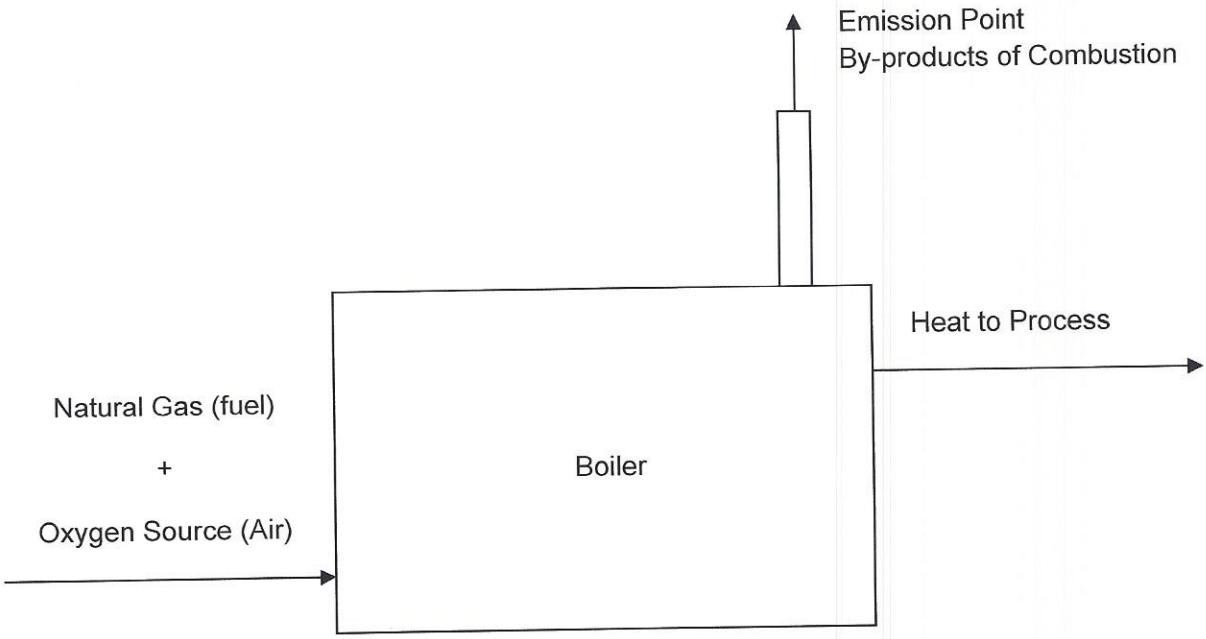
Mockingbird Hill Rd
Lower Run
Mockingbird Hill Rd
South Fork Fishing Creek
State Hwy 20
g Creek
Shortline Hwy
Piney Fork Rd
Piney Fork
Piney Fork
56
500 ft
200 m

Attachment B

Process Flow Diagram

Process Flow Diagram for the Boiler (BL03)

Hastings Extraction Plant



Attachment C

Process Description

Process Description

Hastings Extraction Plant is a natural gas extraction facility that services a natural gas pipeline system. The facility takes natural gas from Hastings Electric Compressor Station and extracts propane, isobutane, n-butane, and natural gasoline. Various equipment is involved in this process including a de-ethanizer, de-propanizer, de-butanizer, C4 splitter, and drip gasoline fractionators. The products are piped to storage tanks at the Galmish loadout area for transport via truck and rail. Products can also be sent to Ben's Run (natural gasoline barge loading) and to Charleroi and Hutchinson (propane). The air emission sources at the extraction plant include two (2) boilers (16.75 MMBtu/hr and 25.1 MMBtu/hr), one (1) heater (70 MMBtu/hr), three (3) emergency generators (50 kW, 40 kW, and 85 kW), one (1) 150 hp fire pump, and one (1) 1,000,000 gallon natural gasoline storage tank with a floating roof, along with fugitive emissions from the process.

The purpose of this permit determination is for the replacement of the natural gas fired Cleaver Brooks 16.75 MMBtu/hr boiler (BL02) with a natural gas fired Superior 25.2 MMBtu/hr boiler (BL03). The Cleaver Brooks boiler will be demolished and removed from site.

New Source Performance Standards (NSPS) Subpart Dc

The natural gas fired Superior 25.2 MMBtu/hr boiler is subject to this Subpart. The only requirement that the boiler needs to comply with is to keep records of monthly fuel usage. No stack testing is required.

National Emission Standards for Hazardous Air Pollutants (NESHAP):

Subpart DDDDD

The natural gas fired Superior 25.2 MMBtu/hr boiler is not subject to this Subpart as Hastings Extraction Plant is not a major source of HAPs.

**Dominion submitted an application for Hastings Compressor Station on 3/23/15 to make the control device federally enforceable; therefore clarifying that the Hastings Compressor Station is an area source of HAPs. This permit will be issued prior to the NESHAP Subpart HH applicability date of October 15, 2015.

Subpart JJJJJJ

The natural gas fired Superior 25.2 MMBtu boiler is not subject to this Subpart as gas-fired boilers are not subject to this Subpart and to any requirements in this Subpart (§63.11195).

West Virginia Minor Source Regulations (R13)

The addition of the Superior 25.5 MMBtu/hr boiler does not trigger permitting as potential to emit calculations are below exemption thresholds of:

- 6 lbs/hr and 10 tons/yr, or
- 144 lbs/day, or
- 2 lbs/hr or 5 tons/yr of HAPs

In addition, the boiler is not "subject to any substantive requirement of an emission control rule" (i.e. no stack testing is required) as stated above. Therefore, the boiler is not deemed to be a "stationary source" and does not require permitting.

Attachment E

Supporting Calculations

Company Name: Dominion Transmission, Inc.
Facility/Division: Hastings Extraction Plant
Prepared By: Becky Remick

Replacement Boiler (BL03)

Btu Rating =	25.2	MMBtu/hr
Fuel Rating =	0.03	MMcf/hr
Process Throughput =	220.8	MMcf/yr
Heat Content =	1,000	Btu/cf
Hours of Operation =	8,760	hrs/yr

Emission Calculations

Pollutant	Emission Factor			Emissions (8760 hrs/yr) (lb/hr)	(lb/day)	(tons/yr)
Criteria Pollutants						
PM	0.0048	lb/MMBtu	(1)	0.12	2.90	0.53
PM-10	0.0048	lb/MMBtu	(1)	0.12	2.90	0.53
PM-2.5	0.0048	lb/MMBtu	(1)	0.12	2.90	0.53
SO2	0.6	lb/MMcf	(2)	0.02	0.36	0.07
CO	0.037	lb/MMBtu	(1)	0.93	22.38	4.08
NO_X	0.029	lb/MMBtu	(1)	0.73	17.54	3.20
VOC	0.025	lb/MMBtu	(1)	0.63	15.12	2.76
Lead	0.0005	lb/MMBtu	(1)	0.01	0.30	0.06
Greenhouse Gases						
CO_2	117.0	lb/MMBtu	(5)	2,947.83	70,747.91	12,911.49
CH_4	2.20E-03	lb/MMBtu	(5)	0.06	1.33	0.24
N_2O	2.20E-04	lb/MMBtu	(5)	0.01	0.13	0.02
CO_2e	117.1	lb/MMBtu	(5, 6)	2,950.87	70,820.98	12,924.83
Hazardous Air Pollutants						
Arsenic	2.00E-04	lb/MMcf	(4)	5.04E-06	1.21E-04	2.21E-05
Benzene	2.10E-03	lb/MMcf	(3)	5.29E-05	1.27E-03	2.32E-04
Beryllium	1.20E-05	lb/MMcf	(4)	3.02E-07	7.26E-06	1.32E-06
Cadmium	1.10E-03	lb/MMcf	(4)	2.77E-05	6.65E-04	1.21E-04
Chromium	1.40E-03	lb/MMcf	(4)	3.53E-05	8.47E-04	1.55E-04
Cobalt	8.40E-05	lb/MMcf	(4)	2.12E-06	5.08E-05	9.27E-06
Ethane	3.10E+00	lb/MMcf	(3)	7.81E-02	1.87E+00	3.42E-01
Formaldehyde	7.50E-02	lb/MMcf	(3)	1.89E-03	4.54E-02	8.28E-03
Hexane	1.80E+00	lb/MMcf	(3)	4.54E-02	1.09E+00	1.99E-01
Manganese	3.80E-04	lb/MMcf	(4)	9.58E-06	2.30E-04	4.19E-05
Mercury	2.60E-04	lb/MMcf	(4)	6.55E-06	1.57E-04	2.87E-05
Naphthalene	6.10E-04	lb/MMcf	(3)	1.54E-05	3.69E-04	6.73E-05
Nickel	2.10E-03	lb/MMcf	(4)	5.29E-05	1.27E-03	2.32E-04
Selenium	2.40E-05	lb/MMcf	(4)	6.05E-07	1.45E-05	2.65E-06
Toluene	3.40E-03	lb/MMcf	(3)	8.57E-05	2.06E-03	3.75E-04
TOTAL HAP:				0.13		0.55

(1) Emission factors from manufacture specification sheets
(2) Emission factors from AP-42 Section 1.4, Table 1.4-2 (7/98)
(3) Emission factors from AP-42 Section 1.4, Table 1.4-3 (7/98)
(4) Emission factors from AP-42 Section 1.4, Table 1.4-4 (7/98)
(5) Lb/MMBtu numbers based on 40 CFR Part 98 Tables C-1 and C-2 for natural gas

For example: CO_2 = (53.06 kg CO_2/MMBtu) / (0.453592 kg/lb) = 117.0 lb/MMBtu

(6) Global Warming Potentials = 25 for CH_4 and 298 for N_2O (per 40 CFR Part 98 Table A-1 to Subpart A)

For example: CO_2e = (117.0 lb/MMBtu) + (0.0022 lb/MMBtu * 25) + (0.00022 lb/MMBtu * 298) = 117.1 lb/MMBtu

Contact JOE/GB Date 01/21/2015

"As Built" Burner Specification Sheet

Job Number J086377-0 Qty 1 Order Number B062562 Line Number 1
Customer COMBUSTION SERVICE& EQUIP Purchase Order 23018
Job Name DOMINION HASTINGS

Burner Model	LNICM10C-G-30		
Burner Mode of Operation	MOD	Serial Number	121456238
Code	CSD-1, NFPA, FM		
UL Label	NONE		
Heat Exchanger Make	SUPERIOR	Heat Exchanger Model	SUPER
Heat Exchanger Type	Scotch		
Combustion Chamber Pressure	3.0"		
Job Site Altitude	2000FT	Clearance Checked By	JOE
Clipped Circuit Board PN			
Gas High Fire Rate	25200 MBH		
Oil High Fire Rate	GPH	PSIG Pump	
Fuel Oil Grade			
UL Group - Gas	4D	UL Group - Oil	
Gas Type	NATURAL		
High Fire Manifold Pressure**	11.6 IN. WC	Side Orifice Drill Size	
Gas Regulator Outlet Pressure	IN. WC	RPTD Job Pressure	280.0 IN. WC
Minimum Supply Pressure	IN. WC	Max Design Pressure*	280.0*** IN. WC
Wiring Diagram	G-J086377		
Gas Piping Diagram	PDG-J086377		
Oil Piping Diagram			
General Arrangement Drawing	LNICM10C-G-30_J086377	Addl Dwg.	
Remote Panel Diagram		Addl Dwg.	
Additional Drawings			
Control Voltage	115V Single Phase 60 HZ	Full Load Amps	6.0
Blower Motor Voltage	460V 3 PH 60 HZ	Full Load Amps	23.0
Oil Pump Motor Voltage	PH HZ	Full Load Amps	
Compressor Motor Voltage	PH HZ	Full Load Amps	
Minimum Circuit Ampacity	12.0	Gas Inlet Location	
Ignition System	GAS PILOT SCANNER		
Diffuser Blade Setting	Blast Tube Flange Set		

Comments:
VERTICAL FGR INLET

NON-UL BUILT TO UL STANDARDS
LESS MAIN GAS PRESSURE REGULATOR, MAIN GAS VALVE, AND AUX GAS VALVE
***BASED ON PFI SUPPLIED COMPONENTS

**Approximate operating pressure at the Manifold Inlet for initial start-up. Final Pressure should be determined after checking actual flow with gas meter. Stack temperature, CO, CO2, O2, and Furnace Pressure will help in determining actual input when gas meter is not available for this unit.

*All components are rated for the Max Design Pressure specified, that pressure must not be exceeded.

Power Flame Incorporated

9/28/2006
Rev. 06/11/2010

Typical Flue Product Emissions Data for Power Flame Burners

	Natural Gas	L.P. Gas	# 2 Fuel Oil [1]
Carbon Monoxide - CO	.037 lb CO 10^6 BTU input (50 PPM)	.037 lb CO 10^6 BTU input (50 PPM)	.037 lb per 10^6 BTU INPUT (50 PPM)
Sulfur Dioxide - SO_2	(1.05) x (% Sulfur by weight in fuel) = lb SO_2 per 10^6 BTU Input		
Particulate Matter	.0048 lb PM per 10^6 BTU input	.0048 lb PM per 10^6 BTU input	.0143 lb PM per 10^6 BTU input
Hydrocarbons	.025 lb HC's per 10^6 BTU input	.025 lb HC's per 10^6 BTU input	.038 lb HC's per 10^6 BTU input
CO_2	9 % to 10%	10% to 12%	10% to 13%
Nitrogen Oxides - NO_x			
Standard J, FDM & X4 Gas Burners	.088 lb NO_x per 10^6 BTU input (75 PPM)	.092 lb NO_x per 10^6 BTU input (75 PPM)	N/A N/A
Standard C(R) Burners	.088 lb NO_x per 10^6 BTU input (75 PPM)	.092 lb NO_x per 10^6 BTU input (75 PPM)	.159 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIC(R) Burners Fire box/Cast Iron boilers	.029 lb NO_x per 10^6 BTU input (25 PPM)	.031 lb NO_x per 10^6 BTU input (25 PPM)	.159 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIC(R) Burners Water tube boilers	.024 lb NO_x per 10^6 BTU input (20 PPM)	.031 lb NO_x per 10^6 BTU input (25 PPM)	.159 lb NO_x per 10^6 BTU Input (90) PPM[2]
LNIAC Burners	.029 lb NO_x per 10^6 BTU input (25 PPM)	.031 lb NO_x per 10^6 BTU input (25 PPM)	.12 lb NO_x per 10^6 BTU Input (90) PPM
CM Burners	.070 lb NO_x per 10^6 BTU input (60 PPM)[4]	.074 lb NO_x per 10^6 BTU input (60 PPM)[4]	.146 lb NO_x per 10^6 BTU Input (110) PPM
LNICM Burners Fire box/Cast Iron boilers	.029 lb NO_x per 10^6 BTU input (25) PPM	.031 lb NO_x per 10^6 BTU input (25) PPM	.12 lb NO_x per 10^6 BTU Input (90) PPM
LNICM Burners Water tube boilers	.029 lb NO_x per 10^6 BTU input (20) PPM	.031 lb NO_x per 10^6 BTU input (20) PPM	.12 lb NO_x per 10^6 BTU Input (90) PPM
NPM Premix Burners	.029 lb NO_x per 10^6 BTU input (25) PPM	.031 lb NO_x per 10^6 BTU input (25) PPM	N/A N/A
Nova Plus Burners NVC AND NP2	.010 lb NO_x per 10^6 BTU input (9) PPM	.015 lb NO_x per 10^6 BTU input (12) PPM	N/A N/A

(1) NOx emissions at 3 % 02 will vary based on the percent of fuel bound nitrogen (these are based on .02%) and boiler or heat exchanger configurations

(2) 90 PPM NOx on cast iron sectional, fire box and water tube boiler, 120 PPM on fire tube boilers.

(3) Burning natural gas the VOC are estimated at 0.003 # per million BTU and SO_X are 0.0005 # per million BTU.

(4) In some applications the CMAX will achieve less than 60 PPM without flue gas recirculation - consult factory.

These emission rates are general estimates and do not constitute guarantees by Power Flame Inc.
In instances where guarantees are required, please consult the factory with the specific application information.
All NOx numbers stated are corrected to 3% O_2