The EC Group

Environmental Consulting & Management

APPLICATION TO RENEW AND REVISE A TITLE V AIR PERMIT

Buffalo Trace Distillery, Inc.

113 Great Buffalo Trace

Frankfort, KY 40601

Permit No. V-12-056

File No. 21-073-00009

AI No. 1373

For Submission to:

Kentucky Division for Air Quality

February 12, 2018
Project No. 0025-4

112 Consumer Lane
Frankfort, Kentucky 40601
(502) 223-9968

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APPLICATION SUMMARY

PERMIT RENEWAL / REVISION APPLICATION

Buffalo Trace Distillery, Inc.
Permit No. V-12-056
File No. 21-073-00009
AI No. 1373

Buffalo Trace Distillery, Inc. (Buffalo Trace) wishes to renew Permit No. V-12-056. The permit expires on August 14, 2018. In accordance with 401 KAR 52:020, *Title V Permits*, "An application for a permit renewal shall be submitted at least six (6) months prior to expiration of the current permit." There are no changes to the portions of the permit not listed under "Permit Changes". As stated in 401 KAR 52:020, Section 4(2)(b) and (c), only changes to the current permit need be addressed in the application.

PERMIT CHANGES

1. One (1) 179 MMBtu/hr natural gas-fired boiler will be installed. See the DEP7007A form for details. See Table 1 for potential emissions estimates.
2. Off-Permit Change letters were submitted to the Division for Air Quality in 2016 and 2017. Each letter referred to the affected facilities listed on page 9 of the current permit. The facilities referenced in the 2016 letter were replaced in July of 2016. The facilities referenced in the 2017 letter were replaced in July of 2017.

NON-APPLICABILITY OF FEDERAL REGULATIONS

40 CFR Part 63 Subpart DDDDD—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters

40 CFR Part 63, Subpart DDDDD is not applicable to this facility. Subpart DDDDD is applicable if "...you own or operate an industrial, commercial, or institutional boiler or process heater as defined in §63.7575 that is located at, or is part of, a major source of

HAP..." Buffalo Trace has no facilities that have the potential to emit 10 tons per year of an individual hazardous air pollutant or 25 tons per year of combined hazardous air pollutants. Buffalo Trace, therefore, is not a major source of hazardous air pollutants. The previous renewal application, submitted August 20, 2007, deleted an inoperable Indirect Heat Exchanger (Emission Unit 09 (09-002)) from the permit that would have been subject to this regulation.

40 CFR Part 63 Subpart JJJJJJ—National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

40 CFR Part 63, Subpart JJJJJJ is not applicable to this facility. Subpart JJJJJJ is applicable if "...you own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 that is located at, or is part of, an area source of hazardous air pollutants..." While there are four Indirect Heat Exchangers (Emissions Units 08, 10, 14, and 15), or boilers, currently permitted, each uses natural gas as the primary fuel. Subpart JJJJJJ, §63.11195 is a list of boilers that "...are not subject to this subpart and to any requirements in this subpart." *Gas-fired boiler* is listed under §63.11195 (e).

40 CFR Part 64—Compliance Assurance Monitoring

40 CFR Part 64 (CAM Rule) became effective on October 22, 1997. It requires enhanced procedures to ensure that monitoring provides reasonable assurance that emission standards and/or limitations are achieved. In order for the CAM Rule to apply, an emissions unit must:

1. Be subject to a limitation or standard for a regulated air pollutant;
2. Use a control device to achieve compliance with the limitation or standard; and
3. Have pre-control emissions of the regulated air pollutant that meet or exceed the major source threshold.

A cyclone is connected to the dryers that comprise Emission Units 04 (03-001) and 05 (03-002 and 03-003) at Buffalo Trace. An argument could be made that the cyclone is a process

collector and not an emissions control device. For the purpose of this discussion, however, the cyclone will be considered a control device. Using the three applicability criteria stated above, the CAM Rule does not apply for the following reasons:

1. The regulations that apply are 401 KAR 59:010 and 401 KAR 61:020, both of which contain emission standards for particulate matter (PM). PM has been replaced by PM_{10} in the list of criteria pollutants subject to a national ambient air quality standard. While a valid standard exists in Kentucky regulations for PM emissions, PM is not a 'regulated air pollutant' with regard to the CAM Rule. Please see 40 CFR §64.1 and 40 CFR §70.2 for definitions of 'regulated air pollutant'. Accordingly, the dryers are not subject to a standard for a 'regulated air pollutant'.
2. The cyclone, if considered an emissions control device, ensures compliance with hourly PM standards. There is no equivalent hourly standard for PM_{10}, the 'regulated air pollutant'. The cyclone, therefore, assures compliance with a standard for a pollutant that is not a 'regulated air pollutant'.
3. The pre-control potential emissions of PM_{10} from Emissions Units 04 and 05 are 77.53 TPY and 41.39 TPY, respectively. These annual emissions are well-below the major source threshold of 100 TPY. These calculations were made using the maximum throughput from the current permit and the emission factor for PM_{10} from AP-42, Table 9.9.1-1, *Particulate Emission Factors for Grain Elevators*, for a Rack Dryer. This point is moot, however, since the standard applies to PM, which is not a 'regulated air pollutant', not PM_{10}.

RECOMMENDED DRAFT PERMIT

On January 22, 2018, Ben Matar, the Supervisor of the Combustion Section of the Permit Review Branch, told Phillip Gordon of The EC Group that a recommended draft permit was not necessary.

APPLICATION FORMS

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection

Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999
http://www.air.ky.gov/

DEP7007AI
Administrative Information
Enter if known
AFS Plant ID# 21-073-00009
Agency Use Only
Date Received
Log#
Permit#

PERMIT APPLICATION

The completion of this form is required under Regulations 401 KAR 52:020, 52:030, and 52:040 pursuant to KRS 224. Applications are incomplete unless accompanied by copies of all plans, specifications, and drawings requested herein. Failure to supply information required or deemed necessary by the division to enable it to act upon the application shall result in denial of the permit and ensuing administrative and legal action. Applications shall be submitted in triplicate.

1) APPLICATION INFORMATION

Note: The applicant must be the owner or operator. (The owner/operator may be individual(s) or a corporation.)

Name: Buffalo Trace Distillery, Inc.

Title: _____ **Phone:** (800) 654-8471

(If applicant is an individual)
Mailing Address: Buffalo Trace Distillery, Inc.
Company

Street or P.O. Box: 113 Great Buffalo Trace

City: Frankfort **State:** KY **Zip Code:** 40601

Is the applicant (check one): ☐ Owner ☐ Operator ☐ Owner & Operator ☒ Corporation/LLC* ☐ LP**

* If the applicant is a Corporation or a Limited Liability Corporation, submit a copy of the current Certificate of Authority from the Kentucky Secretary of State.
** If the applicant is a Limited Partnership, submit a copy of the current Certificate of Limited Partnership from the Kentucky Secretary of State.

Person to contact for technical information relating to application:

Name: Phillip M. Gordon, The EC Group of Kentucky, LLC

Title: Manager, Kentucky Operations **Phone:** (502) 223-9968

2) OPERATOR INFORMATION

Note: The applicant must be the owner or operator. (The owner/operator may be individual(s) or a corporation.)

Name: Same As Applicant

Title: _____ **Phone:** _____

Mailing Address: _____
Company

Street or P.O. Box: _____

City: _____ **State:** _____ **Zip Code:** _____

3) TYPE OF PERMIT APPLICATION

For new sources that currently *do not* hold *any* air quality permits in Kentucky and are required to obtain a permit prior to construction pursuant to 401 KAR 52:020, 52:030, or 52:040.

☐ Initial Operating Permit (the permit will authorize both construction and operation of the new source)

Type of Source (*Check all that apply*): ☐ Major ☐ Conditional Major ☐ Synthetic Minor ☐ Minor

For existing sources that do not have a source-wide Operating Permit required by 401 KAR 52:020, 52:030, or 52:040.

Type of Source (*Check all that apply*): ☐ Major ☐ Conditional Major ☐ Synthetic Minor ☐ Minor

(*Check one only*)

☐ Initial Source-wide Operating Permit ☐ Modification of Existing Facilities at Existing Plant

☐ Construction of New Facilities at Existing Plant

☐ Other (explain) _____

For existing sources that currently have a source-wide Operating Permit.

Type of Source (*Check all that apply*): ☒ Major ☐ Conditional Major ☐ Synthetic Minor ☐ Minor

Current Operating Permit # **V-12-056**

☐ **Administrative Revision** (describe type of revision requested, e.g. name change): _____

☒ **Permit Renewal** ☒ **Significant Revision** ☐ **Minor Revision**

☒ Addition of New Facilities ☐ Modification of Existing Facilities

For all construction and modification requiring a permit pursuant to 401 KAR 52:020, 52:030, or 52:040.

Proposed Date for Start of Construction or Modification: **May 1, 2018**

Proposed date for Operation Start-up: **July 5, 2018**

4) SOURCE INFORMATION

Source Name: **Buffalo Trace Distillery**

Source Street Address: **113 Great Buffalo Trace**

City: **Frankfort** **Zip Code:** **40601** **County:** **Franklin**

Primary Standard Industrial Classification (SIC) Category: **Distilled and Blended Liquors** **Primary SIC #:** **2085**

Property Area (Acres or Square Feet): **110 Acres** **Number of Employees:** **100**

Description of Area Surrounding Source (*check one*):

☐ Commercial Area ☐ Residential Area ☐ Industrial Area ☐ Industrial Park ☐ Rural Area ☒ Urban Area

Approximate Distance to Nearest Residence or Commercial Property: **Adjacent**

UTM or Standard Location Coordinates: (*Include topographical map showing property boundaries*)

UTM Coordinates: Zone _____ Horizontal (km) _____ Vertical (km) _____

Standard Coordinates: Latitude **38** Degrees **13** Minutes **05** Seconds

Longitude **84** Degrees **52** Minutes **00** Seconds

4) SOURCE INFROMATION (CONTINUED)

Is any part of the source located on federal land? ☐ Yes ☒ No

What other environmental permits or registrations does this source currently hold in Kentucky?

KPDES Individual Permit

Water Withdrawal Permit

What other environmental permits or registrations does this source need to obtain in Kentucky?

None

5) OTHER REQUIRED INFORMATION

Indicate the type(s) and number of forms attached as part of this application.

1	DEP7007A	Indirect Heat Exchanger, Turbine, Internal Combustion Engine	___	DEP7007R	Emission Reduction Credit
___	DEP7007B	Manufacturing or Processing Operations	___	DEP7007S	Service Stations
___	DEP7007C	Incinerators & Waste Burners	___	DEP7007T	Metal Plating & Surface Treatment Operations
___	DEP7007F	Episode Standby Plan	1	DEP7007V	Applicable Requirements & Compliance Activities
___	DEP7007J	Volatile Liquid Storage	___	DEP7007Y	Good Engineering Practice (GEP) Stack Height Determination
___	DEP7007K	Surface Coating or Printing Operations	___	DEP7007AA	Compliance Schedule for Noncomplying Emission Units
___	DEP7007L	Concrete, Asphalt, Coal, Aggregate, Feed, Corn, Flour, Grain, & Fertilizer	___	DEP7007BB	Certified Progress Report
___	DEP7007M	Metal Cleaning Degreasers	___	DEP7007CC	Compliance Certification
1	DEP7007N	Emissions, Stacks, and Controls Information	___	DEP7007DD	Insignificant Activities
___	DEP7007P	Perchloroethylene Dry Cleaning Systems			

Check other attachments that are part of this application.

	Required Data		Supplemental Data
☐	Map or Drawing Showing Location	☐	Stack Test Report
☐	Process Flow Diagram and Description	☐	Certificate of Authority from the Secretary of State (for Corporations and Limited Liability Companies)
☐	Site Plan Showing Stack Data and Locations	☐	Certificate of Limited Partnership from the Secretary of State (for Limited Partnerships)
☒	Emission Calculation Sheets	☐	Claim of Confidentiality (See 400 KAR 1:060)
☐	Material Safety Data Sheets (MSDS)	☐	Other (Specify) _____

Indicate if you expect to emit, in any amount, hazardous or toxic materials or compounds or such materials into the atmosphere from any operation or process at this location.

☐	Pollutants regulated under 401 KAR 57:002 (NESHAP)	☒	Pollutants listed in 401 KAR 63:060 (HAPS)
☐	Pollutants listed in 40 CFR 68 Subpart F [112(r) pollutants]	☐	Other

Has your company filed an emergency response plan with local and/or state and federal officials outlining the measures that would be implemented to mitigate an emergency release?

☐ Yes ☒ No

Check whether your company is seeking coverage under a permit shield. If "Yes" is checked, applicable requirements must be identified on Form DEP7007V. Identify any non-applicable requirements for which you are seeking permit shield coverage on a separate attachment to the application.

☐ Yes ☒ No ☐ A list of non-applicable requirements is attached

6) OWNER INFORMATION

Note: If the applicant is the owner, write "same as applicant" on the name line.

Name: Same as Applicant

Title: _____ **Phone:** _____

Mailing Address: _____
Company

Street or P.O. Box: _____

City: _____ **State:** _____ **Zip Code:** _____

List names of owners and officers of your company who have an interest in the company of 5% or more.

Name	Position (owner, partner, president, CEO, treasurer, etc.)
Wholly-Owned Subsidiary of the Sazerac Company	

(attach another sheet if necessary)

7) SIGNATURE BLOCK

I, the undersigned, hereby certify under penalty of law, that I am a responsible official, and that I have personally examined, and am familiar with, the 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 information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

BY: _____ 2-6-18
(Authorized Signature) (Date)

Harlen Wheatley — Master Distiller
(Typed or Printed Name of Signatory) (Title of Signatory)

Commonwealth of Kentucky
Natural Resources & Environmental Protection Cabinet
Department for Environmental Protection

DIVISION FOR AIR QUALITY

(Submit copies of this form for each individual unit. Make additional copies as needed)

DEP7007A
INDIRECT HEAT EXCHANGER, TURBINE, INTERNAL COMBUSTION ENGINE

Emission Point # 16
Emission Unit # 16

1) Type of Unit (Make, Model, Etc.): CleverBooks, NB-500D-100

Date Installed: TBA Cost of Unit: _____
(Date unit was installed, modified or reconstructed, whichever is later.)

Where more than one unit is present, identify with Company's identification or code for this unit:
Boiler #12

2a) Kind of Unit (Check one):
1. Indirect Heat Exchanger X
2. Gas Turbine for Electricity Generation ____
3. Pipe Line Compressor Engines:
   ____ Gas Turbine
   ____ Reciprocating engines
   (a) 2-cycle lean burn _____
   (b) 4-cycle lean burn _____
   (c) 4-cycle rich burn _____
4. Industrial Engine _____

2b) Rated Capacity: (Refer to manufacturer's specifications)
1. Fuel input (mmBTU/hr): 150
2. Power output (hp): 58,952
   Power output (MW): NA

SECTION 1. FUEL

3) Type of Primary Fuel (*Check*):

_____ A. Coal _____ B. Fuel Oil # *(Check one)* _____ 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6

X C. Natural Gas _____ D. Propane _____ E. Butane _____ F. Wood _____ G. Gasoline

_____ H. Diesel _____ I. Other (*specify*) _____

4) Secondary Fuel (*if any, specify type*): _____
Tertiary Fuel: _____

5) Fuel Composition

Type	Percent Ash[a] Maximum	Percent Sulfur[b] Maximum	Heat Content: [c, d]
Primary			1,020 BTU/ft^3
Secondary			

a. As received basis. Proximate Analysis for Ash. (May use values in your fuel contract)
b. As received basis. Ultimate Analysis for Sulfur. (May use values in your fuel contract)
c. Higher Heating Value, BTU/Unit. (May use values in your fuel contract)
d. Suggested units are: Pounds for solid fuel, gallon for liquid fuels, and cu. Ft. for gaseous fuels. If other units are used, please specify.

6) **Maximum Annual Fuel Usage Rate (*please specify units*)*:**

7) Fuel Source or supplier: Columbia Gas

*Should be entered only if applicant requests operating restriction through federally enforceable limitations.

8) MAXIMUM OPERATING SCHEDULE FOR THIS UNIT*

____ hours/day ____ days/week ____weeks/year

9) If this unit is multipurpose, describe percent in each use category:

Space Heat _____ % Process Heat 100 % Power _____ %

10) Control options for turbine/IC engine (*Check*)

__ (1) Water Injection
__ (2) Steam Injection
__ (3) Selective Catalytic Reduction (SCR)
__ (3) Non-Selective Catalytic Reduction (NSCR)
__ (5) Combustion Modification)
__ (5) Other (*Specify*) _____

IMPORTANT: Form DEP7007N must also be completed for this unit.

SECTION II COMPLETE ONLY FOR INDIRECT HEAT EXCHANGERS

11) Coal-Fired Units - NA

_____ Pulverized Coal Fired:
__ Dry Bottom __ Wall Fired
__ Wet Bottom __ Tangentially Fired

_____ Cyclone Furnace

_____ Overfeed Stoker

_____ Fluidized Bed Combustor:
_____ Circulating Bed
_____ Bubbling Bed

Fly Ash Rejection:
☐ Yes ☐ No

_____ Spreader Stoker

_____ Underfeed Stoker

_____ Hand-fed

_____ Other (*specify*) _____

12) Oil-Fired Unit - NA

_____ Tangentially (Corner) Fired ___X___ Horizontally (Normal) Fired

13) Wood-Fired Unit - NA

Fly-Ash Reinjection: ☐ Yes ☐ No

_____ Dutch Oven/Fuel Cell Oven _____ Stoker _____ Suspension Firing

_____ Fluidized Bed Combustion (FBC)

14) Natural Gas-Fired Units

__ Low NO_x Burners: ☒ Yes ☐ No

__ Flue Gas Recirculation: ☒ Yes ☐ No

*Should be entered only if applicant requests operating restriction through federally enforceable limitations.

15) Combustion Air Draft: _____ Natural ___X___ Forced

Forced Pressure ___0.9___ lbs/sq. in.

Percent excess air (air supplied in excess of theoretical air) ___15___ %

SECTION III

16) Additional Stack Data

A. Are sampling ports provided? ☒ Yes ☐ No
B. If yes, are they located in accordance with 40 CFR 60*? ☒ Yes ☐ No
C. List other units vented to this stack None

17) Attach manufacturer's specifications and guaranteed performance data for the indirect heat exchanger. Include information concerning fuel input, burners and combustion chamber dimensions.

18) Describe fuel transport, storage methods and related dust control measures, including ash disposal and control.

Natural gas is delivered by pipeline.

No particulate matter control device will be installed so the issue of ash disposal is moot.

*Applicant assumes responsibility for proper location of sampling ports if the Division for Air Quality requires a compliance demonstration stack test.

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection

DIVISION FOR AIR QUALITY

DEP7007N

Emissions, Stacks, and Controls Information

Applicant Name: Buffalo Trace Distillery, Inc. Log # _____

SECTION I. Emissions Unit and Emission Point Information

KyEIS ID #	Emissions Unit and Emission Point Descriptions	Maximum Operating Parameters		Permitted Operating Parameters		
		Hourly Operating Rate (SCC Units/hr)	Annual Operating Hours (hrs/yr)	Hourly Operating Rate (SCC Units/hr)	Annual Operating Rate (SCC Units/yr)	Annual Operating Hours (hrs/yr)
016	Emission Unit Name: **Boiler #12** Date Constructed: TBA HAPs present? ☑ Yes ☐ No	179 MMBtu/hr	8,760		NA	
	Emission Point Name: **Stack for Boiler #12** Source ID: 16 SCC Code: 10200602 SCC Units: million cubic feet burned KyEIS Stack #: 0016 Fuel Ash Content: NA Fuel Sulfur Content: NA Fuel Heat Content Ratio: 1 Applicable Regulations: 401 KAR 59:015; 40 CFR 60, Subpart Db					
	Emission Point Name: Source ID: SCC Code: SCC Units: KyEIS Stack #: Fuel Ash Content: Fuel Sulfur Content: Fuel Heat Content Ratio: Applicable Regulations:					

SECTION I. Emission Units and Emission Point Information (continued)

KyEIS ID #	Emission Factors			Control Equipment		Hourly (lb/hr) Emissions			Annual (tons/yr) Emissions		
	Pollutant	Emission Factor (lb/SCC Units)	Emission Factor Basis	Control Equipment Association	Pollutant Overall Efficiency (%)	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable	Uncontrolled Unlimited Potential	Controlled Limited Potential	Allowable
See Table 1											
				1st control device KyEIS Control ID #: Collection efficiency: 2nd control device KyEIS Control ID #: Collection efficiency:							
				1st control device KyEIS Control ID #: Collection efficiency: 2nd control device KyEIS Control ID #: Collection efficiency:							

SECTION II. Stack Information

KyEIS Stack ID #	Stack Description	Stack Physical Data			Stack Geographic Data			Stack Gas Stream Data		
		Height (ft)	Diameter (ft)	Vent Height (ft)	Vertical Coordinate	Horizontal Coordinate	Coordinate Collection Method Code	Flowrate (acfm)	Temperature (^{o}F)	Exit Velocity (ft/sec)
16	Stack for Boiler #12	63	4.5	63	38^{o} 12' 56"	84^{o} 52' 19"	INI	52,524	302^{o}	55

Commonwealth of Kentucky
Natural Resources & Environmental Protection Cabinet
Department for Environmental Protection

DIVISION FOR AIR QUALITY

DEP7007V

Applicable Requirements & Compliance Activities

APPLICANT NAME: **Buffalo Trace Distillery, Inc.**

SECTION I. EMISSION AND OPERATING STANDARD(S) AND LIMITATION(S)

KYEIS No.[1]	Emission Unit Description[2]	Contaminant[3]	Origin of Requirement or Standard[4]	Applicable Requirement, Standard, Restriction, Limitation, or Exemption[5]	Method of Determining Compliance with the Emission and Operating Requirement(s)[6]
16	Boiler #12	PM	401 KAR 59:015	0.1 lb/MMBtu	Fuel heating value will be used in conjunction with the AP-42 emission factor to ensure that the allowable emission rate is not exceeded.
		NO_x	40 CFR 60, Subpart Db	0.1 lb/MMBtu	Fuel heating value will be used in conjunction with the AP-42 emission factor to ensure that the allowable emission rate is not exceeded.
		Opacity	401 KAR 59:015	20 percent opacity	Emissions observations using U.S. EPA Reference Method 9
		SO_2	401 KAR 59:015	0.8 lb/MMBtu	Fuel heating value will be used in conjunction with the AP-42 emission factor to ensure that the allowable emission rate is not exceeded.
			40 CFR 60, Subpart Db	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]
Source-Wide	Source-Wide	PM_{10}	Self-Imposed to ensure non-applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality	The total PM_{10} emissions from emission units 02, 04, 05, 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	Actual Emissions of particulate matter less than 10 microns in diameter, sulfur dioxide and nitrogen oxides for the listed emission units will be calculated on a monthly basis. The monthly emissions will be totaled for each consecutive twelve month period.
		SO_2		The total sulfur dioxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		NO_x		The total nitrogen oxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	

APPLICANT NAME: **Buffalo Trace Distillery, Inc.**

SECTION II. MONITORING REQUIREMENTS

KYEIS No.[1]	Emission Unit Description[2]	Contaminant[3]	Origin of Requirement or Standard[4]	Parameter Monitored[7]	Description of Monitoring[8]
16	Boiler #12	PM	401 KAR 59:015	0.1 lb/MMBtu	Heating value of fuels received will be monitored. The heating value will be used in conjunction with the AP-42 emission factor to ensure that the parameter monitored is not exceeded.
		NO_x	40 CFR 60, Subpart Db	0.1 lb/MMBtu	Heating value of fuels received will be monitored. The heating value will be used in conjunction with the AP-42 emission factor to ensure that the parameter monitored is not exceeded.
		Opacity	401 KAR 59:015	20 percent opacity	Visual emissions will be monitored utilizing periodic U.S. EPA Reference Method 9 tests.
		SO_2	401 KAR 59:015	0.8 lb/MMBtu	Heating value of fuel received will be monitored. The heating value and sulfur content will be used in conjunction with the AP-42 emission factor to ensure that the parameter monitored is not exceeded.
			40 CFR 60, Subpart Db	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]
Source-Wide	Source-Wide	PM_{10}	Self-Imposed to ensure non-applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality	The total PM_{10} emissions from emission units 02, 04, 05, 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	Actual Emissions of particulate matter less than 10 microns in diameter, sulfur dioxide and nitrogen oxides for the listed emission units will be monitored on a monthly basis. The monthly emissions will be totaled for each consecutive twelve month period to ensure that the PSD threshold is not exceeded.
		SO_2		The total sulfur dioxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		NO_x		The total nitrogen oxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	

APPLICANT NAME: Buffalo Trace Distillery, Inc.

SECTION III. RECORDKEEPING REQUIREMENTS

KYEIS No.[1]	Emission Unit Description[2]	Contaminant[3]	Origin of Requirement or Standard[4]	Parameter Monitored[7]	Description of Recordkeeping[10]
16	Boiler #12	PM	401 KAR 59:015	0.1 lb/MMBtu	Fuel supplier certifications, including heating value, will be maintained and the amounts recorded on a monthly basis.
		NO_x	40 CFR 60, Subpart Db	0.1 lb/MMBtu	Fuel supplier certifications, including heating value, will be maintained and the amounts recorded on a monthly basis.
		Opacity	401 KAR 59:015	20 percent opacity	A record of the periodic visual emissions monitoring utilizing U.S. EPA Reference Method 9 will be maintained on-site.
		SO_2	401 KAR 59:015	0.8 lb/MMBtu	Fuel supplier certifications, including heating value and sulfur content will be maintained and the amounts recorded on a monthly basis.
			40 CFR 60, Subpart Db	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]
Source-Wide	Source-Wide	PM_{10}	Self-Imposed to ensure non-applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality	The total PM_{10} emissions from emission units 02, 04, 05, 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	Actual Emissions of particulate matter less than 10 microns in diameter, sulfur dioxide and nitrogen oxides for the listed emission units will be calculated on a monthly basis. The monthly emissions will be totaled for each consecutive twelve month period. Records will be maintained on-site.
		SO_2		The total sulfur dioxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		NO_x		The total nitrogen oxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	

APPLICANT NAME: **Buffalo Trace Distillery, Inc.**

SECTION IV. REPORTING REQUIREMENTS

KYEIS No.[1]	Emission Unit Description[2]	Contaminant[3]	Origin of Requirement or Standard[4]	Parameter Monitored[7]	Description of Reporting[12]
16	Boiler #12	PM	401 KAR 59:015	0.1 lb/MMBtu	The reporting listed in 40 cfr §60.49B, as applicable, shall be maintained and submitted as required. and Reports of the monitoring listed in Section II of DEP7007V form submitted to the Frankfort regional office no later than January 30 and July 30 of each calendar year. and A DEP7007CC form, describing compliance with the terms and conditions of the permit, will be completed annually. The DEP7007CC form will be submitted to the Frankfort Regional Office and the Air Enforcement Branch of the U.S. EPA, Region IV, in Atlanta, GA.
		NO_x	40 CFR 60, Subpart Db	0.1 lb/MMBtu	
		Opacity	401 KAR 59:015	20 percent opacity	
		SO_2	401 KAR 59:015	0.8 lb/MMBtu	
			40 CFR 60, Subpart Db	Exempt from the SO2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]	
Source-Wide	Source-Wide	PM_{10}	Self-Imposed to ensure non-applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality	The total PM_{10} emissions from emission units 02, 04, 05, 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		SO_2		The total sulfur dioxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		NO_x		The total nitrogen oxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	

APPLICANT NAME: Buffalo Trace Distillery, Inc.

SECTION V. TESTING REQUIREMENTS

KYEIS No.[1]	Emission Unit Description[2]	Contaminant[3]	Origin of Requirement or Standard[4]	Parameter Monitored[7]	Description of Testing[14]
16	Boiler #12	PM	401 KAR 59:015	0.1 lb/MMBtu	U.S. EPA Reference Method 5 will be utilized to determine initial compliance with particulate matter standards.
		NO_x	40 CFR 60, Subpart Db	0.1 lb/MMBtu	U.S. EPA Reference Method 7 will be utilized to determine initial compliance with nitrogen oxide standards.
		Opacity	401 KAR 59:015	20 percent opacity	U.S. EPA Reference Method 9 will be utilized to determine initial compliance with opacity standards.
		SO_2	401 KAR 59:015	0.8 lb/MMBtu	U.S. EPA Reference Method 6 will be utilized to determine initial compliance with sulfur dioxide standards.
			40 CFR 60, Subpart Db	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]	Exempt from the SO_2 emissions limit as long as only gaseous fuel is used. [§60.42b (k)(2)]
Source-Wide	Source-Wide	PM_{10}	Self-Imposed to ensure non-applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality	The total PM_{10} emissions from emission units 02, 04, 05, 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	Not Applicable
		SO_2		The total sulfur dioxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	
		NO_x		The total nitrogen oxide emissions from emission units 08, 09, 10, 14, 15 and 16 shall not exceed 245 tons in any consecutive twelve month period.	

TABLE

Table 1
Potential Emissions for Gas-Fired Boiler
Buffalo Trace Distillery, Inc.

Pollutant	Rated Capacity (MMBtu/hr)	Rated Capacity (10^6scf/hr) [1]	Maximum Hours	Emission Factor (lb/10^6scf) [2]	Potential Emissions (TPY)
CRITERIA POLLUTANTS					
NO_x [3]	179.0	0.1755	8,760	190.0	146.04
CO [3]	179.0	0.1755	8,760	84.0	64.57
Lead	179.0	0.1755	8,760	5.00E-04	3.84E-04
PM	179.0	0.1755	8,760	7.6	5.84
SO_2	179.0	0.1755	8,760	0.6	0.46
VOC	179.0	0.1755	8,760	5.5	4.23
HAZARDOUS AIR POLLUTANTS					
2-Methylnaphthalene	179.0	0.1755	8,760	2.40E-05	1.84E-05
3-Methylchloranthrene	179.0	0.1755	8,760	1.80E-06	1.38E-06
7,12-Dimethylbenz(a)anthracene	179.0	0.1755	8,760	1.60E-06	1.23E-06
Acenaphthene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Acenaphthylene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Anthracene	179.0	0.1755	8,760	2.40E-06	1.84E-06
Benz(a)anthracene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Benzene	179.0	0.1755	8,760	2.10E-03	1.61E-03
Benzo(a)pyrene	179.0	0.1755	8,760	1.20E-06	9.22E-07
Benzo(b)fluoranthene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Benzo(g,h,I)perylene	179.0	0.1755	8,760	1.20E-06	9.22E-07
Benzo(k)fluoranthene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Chrysene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Dibenzo(a,h)anthracene	179.0	0.1755	8,760	1.20E-06	9.22E-07
Dichlorobenzene	179.0	0.1755	8,760	1.20E-03	9.22E-04
Fluoranthene	179.0	0.1755	8,760	3.00E-06	2.31E-06
Fluorene	179.0	0.1755	8,760	2.80E-06	2.15E-06

Table 1
Potential Emissions for Gas-Fired Boiler
Buffalo Trace Distillery, Inc.

Pollutant	Rated Capacity (MMBtu/hr)	Rated Capacity (10^6scf/hr) [1]	Maximum Hours	Emission Factor (lb/10^6scf) [2]	Potential Emissions (TPY)
Formaldehyde	179.0	0.1755	8,760	7.50E-02	5.76E-02
Hexane	179.0	0.1755	8,760	1.80E+00	1.38E+00
Indeno(1,2,3-cd)pyrene	179.0	0.1755	8,760	1.80E-06	1.38E-06
Naphthalene	179.0	0.1755	8,760	6.10E-04	4.69E-04
Phenanthrene	179.0	0.1755	8,760	1.70E-05	1.31E-05
Pyrene	179.0	0.1755	8,760	5.00E-06	3.84E-06
Toluene	179.0	0.1755	8,760	3.40E-03	2.61E-03
Arsenic	179.0	0.1755	8,760	2.00E-04	1.54E-04
Beryllium	179.0	0.1755	8,760	1.20E-05	9.22E-06
Cadmium	179.0	0.1755	8,760	1.10E-03	8.46E-04
Chromium	179.0	0.1755	8,760	1.40E-03	1.08E-03
Cobalt	179.0	0.1755	8,760	8.40E-05	6.46E-05
Manganese	179.0	0.1755	8,760	3.80E-04	2.92E-04
Mercury	179.0	0.1755	8,760	2.60E-04	2.00E-04
Nickel	179.0	0.1755	8,760	2.10E-03	1.61E-03
Selenium	179.0	0.1755	8,760	2.40E-05	1.84E-05
TOTAL HAPS					1.45E+00

[1] 1,020 British thermal units (Btu) per standard cubic foot (scf)

[2] Emission factors from Tables 1.4-1, 1.4-2,1.4-3 and 1.4-4 of AP-42.

[3] NO_x and CO Emissions factors for Large Wall-Fired Boiler (Uncontrolled)

Trinity Consultants
1717 Dixie Hwy, Ste 900, Covington, KY 41011 / P 859.341.8100 / F 859.341.1021 / **trinityconsultants.com**

SUBMITTED VIA KENTUCKY ONLINE GATEWAY

August 11, 2020

Ms. Melissa Duff
Director
Kentucky Division for Air Quality
300 Sower Boulevard
Frankfort, Kentucky 40601
melissa.duff@ky.gov

RE: Supplement to Title V Renewal Application
Buffalo Trace Distillery (AI #1373, Source ID 21-073-00009)
Activity #: APE20180001

Dear Ms. Duff:

Trinity Consultants ("Trinity") is pleased to submit this supplement to the 2018 Title V Renewal ("TVR") application on behalf of Buffalo Trace Distillery ("BTD") for its distillery in Frankfort, Kentucky ("Frankfort distillery") to the Kentucky Division for Air Quality ("KDAQ"). The Frankfort distillery is subject to the air quality requirements established by Title V Operating Permit V-12-056, which was issued by KDAQ on August 14, 2013.[1] On February 12, 2018, BTD submitted an "Application to Renew and Revise a Title V Air Permit" prepared by The EC Group to KDAQ. This renewal application was given activity number APE20180001 by KDAQ.

SUMMARY OF PAST SUBMITTALS

BTD has provided KDAQ with a series of staggered supplemental submittals to the TVR application and Boiler 12 (EU 016) minor permit application since submitting the privileged Environmental Audit Report on June 4, 2019. Specifically, the following documents have been submitted thus far to KDAQ to address the findings of the audit report and other recommendations made by KDAQ:

- ***September 24, 2019 Supplement to Minor Permit Application for Boiler 12 (EU 016):*** During the meeting with KDAQ on June 5, 2019, KDAQ requested that BTD supplement the minor permit application materials previously submitted for Boiler 12 (EU 016) to ensure their accuracy and completeness. This supplement, which was submitted on September 24, 2019, was intended to satisfy KDAQ's request and clarify applicable requirements for Boiler 12 (EU 016). This submittal is classified as part of Activity Number APE20180003.

- ***September 25, 2019 Supplement to TVR Application for Existing Boilers:*** As documented in BTD's Environmental Audit Report submitted on June 4, 2019, Audit Finding #1(a) requested KDAQ's feedback on the applicability of 40 CFR 63, Subpart JJJJJJ, National Emissions Standards for Hazardous

[1] Although the Title V permit expired on August 14, 2018, it remains in effect until an operating permit renewal is issued. BTD submitted a renewal application on February 12, 2018.

Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources ("Boiler NESHAP") based on periodic combustion of Grain Neutral Spirits ("GNS") at Boiler 11 (EU 015). Based on the permitting record, KDAQ and BTD previously analyzed the applicability of the Boiler NESHAP regulation to this process. At that time, KDAQ advised BTD that the periodic co-combustion of GNS with natural gas did not trigger the applicability of the Boiler NESHAP's requirements. However, in an abundance of caution, BTD again solicited feedback from KDAQ on this issue based on the findings of the audit report. In response, KDAQ indicated that GNS combustion triggers Boiler 11's (EU 015's) classification as an oil subcategory boiler. Accordingly, on September 25, 2019, BTD submitted a supplement to the TVR application to characterize these requirements. This submittal also included a Non-Hazardous Secondary Material Determination ("NHSM") for the GNS generated by BTD, which satisfied Audit Finding #1(b). Additionally, this supplement requested permitting changes for the other existing boilers, including the removal of decommissioned Boiler 8 (EU 010), the removal of fuel types no longer used by the boilers, and the correction of Boiler 10 (EU 014) and Boiler 11's (EU 015's) heat input capacity. This submittal is classified as part of Activity Number APE20180001.

- ***October 14, 2019 Supplement to TVR Application for Existing Emergency Engines:*** As documented by Audit Finding #3 in BTD's Environmental Audit Report, the audit identified two (2) Spark-Ignition Internal Combustion Engines ("SI ICE") at the Frankfort distillery that are not identified in the current permit and were not addressed by the initial TVR application. Upon further review, BTD determined that the Generac model SG070 natural gas-fired 107 hp 4-stroke, lean burn ("4SLB") engine ("G001") is classified as a new stationary Reciprocating Internal Combustion engine ("RICE") at an area source of Hazardous Air Pollutant ("HAP") emissions under 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines ("NESHAP ZZZZ"). Accordingly, BTD meets the requirements of this regulation by complying with 40 CFR 60 Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines ("NSPS JJJJ"). On the other hand, the Cummins model 75GGHF natural gas-fired 126 hp 4SLB engine ("G002") is classified as an existing engine at an area source of HAP under NESHAP ZZZZ and is subject to work practice standards and operating limitations. To characterize the applicability of federal regulatory requirements to these existing engines and provide associated emission calculations, BTD submitted a supplement to the TVR application on October 4, 2019. This submittal is classified as part of Activity Number APE20180001.

- ***October 4, 2019 Supplement to TVR Application for Existing Gasoline Dispensing Facilities ("GDFs"):*** As documented by Audit Finding #4 in BTD's Environmental Audit Report, the audit identified two existing GDFs at the Frankfort distillery that are not identified in the current permit and were not addressed by the initial TVR application. Upon further review, BTD determined that these units trigger the requirements of 40 CFR 63, Subpart CCCCCC, National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities ("NESHAP CCCCCC"). To characterize the applicability of federal regulatory requirements to these existing GDFs and provide associated emission calculations, BTD submitted a supplement to the TVR application on October 4, 2019. This submittal is classified as part of Activity Number APE20180001.

- ***January 30, 2020 Supplement to TVR Application:*** BTD submitted a comprehensive TVR application supplement on 1/30/2020. This submittal was intended to fill the remaining gaps in emission calculations and regulatory applicability determinations for the distillery as identified in the Environmental Audit Report. Specifically, this application addressed Audit Finding #6 (Operation of Air Emissions Sources without a Permit), #8 (Insignificant Activities List is Not Current), and #10 (Boiler Compliance) for existing equipment at the Frankfort distillery.

The current submittal serves as a revised version of the January 30th submittal. Specifically, the following changes were made to this submittal:

- Using the results of the testing performed on May 28, 2020, BTD has revised NO_X and CO emission factors for Boiler #9 (EU 08), and de-rated Boiler #9 to 80% of its nameplate capacity. The source test report documenting the derivation of these NO_X and CO emission factors was submitted by Kenvirons to KDAQ on July 20, 2020. As described in the test report and as discussed with KDAQ, the potential emission calculations presented in this application supplement reflect the average results of Runs 3-4 for NO_X and CO emissions and the de-rated capacity of Boiler #9. The revised potential emission calculations for the distillery are presented in the DEP7007N forms included in Attachment A.[2]

- Based on revised potential emissions totals falling below the applicable major stationary source thresholds (MSSTs) for the distillery, BTD has removed the Prevention of Significant Deterioration ("PSD") avoidance limits from this request. However, BTD requests voluntary limits on rolling 12-month totals of non-fugitive NO_X and VOC emissions under 401 KAR 52:020, Section 10. The revised basis for these requested limits is documented in the DEP7007V forms included in Attachment A.

REQUESTED LIMITS AND NESTED SOURCE PERMITTING STRATEGY

Both Trinity and KDAQ agree that the stationary source comprising of the fossil fuel boilers alone – including Boiler 12 (EU 016) – must be assessed separately as a "nested source" under the PSD permitting program because the group of boilers exceeds the major stationary source threshold of 100 tons per year (tpy) for NO_X emissions. Additionally, Trinity and KDAQ agree that the site as a whole – including both boiler and non-boiler emissions – must be assessed against the 250 tpy MSST. However, while Trinity considered the existing site to be a minor PSD source with a potential to emit ("PTE") below 250 tpy, KDAQ considered the existing site to be a major stationary source, with a PTE above the 250 tpy threshold. A detailed description of the permitting history that resulted in these differing conclusions is provided in the letter from Dressman Benzinger LaVelle (DBL) submitted to Ms. Liz Natter and Ms. Melissa Duff on August 11, 2020.

Based on the revised emissions calculations using the recent Boiler #9 test results, the distillery's non-fugitive PTE falls below the applicable 250 tpy MSSTs for all regulated pollutants. The PTE for the nested fossil fuel boilers exceeds the applicable 100 tpy major source threshold for NO_X; emissions of all other pollutants fall below the 100 tpy threshold. Therefore, as discussed with KDAQ, for PSD purposes, BTD proposes to treat the facility's boilers as a nested major stationary source within the minor source distillery.

With respect to the distillery as a whole, while the distillery is a true minor source for PSD and so synthetic minor limits are not required, BTD has agreed to comply with the following voluntary limits under 401 KAR 52:020, Section 10:

- Less than 250 tons per rolling 12-month period for Volatile Organic Compounds ("VOC") and Nitrogen Oxides ("NO_X") emissions from all non-fugitive sources at the distillery plus non-fugitive and fugitive emissions from the fossil fuel-fired boilers, which provide steam and hot water to support the primary distillery source category.[3]

---

[2] Changes to the application forms relative to the 1/30/2020 application submittal are denoted with yellow highlighting in Attachment A.

[3] Where "all non-fugitive sources at the distillery" means the sum of VOC and NO_X emissions from each process unit in the distillery and the fossil fuel boilers supporting the beverage distillery operations.

These requested limits are supported by the DEP7007V forms included in Attachment A.

Finally, while Trinity has assessed the installation of Boiler 12 as part of the larger expansion project, if the installation of that boiler were assessed as an independent project, the PTE of that unit would be below the PSD Significant Emission Rates (SERs) for all applicable pollutants. As such, the Boiler 12 (EU 016) installation project did not trigger PSD permitting requirements and was correctly addressed by the minor permit application submitted prior to the boiler's installation.

Supplemental Information

As represented by the emission calculations contained in the DEP7007N forms within Attachment A, this application supplement includes new or revised emission calculations relative to the 2018 version of BTD's Title V renewal application for the following process areas:

- Fermentation Process (EU 003)
- Dried Distiller's Grain with Solubles ("DDGS") Dryhouse #1 (EUs 004 and 005)
- Warehouse Aging (EU 006)
- Loadout Stations (EUs 024 and 025)
- Distillation Systems (EUs 021, 022, and 023)

As previously described in this letter, the emission calculations and forms presented herein apply site-specific NO_X and CO emission factors based on recent source test results to calculate the PTE of Boiler #9 (EU 08). This represents a revision of both the original 2018 application and the supplement submitted on January 30, 2020.

In addition to the emission calculations presented in the DEP7007N forms, the DEP7007DD form included in Attachment A of this TVR supplement confirms the designation of Insignificant Activities ("IAs") for the facility and identifies emissions from process vessels, other tanks, and bottling lines. This form comprehensively identifies IAs at the site and is intended to serve as KDAQ's reference to update the IA list in Section C of the current air permit.

Supplemental Regulatory Review

As represented by the DEP7007V forms contained in Attachment A, the following supplemental regulatory requirements relative to the 2018 version of BTD's Title V renewal application are addressed by this application:

- 401 KAR 63:020 requirements for emissions from the Fermentation Process (EU 003), Distillation Systems (EUs 021, 022, and 023), and DDGS Dryhouse #1 System (EUs 004 and 005);

- 401 KAR 50:012, Section 1, paragraph (2) provisions requiring all major air contaminant sources to apply minimum control procedures that are reasonable, available, and practical ("RAP"), which are applicable to VOC emissions from the Fermentation Process (EU 003), Distillation Columns (EUs 021, 022, and 023), DDGS Dryhouse #1 System (EUs 004 and 005), and Loadout Stations (EUs 024 and 025);

- 401 KAR 59:010 and 61:020 process weight rule requirements, which are applicable to PM and opacity emissions from the DDGS Dryhouse #1 System (EUs 004 and 005); and

- 401 KAR 59:015 limits on PM, opacity, and SO2 emissions, which are applicable to the indirect heat exchangers used for temperature control by the existing rick houses (EU 020).

This submittal is affirmed by BTD's responsible official via the signature on the DEP7007AI form in Attachment A, which is included to facilitate processing of this application.

Suggested Draft Permit

The results of this regulatory review are also represented by the suggested draft permit contained in Attachment B. This suggested draft permit language includes requested updates to throughputs and operating information for various emission sources, as characterized by the updated forms provided in Attachment A. Additionally, this suggested permit language accommodates the changes requested by past submittals summarized in this letter and proposes conditions to establish the voluntary NO_X and VOC limits for non-fugitive distillery-wide emissions, along with associated compliance demonstration strategies.

*****

If you have any questions regarding this submittal, please contact me at 859.341.8100 x104.

Sincerely,

TRINITY CONSULTANTS

Maren Seibold
Managing Consultant

Attachments

cc: Michael Kennedy, KDAQ
Rick Shewekah, KDAQ
Liz Natter, EEC
Harlen Wheatley, Buffalo Trace
Andrew Leet, Buffalo Trace
Mary Tortorice, Sazerac
Heather Davis, Heather Davis Law
Laura McAfee, Beveridge & Diamond
Mitchell Denham, Dressman Benzinger LaVelle
Mike Zimmer, Trinity Consultants

ATTACHMENT A

DEP7007 Forms (AI, A, B, EE, N, V, and DD)

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section AI.1: Source Information

Physical Location Address:	**Street:**	113 Great Buffalo Trace				
	City:	Frankfort	**County:**	Franklin	**Zip Code:**	40601
Mailing Address:	**Street or P.O. Box:**	*Same as physical address*				
	City:		**State:**		**Zip Code:**	

Standard Coordinates for Source Physical Location

Longitude: -84.871° E (decimal degrees) **Latitude:** 38.216694° N (decimal degrees)

Primary (NAICS) Category: Distilleries **Primary NAICS #:** 312140

Classification (SIC) Category: Distilled and Blended Liquors **Primary SIC #:** 2085

Briefly discuss the type of business conducted at this site: The site produces distilled spirits. Grain is delivered, ground, and introduced to mash cookers. The mash is fed to fermenters and then to distillation columns and condensers. The resulting liquid is stored in tanks, transferred to barrels for aging, and/or sent to the bottling area for packaging. Barrels of bourbon are stored in rick houses for aging. The spent grain is dried and sold as distiller's dried grain. Beverage ingredients are received in bulk for blending, and other distilled spirits are received by the facility in bulk and sent to the bottling area for packaging.

Description of Area Surrounding Source: ☐ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☑ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 474

Approximate distance to nearest residence or commercial property: Adjacent **Property Area:** 430 Acres **Is this source portable?** ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity: ☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____ ☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Buffalo Trace Distillery

Title: (if individual)

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: (if individual)

Phone: (502) 223-7641

Technical Contact

Name: Andrew Leet

Title: Environmental Engineer

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: aleet@buffalotrace.com

Phone: (859) 705-8187

Air Permit Contact for Source

Name: Andrew Leet

Title: Environmental Engineer

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: aleet@buffalotrace.com

Phone: (859) 705-8187

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name:

Title:

Mailing Address: **Street or P.O. Box:**

City: **State:** **Zip Code:**

Email:

Phone:

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position
Wholly-owned subsidiary of the Sazerac Company; New Orleans, LA	

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment
☑ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☐ Other: _____

Is the source requesting a limitation of potential emissions? ☑ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☐ Single HAP	
☑ Volatile Organic Compounds (VOC)	*250 tpy (facility-wide, non-fugitive)*	☐ Combined HAPs	
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☑ Nitrogen Oxides	*250 tpy (facility-wide, non-fugitive)*	☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)* _____ **Proposed Operation Start-Up Date:** *(MM/YYYY)* _____

Applicant is seeking coverage under a permit shield. ☑ **Yes** ☐ **No**

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- [x] DEP7007A Indirect Heat Exchangers and Turbines
- [x] DEP7007B Manufacturing or Processing Operations
- [ ] DEP7007C Incinerators and Waste Burners
- [ ] DEP7007F Episode Standby Plan
- [ ] DEP7007J Volatile Liquid Storage
- [ ] DEP7007K Surface Coating or Printing Operations
- [ ] DEP7007L Mineral Processes
- [ ] DEP7007M Metal Cleaning Degreasers
- [x] DEP7007N Source Emissions Profile
- [ ] DEP7007P Perchloroethylene Dry Cleaning Systems
- [ ] DEP7007R Emission Offset Credit
- [ ] DEP7007S Service Stations
- [ ] DEP7007T Metal Plating and Surface Treatment Operations
- [x] DEP7007V Applicable Requirements and Compliance Activities
- [ ] DEP7007Y Good Engineering Practice and Stack Height Determination
- [ ] DEP7007AA Compliance Schedule for Non-complying Emission Units
- [ ] DEP7007BB Certified Progress Report
- [ ] DEP7007CC Compliance Certification * *Refer to Env Audit Voluntary Disclosure*
- [x] DEP7007DD Insignificant Activities
- [x] DEP7007EE Internal Combustion Engines
- [ ] DEP7007FF Secondary Aluminum Processing
- [ ] DEP7007GG Control Equipment
- [ ] DEP7007HH Haul Roads
- [ ] Confidentiality Claim
- [ ] Ownership Change Form
- [ ] Secretary of State Certificate
- [ ] Flowcharts or diagrams depicting process
- [ ] Digital Line Graphs (DLG) files of buldings, roads, etc.
- [ ] Site Map
- [ ] Map or drawing depicting location of facility
- [ ] Safety Data Sheet (SDS)
- [ ] Emergency Response Plan
- [ ] Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the 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 information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Harlen Wheatley
Authorized Signature

8-11-20
Date

Harlen Wheatley
Type or Printed Name of Signatory

Master Distiller
Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations
Based on the recent Boiler #9 (EU 08) test results for NOx emissions, as represented by the DEP7007N forms included
with this application, the facility's non-fugitive potential NOx and VOC emissions are less than 250 tpy. Therefore, the
requested limits do not represent PSD avoidance limits. The DEP7007N forms included with this application reflect the
use of these source test results for EU 08, as well as revised stack parameters that were used in the acetaldehyde
modeling submitted to KDAQ on July 16, 2020. Additional information for the proposed RTO associated with the new
dryhouse is also included.

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007A

Indirect Heat Exchangers and Turbines

___ Section A.1: General Information

___ Section A.2: Operating and Fuel Information

___ Section A.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.

____ Manufacturer's specifications

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section A.1: General Information

Emission Unit #	Emission Unit Name	Process ID	Process Name	Identify General Type: Indirect Heat Exchanger, Gas Turbine, or Combustion Turbine	Indirect Heat Exchanger Configuration	Manufacturer	Model No./ Serial No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	SCC Code	SCC Units	Control Device ID	Stack ID
008	Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr)	1	Natural Gas Combustion	Indirect Heat Exchanger	Horizontally-Opposed	Zurn Industries	Burner: 9AODAR	01/1972	10200601	MMscf	NA	S-008
014	Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Burner	Burner: Model: CN4-200, SN: W-3696	09/2002	10200602	MMscf	NA	S-014
015	Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Boiler/ Limpsfield Burner	Burner: LCNOAL175/ 00514	09/2002	10200602	MMscf	NA	S-015
015	"	4	GNS Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Boiler/ Limpsfield Burner	Burner: LCNOAL175/ 00514	09/2002	10200502	Mgal	NA	"
020	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	1	Natural Gas Combustion	Indirect Heat Exchanger	Various	Various	Various	1998-2019	10200602	MMscf	NA	S-020

Section A.2: Operating and Fuel Information

Emission Unit #	If multipurpose unit, identify the percentage of use by purpose				Rated Capacity Heat Input *(MMBTU/hr)*	Rated Capacity Power Output		Describe Operating Scenario (only if this unit will be used in different configurations)	Classify Fuel as Primary or Secondary	Identify Fuel Type: Coal, Natural Gas, Wood, Biomass, Landfill/Digester Gas, Fuel Oil # (specify 1-6), or Other	Heat Content (HHV)		Maximum Operating Hours	Ash Content *(%)*	Sulfur Content *(%)*
	Space Heat	Process Heat	Power	Emergency			*(Specify units: hp, MW, or lb steam/hr)*					*(Specify units: Btu/lb, Btu/gal, or Btu/scf)*			
008-1	na	100%	na	na	140.8	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
014-1	na	100%	na	na	60.5	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
015-1	na	100%	na	na	60.5	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
015-4	na	100%	na	na	60.5	Unk		na	Secondary	GNS	69,095.4	Btu/gal	8,760	N/A	N/A
020-1	na	100%	na	na	9.8 Total	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A

Section A.3: Notes, Comments, and Explanations

For 008-01, used the results of the testing performed on May 28, 2020, revised NOX and CO emission factors for Boiler #9 (EU 08) and de-rated Boiler #9 to 80% of its nameplate capacity. The source test report documenting the derivation of these NOX and CO emission factors was submitted by Kenvirons to KDAQ on July 20, 2020. As described in the test report and as discussed with KDAQ, the potential emission calculations presented in this application reflect the average results of Runs 3-4 for NOX and CO emissions and the de-rated capacity of Boiler #9.

Division for Air Quality

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DEP7007EE

Internal Combustion Engines

___ Section EE.1: General Information
___ Section EE.2: Operating Information
___ Section EE.3: Design Information
___ Section EE.4: Fuel Information
___ Section EE.5: Emission Factor Information
___ Section EE.6: Notes, Comments, and Explanations

Additional Documentation

__ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG

__ Attach EPA certification of the engine

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, August 11, 2020*

Section EE.1: General Information

Emission Unit #	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Date Reconstructed/ Modified	List Applicable Regulations
019	G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine	N/A	S-019-1	Generac	SG070	2007	9/24/2007	11/2007	na	40 CFR 60 Subpart JJJJ (Gap Engine)
019	G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068)	N/A	S-019-2	Cummins	75GGHF	2006	5/1/2006	07/2006	na	40 CFR 63 Subpart ZZZZ (Existing Engine)

Section EE.2: Operating Information

Emission Unit #	Engine Purpose (Identify if Non-Emergency, Emergency,Fire/Water Pump, Black-start engine for combustion turbine, Engine Testing)	Hours Operated	Is this engine a rental? *(Yes/No)*	Rental Time Period *(hrs)*	Alternate Operating Scenarios (Describe any operating scenarios in which the engine may be used in a different configuration)
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion					
019	Emergency	500	No	na	
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion					
019	Emergency	500	No	na	

Section EE.3: Design Information

Emission Unit #	Engine Type (Identify all that apply: Commercial, Institutional, Stationary, Non-Road)	Ignition Type (Identify if either Compression or Spark Ignition)	Engine Family (Identify all that apply: 2-stroke, 4-stroke, Rich Burn, Lean Burn)	Maximum Engine Power *(bhp)*	Maximum Engine Speed *(rpm)*	Total Displacement *(L)*	Number of Cylinders
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion							
019	Stationary	Spark Ignition	4-Stroke, Lean Burn	107	1,800	6.8	10
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion							
019	Stationary	Spark Ignition	4-Stroke, Lean Burn	126	1,800	6.8	10

Section EE.4: Fuel Information

Emission Unit #	Identify if Primary, Secondary, or Tertiary Fuel	Fuel Type (Identify if Diesel, Gasoline, Natural Gas, Liquefied Petroleum Gas (LPG), Landfill/Digester Gas, or Other)	Fuel Grade	Percent Time Used *(%)*	Maximum Fuel Consumption	Heat Content	Sulfur Content *(%)*	SCC Code	SCC Units
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion									
019	Primary	Natural Gas	na	100	1,009 scf/hr	1,020 Btu/scf	Neg.	20200202	MMcf NG Burned
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion									
019	Primary	Natural Gas	na	100	1,017 scf/hr	1,020 Btu/scf	Neg.	20200202	MMcf NG Burned

Section EE.5: Emission Factor Information

Emission factors expressed here are based on the potential to emit.

Emission Unit #	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion					
019	Primary	PM/PM10/PM2.5	10.2	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	NOx	4161.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	SO2	0.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	VOC	120.4	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO	323.3	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO2	119316.9	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-1
019	Primary	N2O	0.22	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	CH4	2.25	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	Formaldehyde	53.9	lb/MMcf NG Burned	AP-42 Table 3.2-2
019	Primary	Ammonia	18.0	lb/MMcf NG Burned	SCAQMD Document, 12/2016
019	Primary	Lead	0.00050	lb/MMcf NG Burned	AP-42 Table 1.4-2
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion					
019	Primary	PM/PM10/PM2.5	10.2	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	NOx	4161.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	SO2	0.60	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	VOC	120	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO	323	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO2	119,317	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-1
019	Primary	N2O	0.22	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	CH4	2.25	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	Formaldehyde	53.9	lb/MMcf NG Burned	AP-42 Table 3.2-2
019	Primary	Ammonia	18.0	lb/MMcf NG Burned	SCAQMD Document, 12/2016
019	Primary	Lead	5.00E-04	lb/MMcf NG Burned	AP-42 Table 1.4-2

Section EE.6: Notes, Comments, and Explanations

Division for Air Quality

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DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, August 11, 2020*

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
002	Hammer Mill Group and Receiver Process Cyclone		1	Hammer Mill and Receiver Process Cyclone (01-006)	NA	NA	01/1969	Continuous	NA	NA
003	Fermentation Process		1	Fermentation Vessels (12)	NA	NA	1944 1/1/1969	Batch		
Note: Each of 12 fermenters is ~92,087 gallons.										
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator		1	Cyclone Separators from No. 1 Rotary Dryer (03-001)	NA	NA	01/1976	Continuous	NA	NA
			2	No. 1 Rotary Steam Tube Dryer (03-001)	NA	NA	01/1976	Continuous	NA	NA
Included a new process ID for the dryer emissions.										
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator		1	Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	NA	NA	01/1973	Continuous	NA	NA
			2	Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)	NA	NA	01/1969	Continuous	NA	NA
			3	Centrifuge	NA	NA	01/1900	Continuous	NA	NA
Included a new process ID for venting from dryer and screens/presses/conveyors in addition to the cyclone separator.										
006	Aging		1	Warehouse Aging	NA	NA	1936 - 1952	Continuous	NA	NA
Moved barrel filling and dumping to IA list.										

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
021	No. 1 Bourbon Distillation System		1	Beer Still #1 S/N 0269	NA	NA	1956	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
021	No. 1 Bourbon Distillation System		2	Doubler Still #2, S/N 0733	NA	NA	1956	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
022	Vodka Distillation System		1	Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494	NA	NA	1967	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
023	Platinum Distillation System		1	Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804	NA	NA	2011	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
024	Bldg 3 Loadout Station		1	Loading losses	NA	NA	2015	Batch	18	0.67
Moved from IA list to a significant emissions unit.										
025	Regauge Loadout Station		1	Loading losses	NA	NA	2008	Batch	21	0.67
Moved from IA list to a significant emissions unit.										

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input	(Specify Units/hr)	Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output	(Specify Units/hr)	Fuel Type	Maximum Hourly Fuel Usage Rate	(Specify Units)	Maximum Yearly Fuel Usage Rate	(Specify Units)	Sulfur Content (%)	Ash Content (%)
003-1	Fermentation Process	Grain Input	0.456	MBU/hr	12.77	Beer			NA	NA	NA	NA	NA	NA	NA
		Yeast	12.07	lbs/hr	0.0060				NA	NA	NA	NA	NA	NA	NA
Updated the maximum hourly operating rate from 11.19 MBU/hr to 0.468 MBU/hr for all 12 mash fermenters.															
004-1	DDGS Dryhouse #1: Cyclone Separators from No. 1 Rotary Dryer	DDGS	2.5	tph	2.5	DDGS	2.5	tph	NA	NA	NA	NA	NA	NA	NA
The output from No. 1 Dryer is 1 to 2.5 tons per hour, not 23.6 tph.															
004-2	DDGS Dryhouse #1: No. 1 Rotary Steam Tube Dryer	Thicker Stillage Syrup Recycled DDGS	19.2	tph	19.2	DDGS	2.5	tph	NA	NA	NA	NA	NA	NA	NA
Note: Input based on a DDGS of 300 gpm (or 81.87 tph), where 61.1% of the mass enters the dryer, or 50 tons/hr. Then we scaled that value by the output from No. 1 Dryer (2.5 tph/6.5 tph)															
Included a new process ID for the dryer emissions.															
005-1	DDGS Dryhouse #1: Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	DDGS	4.0	tph	4.0	DDGS	4	tph	NA	NA	NA	NA	NA	NA	NA
The output from Rotary Dryers No. 2 through 4 is up to 4 tons per hour, not 12.6 tph.															
005-2	DDGS Dryhouse #1: Nos. 2 - 4 Rotary Steam Tube Dryers	Thicker Stillage Syrup Recycled DDGS	30.8	tph	30.8	DDGS	4	tph	NA	NA	NA	NA	NA	NA	NA
Input based on a DDGS of 300 gpm (or 81.87 tph), where 61.1% of the mass enters the dryer, or 50 tons/hr. Then we scaled that value by the output from the three dryers (4 tph/6.5 tph).															
Included a new process ID for the dryer emissions.															
005-3	DDGS Dryhouse #1: Screens/ Presses/ Conveyors	Thick Stillage	18,000	gal/hr	81.9	Wet Cake + Thin Slop	81.9	tph	NA	NA	NA	NA	NA	NA	NA
Note: Input based on a DDGS of 300 gpm (or 81.87 tph).															

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input	(Specify Units/hr)	Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output	(Specify Units/hr)	Fuel Type	Maximum Hourly Fuel Usage Rate	(Specify Units)	Maximum Yearly Fuel Usage Rate	(Specify Units)	Sulfur Content (%)	Ash Content (%)
Included a new process ID for operation of screens/presses.															
006-1	Aging	White Dog	69.47	barrels/hr	N/A	Aged Distilled Spirits			NA	NA	NA	NA	NA	NA	NA
Moved barrel filling and dumping to IA list.															
021-1	No. 1 Bourbon Distillation System: Beer Still	Sour Mash (Beer)	17.669	Mgal/hr	N/A	Low Wine			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
021-2	No. 1 Bourbon Distillation System: Doubler Still	Low Wine	1.304	Mgal/hr	N/A	High Wine			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
022-1	Vodka Distillation System	Sour Mash (Beer)	2.188	Mgal/hr	N/A	Spirits			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
023-1	Platinum Distillation System	Sour Mash (Beer)	0.816	Mgal/hr	N/A	Spirits			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
024-1	Bldg 3 Loadout Station	40-193 proof spirits	4.50	Mgal/hr	N/A	40-193 proof spirits	4.50	Mgal/hr	NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
025-1	Regauge Loadout Station	80-145 Proof Bourbons	5.25	Mgal/hr	N/A	80-145 Proof Bourbons	5.25	Mgal/hr	NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit. Maximum process rate is seven (7) tanker trucks (6,000 gal each) in 8-hr shift at a max average proof of 120.															

Section B.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
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DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary
__ Section N.2: Stack Information
__ Section N.3: Fugitive Information
__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, August 11, 2020*

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
001	Grain and Distiller's Dried Grain Handling	1	Grain Unloading (01-001)	NA	NA	F-001	56.00	PM10	0.500	Prior KyEIS	100.00%	-	28.0	-	123	-
							56.00	PM2.5	0.009	Prior KyEIS	100.00%	-	0.504	-	2.21	-
							56.00	PT	0.900	Prior KyEIS	100.00%	-	50.4	-	221	-
001	Grain and Distiller's Dried Grain Handling	2	Grain Conveying/Elevator (01-002)	NA	NA	F-001	56.00	PM10	0.500	Prior KyEIS	100.00%	90.0%	28.0	2.80	123	12.3
							56.00	PM2.5	0.100	Prior KyEIS	100.00%	90.0%	5.60	0.560	24.5	2.45
							56.00	PT	10.0	Prior KyEIS	100.00%	90.0%	560	56.0	2,453	245
001	Grain and Distiller's Dried Grain Handling	3	Grain Hammermill Conveyor (01-005)	NA	NA	F-001	25.20	PM10	1.20	Prior KyEIS	100.00%	90.0%	30.2	3.02	132	13.2
							25.20	PM2.5	0.024	Prior KyEIS	100.00%	90.0%	0.605	0.060	2.65	0.265
							25.20	PT	2.40	Prior KyEIS	100.00%	90.0%	60.5	6.05	265	26.5
001	Grain and Distiller's Dried Grain Handling	4	Distiller's dried grain loading/conveyor (03-005)	NA	NA	F-001	33.00	PM10	0.010	Prior KyEIS	100.00%	-	0.330	-	1.45	-
							33.00	PM2.5	0.010	Prior KyEIS	100.00%	-	0.330	-	1.45	-
							33.00	PT	0.310	Prior KyEIS	100.00%	-	10.2	-	44.8	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
002	Hammer Mill Group and Receiver Process Cyclone	1	Hammer Mill and Receiver Process Cyclone (01-006)	NA	NA	S-002	25.20	PM10	0.060	Prior KyEIS	100.00%	-	1.51	-	6.62	-
							25.20	PM2.5	0.001	Prior KyEIS	100.00%	-	0.030	-	0.132	-
							25.20	PT	0.120	Prior KyEIS	100.00%	-	3.02	-	13.2	-
003	Fermentation Process	1	Fermentation Vessels (12)	NA	NA	S-003	0.456	VOC	14.3	AP-42-Tab 9.12.3-1	100.00%	-	6.50	-	28.5	-
							0.456	Ethanol	14.2	AP-42-Tab 9.12.3-1	100.00%	-	6.48	-	28.4	-
							0.456	Ethyl Acetate	0.046	AP-42-Tab 9.12.3-1	100.00%	-	0.021	-	0.092	-
							0.456	Isoamyl Alcohol	0.013	AP-42-Tab 9.12.3-1	100.00%	-	0.006	-	0.026	-
							0.456	Isobutyl Alcohol	0.004	AP-42-Tab 9.12.3-1	100.00%	-	0.002	-	0.008	-
							0.456	CO2	13.6	Note 2	100.00%	-	6.19	-	27.1	-
							0.456	Acetaldehyde	0.057	Note 1	100.00%	-	0.026	-	0.115	-
							0.456	Propionaldehyde	0.004	Note 1	100.00%	-	0.002	-	0.008	-
							0.456	Methanol	0.002	Note 1	100.00%	-	8.65E-04	-	0.004	-
							0.456	Formaldehyde	0.002	Note 1	100.00%	-	8.65E-04	-	0.004	-
							0.456	HAPs	0.065	Sum of HAPs	100.00%	-	0.030	-	0.130	-
Corrected VOC EF from 14.2 to 14.263 lbs/1000 bushels (MBU) Source: AP-42, Table 9.12.3-1. Added other non-HAP compounds with emission factors established by AP-42. Estimated HAP and CO2 emissions per Notes 1 and 2, respectively.																
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	1	Cyclone Separators from No. 1 Rotary Dryer (03-001)	NA	NA	S-004-1	2.5	PM10	1.50	Prior KyEIS	100.00%	65.00%	3.75	1.31	16.4	5.75
							2.5	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	1.73	0.604	7.56	2.64
							2.5	PT	3.00	Prior KyEIS	100.00%	65.00%	7.50	2.63	32.9	11.5
							2.5	VOC	0.494	See Note 3	100.00%	-	1.23	-	5.40	-
							2.5	Acetaldehyde	0.020	See Note 4	100.00%	-	0.050	-	0.221	-
							2.5	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Formaldehyde	0.015	See Note 4	100.00%	-	0.038	-	0.166	-
							2.5	HAPs	0.035	Sum	100.00%	-	0.088	-	0.387	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	2	No. 1 Rotary Steam Tube Dryer (03-001)	NA	NA	S-004-2	2.5	VOC	3.56	See Note 6	100.00%	-	8.90	-	39.0	-
							2.5	Acetaldehyde	0.220	See Note 7	100.00%	-	0.550	-	2.41	-
							2.5	Acrolein	0.013	See Note 7	100.00%	-	0.033	-	0.144	-
							2.5	Methanol	0.044	See Note 7	100.00%	-	0.110	-	0.483	-
							2.5	Formaldehyde	0.001	See Note 7	100.00%	-	0.004	-	0.016	-
							2.5	HAPs	0.279	Sum	100.00%	-	0.697	-	3.05	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	1	Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	NA	NA	S-005-1	4.00	PM10	1.50	Prior KyEIS	100.00%	65.00%	6.00	2.10	26.3	9.20
							4.00	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	2.76	0.966	12.1	4.23
							4.00	PT	3.00	Prior KyEIS	100.00%	65.00%	12.0	4.20	52.6	18.4
							4.00	VOC	0.494	See Note 3	100.00%	-	1.97	-	8.65	-
							4.00	Acetaldehyde	0.020	See Note 4	100.00%	-	0.081	-	0.353	-
							4.00	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Formaldehyde	0.015	See Note 4	100.00%	-	0.061	-	0.266	-
							4.00	HAPs	0.035	Sum	100.00%	-	0.141	-	0.619	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	2	Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)	NA	NA	S-005-2	4.00	VOC	3.56	See Note 6	100.00%	-	14.2	-	62.4	-
							4.00	Acetaldehyde	0.220	See Note 7	100.00%	-	0.880	-	3.85	-
							4.00	Acrolein	0.013	See Note 7	100.00%	-	0.053	-	0.231	-
							4.00	Methanol	0.044	See Note 7	100.00%	-	0.177	-	0.773	-
							4.00	Formaldehyde	0.001	See Note 7	100.00%	-	0.006	-	0.025	-
							4.00	HAPs	0.279	Sum	100.00%	-	1.11	-	4.88	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	3	Centrifuge	NA	NA	S-005-3	18,000	VOC	4.62E-05	See Note 8	100.00%	-	0.832	-	3.64	-
							18,000	Acetaldehyde	4.90E-07	See Note 8B	100.00%	-	0.009	-	0.039	-
							18,000	Acrolein	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Methanol	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Formaldehyde	-	See Note 8B	100.00%	-	-	-	-	-
							18,000	HAPs	4.60E-06	Sum	100.00%	-	0.083	-	0.362	-
Per audit disclosure, added emissions of VOCs and HAPs from this new process ID.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
006	Aging	1	Warehouse Aging	NA	NA	F-006	69.5	VOC	6.90	AP-42-Tab 9.12.3-1	100.00%	-	479	-	2,100	-
Even though EF did not change, potential emissions changed based on revised process rate.																
008	Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr)	1	Natural Gas Combustion	NA	NA	S-008	0.138	CO2	119,317	† EPA's GHG Reporting Rule (40 CFR 98), Table C-1	100.00%	-	16,470	-	72,140	-
							0.138	CO	15.9	June 2020 Kenvirons Source Test	100.00%	-	2.19	-	9.61	-
							0.138	CO2e	119,440	†† Scaled GHG by GWP	100.00%	-	16,487	-	72,215	-
							0.138	HAPs	1.89	‡ Sum of HAPs, AP-42 Section 1.4 Table 1.4-3 (7/98)	100.00%	-	0.261	-	1.14	-
							0.138	Hexane	1.80	‡	100.00%	-	0.248	-	1.09	-
							0.138	Formaldehyde	0.075	‡	100.00%	-	0.010	-	0.045	-
							0.138	CH4	2.25	††† EPA's GHG Reporting Rule (40 CFR 98), Table C-2	100.00%	-	0.311	-	1.36	-
							0.138	N2O	0.225	†††	100.00%	-	0.031	-	0.136	-
							0.138	NOX	185	June 2020 Kenvirons Source Test	100.00%	-	25.5	-	112	-
							0.138	PM10	7.60	** AP-42 Section 1.4 Table 1.4-2 (7/98)	100.00%	-	1.05	-	4.60	-
							0.138	PM2.5	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	PT	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	SO2	0.600	**	100.00%	-	0.083	-	0.363	-
							0.138	VOC	5.50	**	100.00%	-	0.759	-	3.33	-
Updated maximum heat input rating. Updated a few emissions factors. Changed NOX EF to 280 lbs/MMBtu per AP-42 Section 1.4 Table 1.4-1 (7/98), factor for large (>100 MMBtu/hr) boiler with pre-NSPS burners																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
014	Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	NA	NA	S-014	0.059	CO2	119,317	†	100.00%	-	7,077	-	30,998	-
							0.059	CO	84.0	*	100.00%	-	4.98	-	21.8	-
							0.059	CO2e	119,440	††	100.00%	-	7,084	-	31,030	-
							0.059	HAPs	1.89	‡	100.00%	-	0.112	-	0.491	-
							0.059	Hexane	1.80	‡	100.00%	-	0.107	-	0.468	-
							0.059	Formaldehyde	0.075	‡	100.00%	-	0.004	-	0.019	-
							0.059	CH4	2.25	†††	100.00%	-	0.133	-	0.585	-
							0.059	N2O	0.225	†††	100.00%	-	0.013	-	0.058	-
							0.059	NOX	100.0	AP-42 Table 1.4-1, small uncontrolled boiler	100.00%	-	5.93	-	26.0	-
							0.059	PM10	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PM2.5	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PT	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	SO2	0.600	**	100.00%	-	0.036	-	0.156	-
							0.059	VOC	5.50	**	100.00%	-	0.326	-	1.43	-
Updated maximum heat input rating. Updated a few emissions factors.																
015	Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	NA	NA	S-015	0.059	CO2	119,317	†	100.00%	-	7,077	-	30,998	-
							0.059	CO	84.0	*	100.00%	-	4.98	-	21.8	-
							0.059	HAPs	1.89	††	100.00%	-	0.112	-	0.491	-
							0.059	Hexane	1.80	‡	100.00%	-	0.107	-	0.468	-
							0.059	Formaldehyde	0.075	‡	100.00%	-	0.004	-	0.019	-
							0.059	CO2e	119,440	‡	100.00%	-	7,084	-	31,030	-
							0.059	CH4	2.25	†††	100.00%	-	0.133	-	0.585	-
							0.059	N2O	0.225	*	100.00%	-	0.013	-	0.058	-
							0.059	NOX	50.0	AP-42 Table 1.4-1, small boiler with LNB	100.00%	-	2.97	-	13.0	-
							0.059	PM10	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PM2.5	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PT	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	SO2	0.600	**	100.00%	-	0.036	-	0.156	-
							0.059	VOC	5.50	**	100.00%	-	0.326	-	1.43	-
Updated maximum heat input rating. Updated a few emissions factors. Changed NOX EF to 50 lbs/MMBtu per AP-42 Section 1.4 Table 1.4-1 (7/98), factor for large (>100 MMBtu/hr) boiler with LNBs.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
015	"	4	GNS Combustion	NA	NA	S-015	0.088	CO	5.00	σ AP-42 Section 1.3 Table 1.3-1 (5/10)	100.00%	-	0.438	-	1.92	-
							0.088	NOX	20.0	σ	100.00%	-	1.75	-	7.67	-
							0.088	PM10	3.30	AP-42 Section 1.3 Table 1.3-1 & 2 (5/10)	100.00%	-	0.289	-	1.27	-
							0.088	PM2.5	3.30	σσ AP-42 Section 1.3 Table 1.3-1 & 2 (5/10)	100.00%	-	0.289	-	1.27	-
							0.088	PT	3.30	σσ	100.00%	-	0.289	-	1.27	-
							0.088	SO2	2.13	AP-42 Section 1.3 Table 1.3-1 (5/10)	100.00%	-	0.187	-	0.817	-
							0.088	VOC	0.200	σσσ AP-42 Section 1.3 Table 1.3-3 (5/10)	100.00%	-	0.018	-	0.077	-
							0.088	CO2	10,425	†	100.00%	-	913	-	3,998	-
							0.088	CH4	0.168	†††	100.00%	-	0.015	-	0.064	-
							0.088	N2O	0.017	†††	100.00%	-	0.001	-	0.006	-
							0.088	CO2e	10,435	††	100.00%	-	914	-	4,002	-
							0.088	HAPs	0.068	Sum of HAPs, AP-42 Section 1.4 Table 1.4-3 (7/98)	100.00%	-	0.006	-	0.026	-
017	Thunder Gas Tank: 1,120 gallon Gasoline Dispensing Tank 01	1	Breathing Losses	NA	NA	S-017	0.011	VOC	2.46	TankESP, AP-42 Section 7.1	100.00%	-	0.028	-	0.120	-
		2	Working Losses	NA	NA	S-017	0.011	VOC	3.65	TankESP, AP-42 Chapter 7	100.00%	-	0.041	-	0.179	-
		3	Loading Losses	NA	NA	S-017	0.011	VOC	11.7	AP-42 Section 5.2	100.00%	-	0.131	-	0.574	-
018	Farm Tank: 250 gallon Gasoline Dispensing Tank 02	1	Breathing Losses	NA	NA	S-018	0.003	VOC	6.54	TankESP, AP-42 Section 7.1	100.00%	-	0.016	-	0.072	-
		2	Working Losses	NA	NA	S-018	0.003	VOC	2.24	TankESP, AP-42 Chapter 7	100.00%	-	0.006	-	0.024	-
		3	Loading Losses	NA	NA	S-018	0.003	VOC	11.7	AP-42 Section 5.2	100.00%	-	0.029	-	0.128	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
019	G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine	1	Natural Gas Combustion	NA	NA	S-019-1	1.009E-03	PM10	10.2	AP-42 Table 3.2-2, 07/2000	100.00%	-	0.010	-	0.003	-
							1.009E-03	PM2.5	10.2	""	100.00%	-	0.010	-	0.003	-
							1.009E-03	PT	10.2	""	100.00%	-	0.010	-	0.003	-
							1.009E-03	NOx	4,162	""	100.00%	-	4.20	-	1.05	-
							1.009E-03	SO2	0.600	""	100.00%	-	6.05E-04	-	1.51E-04	-
							1.009E-03	VOC	120	""	100.00%	-	0.121	-	0.030	-
							1.009E-03	CO	323	""	100.00%	-	0.326	-	0.082	-
							1.009E-03	CO2	119,317	†	100.00%	-	120	-	30.1	-
							1.009E-03	N2O	0.225	†††	100.00%	-	2.27E-04	-	5.67E-05	-
							1.009E-03	CH4	2.25	†††	100.00%	-	0.002	-	5.67E-04	-
							1.009E-03	Formaldehyde	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-
							1.009E-03	Ammonia	18.0	SCAQMD Document, 12/2016	100.00%	-	0.018	-	0.005	-
							1.009E-03	Lead	5.00E-04	AP-42 Table 1.4-2	100.00%	-	5.05E-07	-	1.26E-07	-
							1.009E-03	HAPs	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
019	G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068)	2	Natural Gas Combustion	NA	NA	S-019-2	1.017E-03	PM10	10.2	AP-42 Table 3.2-2, 07/2000	100.00%	-	0.010	-	0.003	-
							1.017E-03	PM2.5	10.2	""	100.00%	-	0.010	-	0.003	-
							1.017E-03	PT	10.2	""	100.00%	-	0.010	-	0.003	-
							1.017E-03	NOx	4,162	""	100.00%	-	4.23	-	1.06	-
							1.017E-03	SO2	0.600	""	100.00%	-	6.10E-04	-	1.53E-04	-
							1.017E-03	VOC	120	""	100.00%	-	0.122	-	0.031	-
							1.017E-03	CO	323	""	100.00%	-	0.329	-	0.082	-
							1.017E-03	CO2	119,317	†	100.00%	-	121	-	30.3	-
							1.017E-03	N2O	0.225	†††	100.00%	-	2.29E-04	-	5.72E-05	-
							1.017E-03	CH4	2.25	†††	100.00%	-	0.002	-	5.72E-04	-
							1.017E-03	Formaldehyde	53.9	AP-42 Table 3.2-2	100.00%	-	0.055	-	0.014	-
							1.017E-03	Ammonia	18.0	SCAQMD Document, 12/2016	100.00%	-	0.018	-	0.005	-
							1.017E-03	Lead	5.00E-04	AP-42 Table 1.4-2	100.00%	-	5.09E-07	-	1.27E-07	-
							1.009E-03	HAPs	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-
020	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	1	Natural Gas Combustion	NA	NA	S-020	9.608E-03	CO2	119,317	†	100.00%	-	1,146	-	5,021	-
							9.608E-03	CO	84.0	*	100.00%	-	0.807	-	3.53	-
							9.608E-03	HAPs	1.89	††	100.00%	-	0.018	-	0.079	-
							9.608E-03	CO2e	119,440	‡	100.00%	-	1,148	-	5,026	-
							9.608E-03	CH4	2.25	†††	100.00%	-	0.022	-	0.095	-
							9.608E-03	N2O	0.225	*	100.00%	-	0.002	-	0.009	-
							9.608E-03	NOX	100.0	AP-42 Section 1.4 Table 1.4-1 (7/98)	100.00%	-	0.961	-	4.21	-
							9.608E-03	PM10	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	PM2.5	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	PT	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	SO2	0.600	**	100.00%	-	0.006	-	0.025	-
							9.608E-03	VOC	5.50	**	100.00%	-	0.053	-	0.231	-

Per audit disclosure, added emissions of criteria pollutants and HAPs from this existing process.

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
021	No. 1 Bourbon Distillation System	1	Beer Still #1 S/N 0269	NA	NA	S-021-1A	2.08	VOC	0.321	See Note 9	100.00%	-	0.668	-	2.93	-
							2.08	Acetaldehyde	0.016	See Note 9	100.00%	-	0.034	-	0.150	-
							2.08	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Methanol	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Formaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	HAPs	0.019	Sum	100.00%	-	0.039	-	0.169	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
021	No. 1 Bourbon Distillation System	2	Doubler Still #2, S/N 0733	NA	NA	S-021-2A	1.19	VOC	0.321	See Note 9	100.00%	-	0.380	-	1.67	-
							1.19	Acetaldehyde	0.016	See Note 9	100.00%	-	0.020	-	0.085	-
							1.19	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Methanol	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Formaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	HAPs	0.019	Sum	100.00%	-	0.022	-	0.096	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
022	Vodka Distillation System	1	Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494	NA	NA	S-022A	1.04	VOC	0.321	See Note 9	100.00%	-	0.334	-	1.46	-
							1.04	Acetaldehyde	0.016	See Note 9	100.00%	-	0.017	-	0.075	-
							1.04	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	Methanol	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	Formaldehyde	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	HAPs	0.019	Sum	100.00%	-	0.019	-	0.085	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
023	Platinum Distillation System	1	Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804	NA	NA	S-023A	0.389	VOC	0.321	See Note 9	100.00%	-	0.125	-	0.546	-
							0.389	Acetaldehyde	0.016	See Note 9	100.00%	-	0.006	-	0.028	-
							0.389	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	Methanol	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	Formaldehyde	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	HAPs	0.019	Sum	100.00%	-	0.007	-	0.032	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
024	Bldg 3 Loadout Station	1	Loading losses	NA	NA	S-024	4.50	VOC	0.693	AP-42 Section 5.2.2.1.1, Engineering Calculations	100.00%	-	3.12	-	13.7	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
025	Regauge Loadout Station	1	Loading losses	NA	NA	S-025	5.25	VOC	0.889	AP-42 Section 5.2.2.1.1, Engineering Calculations	100.00%	-	4.67	-	20.4	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																

N.1: PSD Emission Summary

Emission Units	Pollutant	Annual Emissions		Comparison to PSD Major Threshold	Voluntary Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Facility-Wide: Primary SIC Distillery + All Heat Exchangers	VOC	2,295	2,295	NA	
	Non-Fugitive VOCs	196	196	N < 250 tpy	Yes
	NOX	165	165	N < 250 tpy	Yes
	CO	58.9	58.9	N < 250 tpy	
	PT	3,092	591	NA	
	Non-Fugitive PT	109	53.3	N < 250 tpy	
	PM10	439	181	NA	
	Non-Fugitive PM10	59.5	31.7	N < 250 tpy	
	PM2.5	60.7	23.5	NA	
	Non-Fugitive PM2.5	29.9	17.1	N < 250 tpy	
	SO2	1.52	1.52	N < 250 tpy	

Emission Units	Pollutant	Annual Emissions		Comparison to PSD Major Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Support SIC Boilers: EU 08, EU 14, EU 15, & EU 20	VOC	6.49	6.49	N < 100 tpy	
	NOX	162	162	Y > 100 tpy	No
	CO	58.7	58.7	Y > 100 tpy	No
	PT	10.1	10.1	N < 100 tpy	
	PM10	10.1	10.1	N < 100 tpy	
	PM2.5	10.1	10.1	N < 100 tpy	
	SO2	1.52	1.52	N < 100 tpy	

N.1: Title V Emission Summary

Emission Units	Pollutant	Annual Emissions		Comparison to Title V / HAP Major Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Facility-Wide: Primary SIC Distillery + Heat Exchangers	VOC	2,295	2,295	NA	
	Non-Fugitive VOCs	196	196	Y > 100 tpy	No
	NOX	165	165	Y > 100 tpy	No
	CO	58.9	58.9	Y > 100 tpy	No
	PT	3,092	591	NA	
	Non-Fugitive PT	109	53.3	N < 100 tpy	
	PM10	439	181	NA	
	Non-Fugitive PM10	59.5	31.7	N < 100 tpy	
	PM2.5	60.7	23.5	NA	
	Non-Fugitive PM2.5	29.9	17.1	N < 100 tpy	
	SO2	1.52	1.52	N < 100 tpy	
	CO2e	143,303	143,303	NA	
	HAPs	12.1	12.1	N < 25 tpy	
	Acetaldehyde	7.33	7.33	N < 10 tpy	
	Formaldehyde	0.603	0.603	N < 10 tpy	
	Hexane	2.02	2.02	N < 10 tpy	
	Lead	2.53E-07	2.53E-07	N < 10 tpy	
	Methanol	1.44	1.44	N < 10 tpy	
	Propionaldehyde	0.022	0.022	N < 10 tpy	

Section N.2: Stack Information

UTM Zone: 16

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
Hammer Mill Group and Receiver Process Cyclone; Hammer Mill and Receiver Process Cyclone (01-006)									
S-002	002-1	5.6	95	512	4,231,972	686,290	70,628	Amb	49.0
Fermentation Process; Fermentation Vessels (12)									
S-003	003-1	0.75	46	511.68	4,231,982	686,323	1,325	Amb	50.0
DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator; Cyclone Separators from No. 1 Rotary Dryer (03-001)									
S-004-1	004-1	9.80	40.0	512	4,231,985	686,296	105,942	89	23
DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator; No. 1 Rotary Steam Tube Dryer (03-001)									
S-004-2	004-2	2.50	50.8	512	4,232,031	686,273	14,726	300	50.0
Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator; Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4									
S-005-1	005-1	9.80	40.0	512	4,231,985	686,290	105,942	89	23
Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator; Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)									
S-005-2	005-2	3.95	47.2	512	4,232,031	686,278	36,750	300	50
S-005-3	005-3	3.95	47.0	512	4,232,031	686,284	36,750	300	50
S-005-4	005-4	3.95	47.3	512	4,232,031	686,289	36,750	300	50

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr); Natural Gas Combustion									
S-008	008-1	16.40	69.0	515	4,231,925	686,302	1,765,700	280	138
Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr; Natural Gas Combustion									
S-014	014-1	3.75	40.0	515	4,231,904	686,305	18,766	300	28
Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr; Natural Gas Combustion									
S-015	015-1	3.75	40.0	515	4,231,925	686,302	18,766	300	28
Thunder Gas Tank: 1,120 gallon Gasoline Dispensing Tank 01; Breathing Losses									
S-017	017-1	0.25	6.0	512	4,232,365	686,634	Neg	AMB	Neg
Farm Tank: 250 gallon Gasoline Dispensing Tank 02; Breathing Losses									
S-018	018-1	0.17	4.0	722	4,232,618	686,553	Neg	AMB	Neg
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion									
S-019-1	019-1	0.25	25.0	512	4,232,018	686,378	221	650	75.0
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion									
S-019-2	019-2	0.25	46.0	512	4,231,960	686,316	221	650	75.0
Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea; Natural Gas Combustion									
S-020	020-1	0.50	90.0	515	4,232,140	686,846	589	400	50.0
No. 1 Bourbon Distillation System; Beer Still #1 S/N 0269									
S-021-1A	021-1	0.50	30.0	515	4,231,926	686,330	295	200	25.0
No. 1 Bourbon Distillation System; Doubler Still #2, S/N 0733									
S-021-2A	021-2	0.50	30.0	515	4,231,927	686,335	295	200	25.0
Vodka Distillation System; Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494									
S-022A	022-1	0.50	50.0	515	4,231,926	686,325	295	200	25.0
Platinum Distillation System; Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804									
S-023A	023-1	0.50	50.0	515	4,231,926	686,321	295	200	25.0
Bldg 3 Loadout Station; Loading losses									
S-024	024-1	2.00	12.0	515	4,232,057	686,303	Neg	AMB	Neg
Regauge Loadout Station; Loading losses									
S-025	025-1	2.00	12.0	508	4,232,164	686,520	Neg	AMB	Neg

Section N.3: Fugitive Information

UTM Zone: 16

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side *(ft)*	Length of the Y Side *(ft)*	Northing *(m)*	Easting *(m)*	Release Temperature *(°F)*	Release Height *(ft)*
Grain and Distiller's Dried Grain Handling; Grain Unloading (01-001)								
F-001	Grain and Distiller's Dried Grain Handling	1	60.0	110.0	4,231,950	686,290	Amb	50.0
Aging; Warehouse Aging								
F-006	Aging	1	150.0	150.0	4,232,170	686,690	Amb	90.0
Represents the centroid of the property.								

Section N.4: Notes, Comments, and Explanations
Note 1: HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 9 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that acetaldehyde, propionaldehyde, formaldehyde, and methanol were 0.402%, 0.0267%, 0.0133%, and 0.0133% of VOC, respectively.
Note 2: Assume one mole of both ethanol and CO2 is generated during fermentation, thus EF for CO2 = 14.2 lbs EtOH/MBU * 44 lbs/lb-mol CO2 / 46 lbs/lb-mol EtOH * 1 mol CO2 / 1 mol of EtOH.
Note 3. Engineering Judgement. For cooling cyclone, 0.494 lbs/ton is 90% LPL from measured stack testing at LINCOLNWAY ENERGY, LLC - NEVADA, IA for S70, which is cooling cyclone for DDGS. For the mass balance around the cooling cyclone, this translates into a 69.0% VOC loss rate.
Note 4. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 69% VOC loss rate divided by the process weight in tons.
Note 5. Engineering Judgement based on raw material sampling that did not contain this HAP.
Note 6. Engineering Judgement. For dryer, the 3.56 lbs/ton is the average of three one-hour test runs measured at MGPI on August 25, 2016 on the inlet of a new dryer system running at 6.49 tons of DDGS per hour.
Note 7. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 11 of 28, TSD App A which references testing performed at similar facilities https://permits.air.idem.in.gov/40029f.pdf. This document shows that acetaldehyde, acrolein, methanol, and formaldehyde were 6.18%, 0.37%, 1.24%, and 0.04% of VOC, respectively.
Note 8. Engineering Judgement. For screens/presses, 0.046 lbs/Mgal is from measured average stack testing at POET - Mitchell stack testing results from April 18, 2017 with a 1.3 safety factor. For the mass balance around the screens/presses, this translates into a 1.24% VOC loss rate.
Note 8B. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 1.24% VOC loss rate divided by the process weight in tons.
Note 8C. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, scaled the measured EtOH concentration to the excepted ratio of a specific HAP to EtOH concentration as represented from the "TO" emissions unit shown in Daniel Brady & Gregory C. Pratt (2007) Volatile Organic Compound Emissions from Dry Mill Fuel Ethanol Production, Journal of the Air & Waste Management Association, 57:9, 1091-1102, DOI: 10.3155/1047-3289.57.9.1091
Note 9. Engineering Judgement. VOCs and Acetaldehyde were derived from Oregon DEQ Permit 05-0006-ST-01 for Columbia Pacific Bio-Refinery, see page 67of 75. Assumed process vent scrubber could achieve 98% CE for VOC and 65% CE for acetaldehyde (and other OHAPs) based on same source. Process scrubber returns material back to still so this is not treated as a control device. https://www.oregon.gov/deq/Programs/Documents/CPBREthanolAQPermitRtC.pdf
Note 10. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 8 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that propionaldehyde, formaldehyde, and methanol were 0.22%, 0.22%, and 0.22% of VOC, respectively.
Note 11. The base height and UTM coordinates represent the approximate centerpoint of the Buffalo Trace distillery. G001 is located in the process chiller area; G002 is located near the control room for the distillery.
Note 12. Manufacturer's information is used for the G001 stack height. G002 is assumed to have a similar stack. Engineering estimates are used for other stack parameters.
Note 13. The stack location information presented in Section N.2 represents the approximate centerpoint of the facility.

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

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DEP7007V

Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)

___ Section V.2: Monitoring Requirements

___ Section V.3: Recordkeeping Requirem

___ Section V.4: Reporting Requirements

___ Section V.5: Testing Requirements

___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
N/A	Facility-Wide	401 KAR 52:020, Section 10	VOC NOX	na	< 250 tpy	VOC and NOX emissions from non-fugitive sources will not equal or exceed 250 tons on a rolling 12-month basis.	Comply with existing monitoring requirements, calculate emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
003-1 004-1 004-2 005-1 005-2 005-3	Fermentation Process DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
003-1	Fermentation Process	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard fermentation practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
004-1	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	6.34 lb/hr	na	The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the cyclone separator is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.
005-1	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	401 KAR 61:020, Section 3(2)(a)	PM	10.4 lb/hr	na	The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the cyclone separator is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 61:020, Section 3(1)(a)	Opacity	40%	na	NA	Visual observations and maintaining a log of the observations.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
004-1 004-2 005-1 005-2 005-3	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard DDGS practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	401 KAR 59:015, Section 4(1)(b)	PM	0.1 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 4(2)+(a)	Opacity	20%	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 5(1)(b)	SO2	0.8 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1)Optimize the water column pressure relief devices over each vessel to avoid releasees. 2) Implement industry standard good operating and maintenance practices to minimize VOC emissions from the process vent condensers.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
024-1 025-1	Bldg 3 Loadout Station Regauge Loadout Station	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization:	
			VOC	na	na	Operate and maintain any affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Follow standard operating procedures for tanker truck loading.
			VOC	na	na	Minimize product spills and clean up spills as expeditiously as practicable.	"

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
003-1	Fermentation Process	VOC	401 KAR 52:020, Section 10	Feed Rate	Monitor the grain input in tons on a monthly basis.
004-1 004-2	DDGS Dryhouse #1: No. 1 Rotary Dryer	PM	401 KAR 52:020, Section 10	Production Rate	Track monthly DDGS produced in tons and monthly operating hours.
005-1 005-2	Dryhouse #1: Three Rotary Dryers	Opacity	401 KAR 52:020, Section 10	Visible emissions	Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM	na	NG Usage	Track monthly usage in MMscf
		Opacity	na	Visible emissions	na
		SO2	na	NG Usage	Track monthly usage

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
Facility-wide	N/A	VOC and NO_X	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	Calculate facility-wide non-fugitive emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
003-1	Fermentation Process	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
004-1 004-2 005-1 005-2	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	PM Opacity	401 KAR 52:020, Section 10, 401 KAR 52:020, Section 10,	Production Rate Visible emissions	Record monthly DDGS produced in tons and monthly operating hours. A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.
004-1 004-2 005-1 005-2 005-3	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM Opacity SO2	na na na	NG Usage Visible emissions NG Usage	Keep a record of amount of natural gas combusted in MMscf on a monthly basis. na Keep a record of amount of natural gas combusted on a monthly basis.
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
024-1 025-1	Bldg 3 Loadout Station Regauge Loadout Station	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
Facility-wide	N/A	VOC NO_X	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	In each SAMR, report monthly and rolling 12-month emissions totals for the distillery (non-fugitives only) and fossil fuel-fired boilers (including fugitives) for each month of the semiannual period.

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
004-1	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	PM, Opacity	401 KAR 59:005 Section 2 (2) 401 KAR 50:045 Section 4	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM, Opacity, SO2	401 KAR 59:015, Section 8	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.

Section V.6: Notes, Comments, and Explanations

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *August 11, 2020*

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
1.	Grain Cleaner Receiver Cyclone	01-003	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
2.	Grain Bin Loading	01-004	401 KAR 59:010	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
3.	Meal Bin Loading	01-007	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
4.	Beer Well	02-002	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~5.~~	~~Vent Condenser~~	~~02-003~~	~~None~~	See Note 1
~~6.~~	~~Vent Scrubber Condenser~~	~~02-004~~	~~None~~	See Note 1
~~7.~~	~~Column Condenser~~	~~02-006~~	~~None~~	See Note 1
5.	Two (2) Spirits Process Vessels and Storage Tanks (103,925 gal ea)	02-007	None	1.75 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
6.	Heads and Tails Tanks	02-008	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
7.	Receiving Cistern Tanks	02-009	None	1.0 tpy VOC
~~11.~~	~~Beer Still Pressure Relief~~	~~02-010~~	~~401 KAR 50:055~~	See Note 2
~~12.~~	~~Mini-Still Pressure Relief~~	~~02-10a~~	~~401 KAR 50:055~~	See Note 2
~~13.~~	~~Doubler Still Pressure Relief~~	~~02-011~~	~~401 KAR 50:055~~	See Note 2
~~14.~~	~~Column Still Pressure Relief~~	~~02-012~~	~~401 KAR 50:055~~	See Note 2
8.	Distiller's Dried Grain Conveying	03-004	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~16.~~	~~#1 Fill Line (Processing and bottling operations)~~	~~07-002~~	~~None~~	See Note 3
~~17.~~	~~#2 Fill Line (Processing and bottling operations)~~	~~07-002a~~	~~None~~	See Note 3
~~18.~~	~~#3 Fill Line (Processing and bottling operations)~~	~~07-002b~~	~~None~~	See Note 3
~~19.~~	~~#4 Fill Line (Processing and bottling operations)~~	~~07-002c~~	~~None~~	See Note 3
~~20.~~	~~#5 Fill Line (Processing and bottling operations)~~	~~07-002d~~	~~None~~	See Note 3
~~21.~~	~~#6 Fill Line (Processing and bottling operations)~~	~~07-002e~~	~~None~~	See Note 3
~~22.~~	~~#7 Fill Line (Processing and bottling operations)~~	~~07-002f~~	~~None~~	See Note 3
~~23.~~	~~#8 Fill Line (Processing and bottling operations)~~	~~07-002g~~	~~None~~	See Note 3
9.	Blanton Fill Line #1	07-005	None	1.1 tpy VOC
10.	Blanton Fill Line #2	07-005a	None	1.1 tpy VOC
11.	Blanton/Weller Fill Line	07-005b	None	1.1 tpy VOC
12.	#52 Fill Line	07-005c	None	2.6 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
13.	Labeling/Case Sealing	07-006	None	Neg.
14.	Case Printing	07-007	None	Neg.
15.	Blended Used Oil Tank	09-010	None	Neg.
16.	Caustic Tanks-NaOH	09-011	None	None
17.	Unpaved Roads	11-001	401 KAR 63:010	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~33.~~	~~Mobile Sources~~	~~NA~~	~~401 KAR 63:010~~	See Note 4
18.	Maintenance Equipment	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
19.	Evaporative Chiller	NA	401 KAR 63:010	None
20.	Three (3) 10,000 gallons Grain Cookers	NA	401 KAR 63:010	None
~~37.~~	~~Pot Still Pressure Relief~~	~~NA~~	~~None~~	See Note 2
21.	Two (2) Platinum Process Vessels and Storage Tanks (10,200 gal ea)	NA	None	0.32 tpy VOC
22.	Two (2) Bourbon Process Vessels and Storage Tanks (13,800 gal ea)	NA	None	0.54 tpy VOC
23.	Micro Distillation System	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
24.	Wastewater Treatment Plant	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
25.	Replacement Cooling Tower #1	NA	401 KAR 59:010	0.013 tpy PM10
26.	Bitters Operations	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
27.	Equipment Leaks Components	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
28.	Dryhouse #1: Two (2) Open-top Thick Stillage Storage Tanks (110,000 gallon ea)	NA	None	1.15 tpy VOC
29.	Dryhouse #1: Four Evaporators	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
30.	Cistern Barrel Filling Station	NA	None	1.0 tpy VOC
31.	Regauge Barrel Dumping	NA	None	1.6 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
32.	*Thin Stillage Tanks*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
33.	*Misc. Indoor Process/ Storage Tanks in Bldg. 3*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
34.	*Misc. Outdoor Process/ Storage Tanks Near Bldg. 3*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
35.	*Misc. Process Tanks in Cistern Area (CR5, CR17-CR23)*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
36.	*Misc. Process Tanks in Regauge (R2-R6, R10)*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
37.	*Tank Farm Storage Tanks (S3-S5)*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
38.	*Misc. Bldg. 33 Process/Storage Tanks in Chill Room*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
39.	*Misc. Bldg. 33, 26, & 39 Process/Storage Tanks*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
40.	*Misc. Bldg. 33 & 26 Process/Storage Tanks*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
41.	*Misc. Bldg. 45 Process/Storage Tanks*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*
42.	*Misc. Bldg. 52 Process/Storage Tanks*	*NA*	*None*	*< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs*

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE 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 INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

By:

Authorized Signature	Date
Harlen Wheatley	Master Distiller
Type/Print Name of Signatory	Title of Signatory

Section DD.3: Notes, Comments, and Explanations
Note 1. Moved to significant EU.
Note 2. This is part of Still emissions (Refer to DEP7007B and DEP7007N forms).
Note 3. The #1 - #8 Fill Lines have been shutdown. The shutdown dates for each line are as follows: #1 on 3/19, #2 on 1/19, #3 on 3/19, #4 on 1/19, #5 on 10/18, #6 on 12/18, #7 on 12/18, #8 on 10/18.
Note 4. Mobile sources are not covered under Title V of the Clean Air Act.

ATTACHMENT B

Suggested Draft Permit

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999

Final

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name:	**Buffalo Trace Distillery, Inc.**
Mailing Address:	**P.O. Box 619, Frankfort, KY 40601**
Source Name:	**Buffalo Trace Distillery, Inc.**
Mailing Address:	**~~101 Wilkinson Boulevard~~113 Great Buffalo Trace Frankfort, KY 40601**
Source Location:	**~~101 Wilkinson Boulevard~~ 113 Great Buffalo Trace~~-~~**
Permit:	**~~V-12-056~~V-20-XXX**
Agency Interest:	**1373**
Activity:	**APE20120002**
Review Type:	**Title V, Operating**
Source ID:	**21-073-00009**
Regional Office:	**Frankfort Regional Office 200 Fair Oaks Lane 3rd Floor Frankfort, KY 40601 (502) 564-3358**
County:	**Franklin**
Application Complete Date:	**~~January 30, 2013~~**
Issuance Date:	**~~August 14, 2013~~**
Revision Date:	
Expiration Date:	**~~August 14, 2018~~**

John S. Lyons, Director
Division for Air Quality

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Permit Number	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
V-07-038	**Renewal**	**APE20070001**	**10/12/2007**	**4/28/2008**	**Renewal**
V-12-056	**Renewal**	**APE20120002**	**1/30/2013**	**8/14/ 2013**	**Renewal**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality (Division) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Energy and Environment Cabinet (Cabinet) or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit 01 **(01-001, 01-002, 01-005 & 03-005)**
Grain and Distiller's Dried Grain Handling

Description:

Equipment includes: Grain unloading/receiving hopper with partial enclosure, conveyors, bucket elevators,. distiller's dried grain conveying, storage, and loadout
(01-001 and 01-002) Design operating rate for grain loading/conveyor: 56 tons/hr
Construction commenced: 1974
(01-005) Design operating rate for hammermill conveyor: 25.2 tons/hr
Construction commenced: 1974
(03-005) Design operating rate for distiller's dried grain loading: 33 tons/hr
Construction commenced: 1969

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions

1. **Operating Limitations:**

   a. Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the installation and utilization of hoods, fans, and fabric filters to enclose and vent the emissions generated from the processing of dust generating materials, or use of water sprays or other measures to suppress the dust emissions during handling.

   b. Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive emissions beyond the property line is prohibited.

2. **Emission Limitations:**

   NA

3. **Testing Requirements:**

   NA

Permit Number: V-12-056

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the amount (in tons) of grain received and processed on a monthly basis.

b. Pursuant to 401 KAR 52:020, section 10, the permittee shall monitor the amount (in tons) of distiller's dried grain processed on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain received and processed ~~shall be maintained~~ on a monthly basis.

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of distiller's dried grain processed ~~shall be maintained~~ on a monthly basis.

c. Records shall be kept of reasonable precaution implementation used to prevent particulate matter from being airborne.

6. Specific Reporting Requirements:

See Section F

7. Specific Control Equipment Operating Conditions:

NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 02 (01-006) Hammer Mill and Receiver Process Cyclone

Description:

Equipment: Hammer mill and receiver process cyclone
Design operating rate: 25.2 tons/hr milled grain
Construction commenced: 1969

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations

1. **Operating Limitations:**

   NA

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions into the open air shall not exceed $[4.10(P)^{0.67}]$ lbs/hour for based on a three-hour-average where P is the processing rate in tons/hour.

      Compliance Demonstration Method:
      The emission unit shall be deemed in compliance when the hammer mill and receiver process cyclone are operated, consistent with manufacturer's specifications and standard operating procedures.

   b. Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 40% opacity based on a six-minute- average.

3. **Testing Requirements:**

   Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

4. **Specific Monitoring Requirements:**

   ~~a.~~ Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 02 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. ~~the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs~~.

~~c.~~b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate and hours of operation on a month~~week~~ly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, ~~the permittee shall~~ records of grain processed and hours of operation shall be maintained on a month~~week~~ly basis.

b. ~~The permittee shall keep records of visual observation and any M~~method 9 observation ~~performed.~~ The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

7. Specific Control Equipment Operating Conditions:

a. The process cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 03 (02-001 and 02-005) Fermentation Process

Description:

Equipment ~~includes~~: 12 fermentation vessels~~and distilling process~~
Construction commenced: 1969

APPLICABLE REGULATIONS:

~~NA~~401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 03 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Follow industry standard fermentation practices for specific recipes to minimize the release of VOCs, and

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph b.

c. The permittee shall limit emissions from EU 03 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. **Emission Limitations:**

NA

3. **Testing Requirements:**

NA

4. **Specific Monitoring Requirements:**

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain input in ~~bushels~~ tons on a monthly basis.

5. **Specific Record Keeping Requirements:**

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain input in ~~bushels~~ tons ~~shall be maintained~~ on a monthly basis.

~~a.~~b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. **Specific Reporting Requirements:**

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 04 (03-001) Rotary Dryer and Cyclone Separator

Description:

Equipment: No. 1 Rotary steam tube dryer and pneumatic conveying cyclone separator
Control equipment: Cyclone
Design operating rate: ~~23.6~~2.5 tons/hr distiller's dried grain with solubles
Construction commenced: 1976

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations, applicable to an emission unit that commenced on or after July 2, 1975.

401 KAR 50:012, General application

401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:~~NA~~

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 04 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Implement industry standard good operating and maintenance practices to minimize VOC emissions each dryer system, and

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall limit emissions from EU 04 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

~~1.~~2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions into the open air shall not exceed [$3.59(P)^{0.62}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour.

Compliance Demonstration Method:
The emission unit shall be deemed to be in compliance when the cyclone is operated, consistent with manufacture's specification and standard operating procedures.

b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute-average.

~~2.~~3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

~~a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a qualitative visual observation of the opacity of emission from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs.~~

~~b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate and hours of operation on a weekly basis.~~

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 04 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate (in tons), the quantity of Distiller's Dried Grain with Solubles (DDGS) produced (in tons), and hours of operation on a monthly basis.

~~3.~~5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of monthly~~weekly~~ grain processed, DDGS produced, and ~~weekly~~ hours of operation ~~shall be maintained~~.

b. ~~The permittee shall keep records of visual observation and any method 9 observation performed.~~ The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

~~b.~~c. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

~~4.~~6. Specific Reporting Requirements:

See Section F

~~5.~~7. Specific Control Equipment Operating Conditions:

a. The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 05 (03-002 and 03-003) ~~**Four**~~ **Three Rotary Dryers and Cyclone Separator**

Description:

Equipment: ~~Four~~ Three rotary steam tube dryers and pneumatic conveying cyclone separator
Control equipment: Cyclone
Design operating rate for dryers (total): ~~12.6~~4.0 tons/hr distiller's dried grain
Construction commenced on or before 1969
Design operating rate for cyclone separator: ~~27.85~~4.0 tons/hr distiller's dried grain
Construction commenced: 1973

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations
401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. ~~NA~~The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 04 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Implement industry standard good operating and maintenance practices to minimize VOC emissions each dryer system

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall limit emissions from EU 05 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions into the open air shall not exceed [$4.10(P)^{0.67}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour.

Compliance Demonstration Method:

The emission unit shall be deemed in compliance when rotary dryer and the cyclone separator are operated, consistent with manufacture's specification and standard operating procedures.

b. Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 40% opacity based on a six-minute-average.

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 05 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.~~the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs.~~

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate (in tons), the quantity of DDGS produced (in tons), and hours of operation on a month~~week~~ly basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of month~~week~~ly grain processed, DDGS produced, and hours of operation ~~shall be maintained~~.

b. The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

c. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a. The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 06 (05-001) ~~**Barrel Filling,**~~ **Aging**~~**, and Dumping**~~

Commented [MZ1]: KDAQ: Barrel filling and dumping have been moved to IA list.

Description:

Equipment~~ includes~~: ~~Barrel filling stations,~~Sixteen (16) warehouses for product aging~~ in warehouses, and barrel dumping~~
Construction commenced: 1936-1952~~69.~~

APPLICABLE REGULATIONS:

NA

1. **Operating Limitations:**

   NA

2. **Emission Limitations:**

   NA

3. **Testing Requirements:**

   NA

4. **Specific Monitoring Requirements:**

   Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the number of barrels stored on a yearly basis.

5. **Specific Record Keeping Requirements:**

   Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the number of barrels stored on a yearly basis.

6. **Specific Reporting Requirements:**

   See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units 21 (21-001, 21-002), 22 (22-001), and 23 (23-001) Distillation Systems

Description:

EU 21-001: No. 1 Bourbon Distillation System – Beer Still #1
Construction commenced: 1956
EU 21-002: No. 1 Bourbon Distillation System – Doubler Still #2
Construction commenced: 1956
EU 22-001: Vodka Distillation System – Vodka Still #3 and Distillation Column Still #4
Construction commenced: 1967
EU 23-001: Platinum Distillation System – Platinum Still #7, Still #8, and Still #9
Construction commenced: 2011

APPLICABLE REGULATIONS:

401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 21-001, 21-002, 22-001, and 23-001 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Optimize the water column pressure relief devices over each vessel to avoid releasees.

(2) Implement industry standard good operating and maintenance practices to minimize VOC emissions from the process vent condensers.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph b.

c. The permittee shall limit emissions from EUs 21, 22, and 23 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

NA

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain input in bushels on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain input in bushels on a monthly basis.

b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units 24 (24-001) and 25 (25-001) Loadout Stations

Description:

EU 24-001: Building 3 Loadout Station
Construction commenced: 2015
EU 25-001: Regauge Loadout Station
Construction commenced: 2008

APPLICABLE REGULATIONS:

401 KAR 50:012, General application

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 24 and EU 25 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Minimize product spills and clean up spills as expeditiously as practicable.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph a.

b. The permittee shall limit emissions from EUs 24 and 25 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

NA

5. Specific Record Keeping Requirements:

a. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 08 (09-001) Indirect Heat Exchanger

Description:

Horizontally-opposed-natural gas-fired indirect heat exchanger
Fuel: Natural Gas
~~Tertiary fuel: Off spec alcohol~~
Maximum continuous rating: ~~176~~ 140.8 MMBtu/hr
Construction commenced: 1972

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

~~To preclude 40 CFR 63, Subpart JJJJJJ, this unit shall meet the definition of "gas fired unit under this Subpart. This unit shall only burn liquid fuel during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined 48 hours during any calendar year [40 CFR 63.11195(e)].~~

~~**Compliance Demonstration Method:**~~

a. ~~To demonstrate compliance with this requirement the permittee shall meet the recordkeeping requirements in Paragraph 5 (b).~~ During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(2) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(3) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(4) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

Commented [MZ2]: KDAQ: This boiler is only capable of firing NG; therefore, this condition is not necessary.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph c.

b. The permittee shall limit emissions from EU 08 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu~~/hr~~ on a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4 (2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions from the unit shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance Demonstration Method:
These units are considered to be in compliance with the allowable PM, SO2 and opacity limitation while burning natural gas.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirement:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(4)~~.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

b. See Section F

5. Specific Recordpeeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted on a monthly basis.

~~The permittee shall maintain records of the reason fuel oil is burned (gas curtailment, gas supply emergencies, or periodic testing on liquid fuel) and the number of hours liquid fuel is burned on a monthly basis [401 KAR 50:020, Section 10].~~

Commented [MZ3]: KDAQ: Please remove, as fuel oil is not combusted in this unit.

b. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units 14 & 15 (14-001 and 14-002) Two Indirect Heat Exchangers

Description:

Two (2) identical nNatural gas fired indirect heat exchangers.
Tertiary Fuel: Off spec alcohol
Fuel: Natural Gas
Maximum continuous rating: 5860.5 MMBtu-/hr, each.
Construction commenced: May 9, 2002.

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to a steam generating unit with a capacity of less than 100 MMBtu/hr but greater than 10 MMBtu/hr which commenced on or after June 9, 1989.

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating limitations:**

To preclude 40 CFR 63, Subpart JJJJJJ, this unit shall meet the definition of "gas-fired unit under this Subpart. This unit shall only burn liquid fuel during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined 48 hours during any calendar year [40 CFR 63.11195(e)].

Compliance Demonstration:

a. To demonstrate compliance with this requirement the permittee shall meet the recordkeeping requirements in Paragraph 5(b).During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(1)(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

Commented [MZ4]: KDAQ: This boiler is only capable of firing NG; therefore, this condition is not necessary.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph d.

c. The permittee shall limit emissions from EU 14 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions ~~from each unit~~ shall not exceed 0.1 lb/MMBtu ~~each~~ upon a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4 (2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

c. The sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu~~, each~~ based on a twenty- hour average [401 KAR 59:015, Section 5(1)(c)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. These units is are considered to be in compliance with the allowable PM, SO2 and opacity limitation while burning natural gas [401 KAR 52:020, Section 10].

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section (4).

4. Monitoring Requirements:

The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted in each the unit on a monthly basis.

b. The permittee shall maintain records of the reason fuel oil is burned (gas curtailment, gas supply emergencies, or periodic testing on liquid fuel) and the number of hours liquid fuel is burned on a monthly basis [401 KAR 52:020, Section 10].

b. The permittee shall record and maintain records of the fuel combusted in this emission unit during each calendar month [40 CFR 60 Subpart Dc, Section 60.48c(g)(2)].

c. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

a. The permittee shall maintain records required by 40 CFR 60, Subpart Dc, as identified by 5. Specific Recordkeeping Requirements, paragraph b., for a period of two (2) years following the date of such record [40 CFR 60.48c(i)].

b. The reporting period required for the reports required under 40 CFR 60, Subpart Dc is each six (6)-month period. All reports shall be submitted to the Administrator and shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.48c(j)].

c. See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 15 (14-002) Indirect Heat Exchanger

Description:

Natural gas fired indirect heat exchanger
Primary Fuel: Natural Gas
Co-Fired Secondary Fuel: Grain Neutral Spirits (GNS) (Non-Hazardous Secondary Material)
Maximum continuous rating: 60.5 MMBtu/hr
Construction commenced: May 9, 2002. Burner changed in 2008; no capacity increase.

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to a steam generating unit with a capacity of less than 100 MMBtu/hr but greater than 10 MMBtu/hr which commenced on or after June 9, 1989[1]

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall 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 at all times. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved [40 CFR 63.11205(a)].

Compliance Demonstration Method:
Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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 [40 CFR 63.11205(a)].

[1] 40 CFR 60, Subpart Dc requirements do not apply to GNS combustion in EU 15.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in the following paragraphs. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up [40 CFR 63.11201(b), §63.11223(a)-(b); Table 2(4) to 40 CFR 63, Subpart JJJJJJ].

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection [40 CFR 63.11223(b)(3)].

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

(6) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup [40 CFR 63.11223(b)(7)].

c. If the permittee uses an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up, the permittee must conduct a tune-up of the boiler every 5 years using the same procedures as the biennial tune-up. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. The permittee may delay the burner inspection and inspection of the system controlling the air-to-fuel ratio until the next scheduled unit shutdown, but the permittee must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, the permittee shall set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up [40 CFR 63.11223(c)].

Compliance Demonstration Method:

Commented [MS5]: KDAQ: The initial tune-up requirement is not reflected in this proposed permit language, since it was completed prior to the issuance of this permit.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance with tune-up requirements shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraphs d and e and 6. Specific Reporting Requirements, paragraphs c, e, and f.

d. The permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must comply with the requirements of 40 CFR 63.11237 and Table 2 to 40 CFR 63, Subpart JJJJJJ, Item 16 [40 CFR 63.11201(b); Table 2(16) to 40 CFR 63, Subpart JJJJJJ].

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph e and 6. Specific Reporting Requirements, paragraphs e and f.

e. The permittee shall limit emissions from EU 15 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu upon a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4(2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

c. The sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu based on a twenty- hour average [401 KAR 59:015, Section 5(1)(c)].

Compliance Demonstration Method:
The unit is considered to be in compliance with the allowable PM, SO_2 and opacity limitations while burning natural gas and GNS [401 KAR 52:020, Section 10].

3. Testing Requirements:

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

~~a.~~b. Pursuant to 401 KAR 50:045, the permittee shall conduct one performance test while burning GNS if it used as a primary fuel for 30 consecutive days on the boiler in the lifetime of the permit. The emission factors generated from the testing will be based on the heat input to the boiler as defined in 401 KAR 51:001, Section 1.

~~2.~~4. Monitoring Requirements:

a. The permittee shall monitor the natural gas and GNS usage on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Record Keeping Requirements:

a. The permittee shall maintain records of the amount of the natural gas combusted in the unit on a monthly basis [401 KAR 52:020, Section 10].

b. The permittee shall maintain records of the amount of GNS combusted on a monthly basis [40 CFR 60.48c(g)(2)].

c. The permittee shall record the following information for each tune-up [40 CFR 63.11223(b)(6)]:

(1) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler [40 CFR 63.11223(b)(6)(i)].

(2) A description of any corrective actions taken as a part of the tune-up of the boiler [40 CFR 63.11223(b)(6)(ii)].

(3) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

d. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

(1) A copy of each notification and report submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status [40 CFR 63.11225(c)(1)].

~~(1)~~(2) The date of each tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

(3) A record which documents how the secondary material (GNS) meets each of the legitimacy criteria under 40 CFR 241.3(d)(1) [40 CFR 63.11225(c)(2)(ii)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

~~(2)~~(4) A copy of the energy assessment report [40 CFR 63.11225(c)(2)(iii)].

6. Specific Reporting Requirements:

a. The permittee shall maintain records required by 40 CFR 60, Subpart Dc for a period of two (2) years following the date of such record [40 CFR 60.48c(i)].

b. The reporting period required for the reports required under 40 CFR 60, Subpart Dc is each six (6)-month period. All reports shall be submitted to the Administrator and shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.48c(j)].

c. If requested by the Administrator, submit a report containing the information identified by 5. Specific Recordkeeping Requirements, paragraph d [40 CFR 63.11223(b)(6)].

d. The permittee shall submit an Initial Notification to the Administrator within 120 days after the source becomes subject to 40 CFR 63, Subpart JJJJJJ [40 CFR 63.11225(a)(2)].

e. The permittee shall submit the Notification of Compliance Status for 40 CFR 63, Subpart JJJJJJ no later than 120 days after the applicable compliance date. The Notification of Compliance Status shall contain the following information and certifications of compliance, and must be signed by a responsible official [40 CFR 63.11225(a)(4)]:

(1) The information required in 40 CFR 63.9(h)(2), except the information listed in 40 CFR 63.9(h)(2)(i)(B), (D), (E), and (F) [40 CFR 63.11225(a)(4)(i)].

(2) "This facility complies with the requirements in § 63.11214 to conduct an initial tune-up of the boiler" [40 CFR 63.11225(a)(4)(ii)].

(3) "This facility has had an energy assessment performed according to § 63.11214(c)" [40 CFR 63.11225(a)(4)(iii)].

(4) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit" [40 CFR 63.11225(a)(4)(v)].

~~(1)~~(5) The notification must be submitted electronically using 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 Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in 40 CFR 63.13.

f. The permittee shall prepare, by March 1 biennially, and submit to the delegated authority upon request, an annual compliance certification report for the previous biennial period

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

containing the following information [40 CFR 63.11225(b)]:

(1) Company name and address [40 CFR 63.11225(b)(1)].

(2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the report and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The report must include the following certification(s) of compliance, as applicable, and signed by a responsible official [40 CFR 63.11225(b)(2)]:

i. "This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler" [40 CFR 63.11225(b)(2)(i)].

ii. For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit" [40 CFR 63.11225(b)(2)(ii)].

g. See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 16 (16-001) Indirect Heat Exchanger

Description:

Natural gas fired indirect heat exchanger
Fuel: Natural Gas
Controls: Low NO_x burners and Flue Gas Recirculation
Maximum continuous rating: 179.2 MMBtu/hr
Construction commenced: 2018

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

NON APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating limitations:

a. During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 59:015, Section 7: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph a.

b. The permittee shall limit emissions from EU 16 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. PM emissions shall not exceed 0.10 lb/MMBtu actual heat input. [401 KAR 59:015, Section 4(1)(b)]

b. Opacity shall not exceed 20 percent except: [401 KAR 59:015, Section 4(2)]

(1) A maximum of 27 percent opacity shall be allowed for one 6-minute period in any 60 consecutive minutes; and [401 KAR 59:015, Section 4(2)(a)]

(2) For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015, Section 4(2)(c)]

c. SO_2 emissions shall not exceed 0.8 lb/MMBtu actual heat input. [401 KAR 59:015, Section 5(1)(b)1.]

Compliance Demonstration Method:
The unit is assumed to be in compliance with the 401 KAR 59:015 PM emissions, opacity, and SO_2 emissions standards while combusting natural gas.

d. Potential SO_2 emissions must be less than 0.32 lb/MMBtu to preclude the applicability of the SO_2 emission standard in 40 CFR 60, Subpart Db. [40 CFR 60.42b(k)(2)]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. As a high heat release rate unit, NO_X emissions shall not exceed 0.20 lb/MMBtu. The NO_X standard shall apply at all times, including periods of startup, shutdown, or malfunction. [40 CFR 60.44b(a), 40 CFR 60.46b(a)]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 3. Testing Requirements, paragraph b and 4. Monitoring Requirements, paragraphs b through f.

3. Testing Requirements:

a. Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

b. The permittee shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring NO_X under 40 CFR 60.48b to determine compliance with the emission limit for NO_X required under 40 CFR 60.44b. [40 CFR 60.46b(e)]

(1) For the initial compliance test, NO_X from the steam generating unit is monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standard. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]

(2) Following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, the permittee shall upon request determine compliance with the NO_X standards in 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to 40 CFR 60.48b(g)(1) or CFR 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emissions reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all the hourly NO_X emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(2)]

4. Monitoring Requirements:

a. The permittee shall monitor the amount of the natural gas combusted in the unit on a monthly basis [401 KAR 52:020, Section 10, 40 CFR 60.49b(d)(2)].

b. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system [40 CFR 60.48b(b)(1)].

c. The CEMS required under 40 CFR 60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by 40 CFR 60.48b(b) and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]

~~a.~~e. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. This includes the completion of annual Relative Accuracy Test Audits (RATAs), daily drift checks, and quarterly cylinder gas audits in accordance with 40 CFR 60, Appendix B. [40 CFR 60.48b(e), 40 CFR 60.13, 40 CFR 60, Appendix B]

f. When NO_X emission data are not obtained because of CEMS breakdown, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of 40 CFR Part 60, Method 7A of appendix A of 40 CFR Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]

g. As an alternative to meeting the CEMS requirements of this section, the permittee may elect to monitor steam generating unit operating conditions and predict NO_X emission rates as specified in a plan submitted pursuant to 40 CFR 60.49b(c). [40 CFR 60.48b(g)(2)]

5. Specific Recordkeeping Requirements:

a. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

b. The permittee shall maintain records of the amount of the natural gas combusted on a monthly basis [401 KAR 52:020, Section 10, 40 CFR 60.49b(d)(2)].

c. The permittee shall maintain fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the fuel meets the definition of natural gas as defined in §60.41b and the sulfur limit (0.32 lb/MMBtu) to preclude the applicability of the 40 CFR 60, Subpart Db SO_2 standard. [40 CFR 60.49b(r)(1)]

d. The permittee shall maintain records of the following information for each steam generating unit operating day: [40 CFR 60.49b(g)]

(1) Calendar date;

~~(1)~~(2) The average hourly NO_X emission rates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted;

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emissions data have been excluded from the calculations of average emission rates and the reasons for excluding data;

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of 40 CFR Part 60.

6. Specific Reporting Requirements:

a. The permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include: [40 CFR 60.49b(a)]

(1) The design heat input capacity of the unit and identification of the fuels to be combusted in the unit;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels; and

(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

~~a.~~b. If the permittee seeks to demonstrate compliance with the NO_X standard through the monitoring of steam generating unit operating conditions in the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in 40 CFR 60.48b(g)(2) and the records to be maintained in 40 CFR 60.49b(g). [40 CFR 60.49b(c)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall submit excess emission reports for any excess emissions that occurred during the reporting period. Excess emissions are defined as any calculated 30-day rolling average NO_x emission rate, as determined under 40 CFR 60.46b(e), that exceeds the applicable emission limits in 40 CFR 60.44b. [40 CFR 60.49b(h)]

d. For each six (6)-month period of operation, the permittee shall submit reports containing the information recorded under 40 CFR 60.49b(g) as identified by Condition 5.d. These reports shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.49b(i) & (w)]

~~(1)~~(4) In each semiannual report, the permittee shall certify that only natural gas was combusted in the affected boiler during the reporting period. [40 CFR 60.49b(r)(1)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 17 & 18 (17-001 & 18-001) Gasoline Storage Tanks (Double-Walled)

Description:

Two (2) gasoline dispensing tanks
Capacity/Construction Date: EU 17 (Thunder Gas) - 1,120 gallons; constructed pre-2019
EU 18 (Farm Gas) - 250 gallons; constructed pre-2019
Each gasoline storage tank dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine.

APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart CCCCCC, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall comply with the requirements for the maximum recorded site-wide monthly throughput of gasoline since January 10, 2011. If monthly throughput exceeds a threshold at any time, the permittee shall comply with the applicable requirements of 63.11117 or 63.11118 within three years, as required by 63.11113(c) [40 CFR 63.11111(i)].

Compliance Demonstration Method:
See 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements (a)-(b).

b. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116(a)]:

(1) Minimize gasoline spills

(2) Clean up spills as expeditiously as practicable

(3) Cover all open gasoline containers and all gasoline storage fill-pipes with a gasketed seal when not in use

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators

Compliance Demonstration Method:
The permittee shall state in the annual compliance report required by Section F(9) that each gasoline storage tank has been maintained in accordance with 1. Operating Limitations (b) and (d).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall have documentation of gasoline throughput available within 24 hours of a request by the Administrator [40 CFR 63.11116(b)].

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements (a).

d. The permittee shall, at all times, 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. 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 [40 CFR 63.11115(a)].

Compliance Demonstration Method:
See 1. Operating Limitations – Compliance Demonstration (b).

e. The permittee shall limit emissions from EUs 17 and 18 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

a. Any required performance tests on gasoline storage tanks shall be conducted under conditions specified or approved by the Administrator [40 CFR 63.11120(c)].

4. Specific Monitoring Requirements:

a. The permittee shall monitor one of the following parameters [40 CFR 63.11116(b)]:

(1) The volume of gasoline loaded into gasoline storage tanks, or

(2) The volume of gasoline dispensed from gasoline storage tanks.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of gasoline throughput, summarized monthly. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Should gasoline throughput exceed 10,000 gallons in one month, the permittee shall [40 CFR 63.11124]:

(1) The permittee shall submit an Initial Notification at the time the gasoline storage tank becomes subject to the control requirements in 40 CFR 63.11117. The Initial Notification shall be submitted to the applicable EPA Regional Office and DAQ Regional Office, and shall contain the following information [40 CFR 63.11124 (a)(1)]:

i. Name and address of the permittee;

ii. Address (i.e., physical location) of the facility; and

iii. A statement that the notification is being submitted in response to 40 CFR 63 Subpart CCCCCC and identifying the requirements in 40 CFR 63.11117 that apply to the facility.

(2) The permittee shall submit a Notification of Compliance Status to the applicable EPA Regional Office and DAQ Regional Office within 60 days of the applicable compliance date. The Notification of Compliance Status shall be signed by a responsible official who shall certify its accuracy, indicate whether the source has complied with the requirements of this subpart, and indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If the facility is in compliance with the requirements of 40 CFR 63 Subpart CCCCCC at the time the Initial Notification is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains all information required for the Initial Notification [40 CFR 63.11124(a)(2)].

6. Specific Reporting Requirements:

The permittee shall submit a Notification of Performance Test prior to initiating testing required by 40 CFR 63 Subpart CCCCCC on gasoline cargo tanks or gasoline storage tanks [40 CFR 63.11124(b)(4)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 19-001 Natural Gas-fired Emergency Engine

Commented [MS6]: KDAQ: Note that the engines are in different sections, because of the different regulatory requirements that apply.

Description:

Natural gas-fired emergency engine G001
Rated capacity: 107 bhp
Manufacturer: Generac generator with Ford engine
Manufacture date: September 2007

APPLICABLE REGULATIONS:

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (NSPS JJJJ)

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations

a. The permittee shall operate the emergency stationary ICE according to the requirements of 40 CFR 60.4243(d)(1) through (3). In order for G001 to be considered an emergency stationary ICE under NSPS JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. To preclude the applicability of federal requirements for non-emergency engines, limit the engine's operation to the following levels [40 CFR 60.4243(d)]:

(1) There is no time limit on the use of emergency stationary ICE in emergency situations [40 CFR 60.4243(d)(1)].

(2) The permittee may operate G001 for any combination of the purposes specified in the following paragraphs for a maximum of 100 hours per calendar year. Any operation for non-emergency situations counts as part of the 100 hours per calendar year allowed by this paragraph [40 CFR 60.4243(d)(2)].

i. The permittee may operate G001 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

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

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 G001 beyond 100 hours per calendar year [40 CFR 60.4243(d)(2)(i)].

~~(1)~~(3) The permittee may operate G001 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 as provided in paragraph (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 an electric grid or otherwise supply power as part of a financial arrangement with another entity [40 CFR 60.4243(d)(3)].

b. Because construction commenced after June 12, 2006, G001 is considered a new stationary RICE at an area source under RICE MACT. Therefore, the permittee meets the requirements of NESHAP ZZZZ by complying with NSPS JJJJ [40 CFR 63.6590(c)].

c. An emergency engine with a maximum engine power greater than 25 hp is subject to the requirements of this NSPS JJJJ only if it is manufactured on or after January 1, 2009. Since G001 was manufactured before January 1, 2009, no specific Subpart JJJJ requirements apply [40 CFR 60.4230(a)(4)(iv)].

Compliance Demonstration Method:
By meeting the operating limits of paragraph 1.a., the permittee demonstrates compliance with both NSPS JJJJ and NESHAP ZZZZ.

d. The permittee shall limit emissions from EU 19-001 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. To maintain G001's classification as an emergency engine, the permittee shall use a non-resettable operating hour meter to monitor hours of operation in emergency and non-emergency service. [401 KAR 52:020, Section 10].

~~a.~~b. The permittee shall monitor the monthly amount of natural gas usage (scf/month). [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. To maintain G001's classification as an emergency engine, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter, including the time of operation of the engine and the reason the engine was in operation during that time. The permittee shall use these records to verify compliance with the operating limits established by paragraph 1.a. [401 KAR 52:020, Section 10].

~~a.~~b. The permittee shall maintain records of fuel combusted on a monthly basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 19-002 Natural Gas-fired Emergency Engine

Description:

Natural gas-fired emergency engine G002
Rated capacity: 126 bhp
Manufacturer: Cummins generator/engine
Manufacture date: May 2006

APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)[2]

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations

a. The permittee shall be in compliance with the emission limitations and operating limitations in 40 CFR 63, Subpart ZZZZ that apply at all times [40 CFR 63.6605(a)].

b. At all times, the permittee 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 the permittee 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 [40 CFR 63.6605(b)].

c. The permittee 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 a site-specific 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 [40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6, Item 9.2.i.-ii.].

[2] Because the date the engine became operational at BTD is within 30 days of the applicable engine classification date under RICE MACT, BTD has conservatively assumed that G002 (EU 19-002) is classified as an existing engine and is subject to RICE MACT requirements. Otherwise, it would be classified as a gap engine under NSPS JJJJ and would be subject to the less stringent requirements that apply to G001 (EU 19-001).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee shall operate G002 according to the requirements of 40 CFR 63.6640(f)(1), (2), and (4). In order for the engine to be considered an emergency stationary RICE, any operation other than emergency operation, maintenance checks and readiness testing, and operation in non-emergency situations for 50 hours per year is prohibited. If you do not operate the engine according to these requirements, the engine will not be able to be considered an emergency engine and must meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

(1) There is no time limit on the use of emergency stationary RICE in emergency situations [40 CFR 63.6640(f)(1)].

(2) The permittee may operate G002 for maintenance checks and readiness testing for a maximum of 100 hours per calendar year, 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 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 [40 CFR 63.6640(f)(2)].

~~(1)~~(3) The permittee may operate G001 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 as 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 an electric grid or otherwise supply power as part of a financial arrangement with another entity [40 CFR 63.6640(f)(4)].

Compliance Demonstration Method:

Refer to 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements.

e. The permittee shall comply with the following requirements [40 CFR 63.6640(a), §63.6603(a), Table 2d]:

(1) Change oil and filter every 500 hours of operation or annually, whichever comes first[3] [RICE MACT, Table 2d(5)(a)];

(2) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary [RICE MACT, Table 2d(5)(b)];

(3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary [RICE MACT, Table 2d(5)(c)]; and

[3] Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirement in Table 2d of RICE MACT [40 CFR 63.6625(j)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Minimize the engine's time spent at idle during startup 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 [40 CFR 63.6625(h)].

f. The permittee shall install and use a non-resettable hour meter (if one is not already installed) to monitor G002's operating time [40 CFR 63.6625(f)].

Compliance Demonstration Method:

Refer to 5. Specific Recordkeeping Requirements.

g. The permittee shall limit emissions from EU 19-002 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the monthly amount of natural gas usage (scf burned/month). [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain the following records:

(1) Hours of operation of the engine as recorded through the non-resettable hour meter. These records shall identify 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 [40 CFR 63.6655(f)].

(2) Oil and filter change dates and corresponding engine hours of operation (determined using hour meter, fuel consumption data, or other appropriate methods) [401 KAR 52:020, Section 10].

(3) Inspection and replacement dates for spark plugs, hoses, and belts [401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Records of the maintenance conducted on G002 and after-treatment control device (if any) in order to demonstrate that the stationary RICE was operated and maintained according to manufacturer's emission-related instructions or the maintenance plan [40 CFR 63.6655(e)].

b. The permittee shall maintain records of fuel combusted (scf) on a monthly basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 20 (20-001) Indirect Heat Exchangers

Description:
Six (6) natural gas-fired indirect heat exchangers
Two (2) 2019 replacement indirect heat exchangers at 1.44 MMBtu/hr for Warehouse R&S
One (1) 2018 replacement indirect heat exchangers at 1.44 MMBtu/hr and one backup 2012 boiler at 1.86 MMBtu/hr for warehouses T&U
Two (2) 1998 indirect heat exchangers at 1.81 MMBtu/hr for old bottling area
Fuel: Natural Gas
Construction commenced: Post-1971

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources
401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph b.

e. The permittee shall limit emissions from EU 20 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:

See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu on a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4(2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions from the unit shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance Demonstration Method:

These units are considered to be in compliance with the allowable PM, SO_2 and opacity limitation while burning natural gas.

3. Testing Requirement:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. See Section F

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted on a monthly basis.

b. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

See Section F

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause, and any corrective actions taken due to abnormal visible emissions.

	Description		Generally Applicable Regulation
1.	01-003	Grain Cleaner Receiver Cyclone	401 KAR 61:020
2.	01-004	Grain Bin Loading	401 KAR 59:010
3.	01-007	Meal Bin Loading	401 KAR 61:020
4.	02-002	Beer Well	NA
5.	02-0073	Two (2) Spirits Process Vessels and Storage	NA
6.	02-0084	Heads and Tails Tanks~~Vent Scrubber Condenser~~	NA
7.	02-0096	~~Column Condenser~~Receiving Cistern Tanks	NA
8.	0203-	Distiller's Dried Grain Conveying~~Spirits Tanks~~	401 KAR 61:020
9.	072-008005	~~Heads and Tails Tanks~~Blanton Fill Line #1	NA
~~10.~~	~~02-009~~	~~Receiving Cistern Tanks~~	~~NA~~
~~11.~~	~~02-010~~	~~Beer Still Pressure Relief~~	~~NA~~
~~12.~~	~~02-10a~~	~~Mini-Still Pressure Relief~~	~~NA~~
~~13.~~	~~02-011~~	~~Doubler Still Pressure Relief~~	~~NA~~
~~14.~~	~~02-012~~	~~Column Still Pressure Relief~~	~~NA~~
~~15.~~	~~03-004~~	~~Distiller's Dried Grain Conveying~~	~~401 KAR 61:020~~
~~16.~~	~~07-002~~	~~#1 Fill Line (Processing and bottling operations)~~	~~NA~~
~~17.~~	~~07-002a~~	~~#2 Fill Line (Processing and bottling operations)~~	~~NA~~
~~18.~~	~~07-002b~~	~~#3 Fill Line (Processing and bottling operations)~~	~~NA~~
~~19.~~	~~07-002c~~	~~#4 Fill Line (Processing and bottling operations)~~	~~NA~~
~~20.~~	~~07-002d~~	~~#5 Fill Line (Processing and bottling operations)~~	~~NA~~
~~21.~~	~~07-002e~~	~~#6 Fill Line (Processing and bottling operations)~~	~~NA~~
~~22.~~	~~07-002f~~	~~#7 Fill Line (Processing and bottling operations)~~	~~NA~~
~~23.~~	~~07-002g~~	~~#8 Fill Line (Processing and bottling operations)~~	~~NA~~
~~24.~~	~~07-005~~	~~Blanton Fill Line~~	~~NA~~
102	07-005a	Blanton Fill Line #2	NA
112	07-005b	Blanton/Weller Fill Line	NA
271	07-005c	#52 Fill Line	NA
132	07-006	Labeling/Case Sealing	NA
142	07-007	Case Printing	NA
153	09-010	Blended Used~~Waste~~ Oil Tank	NA
163	09-011	Caustic Tanks-NaOH	NA
173	11-001	Unpaved Roads	401 KAR 63:010
~~33.~~		~~Mobile Sources~~	~~401 KAR 63:010~~
183		Maintenance Equipment	NA
193		Evaporative Chiller	401 KAR 63:010
20.		Three (3) 10,000 gallons Grain Cookers	401 KAR 63:010
21.		Two (2) Platinum Process Vessels/Storage Tanks	N/A
223		Two (2) Bourbon Process Vessels and Storage	N/A
23.		Micro Distillation System	N/A
24.		Wastewater Treatment Plant	N/A

25.	Replacement Cooling Tower #1	401 KAR 59:010
26.	Bitters Operations	N/A
27.	Equipment Leaks Components	N/A
28.	Dryhouse #1: Two (2) Open-top Thick Stillage Storage Tanks	N/A
29.	Dryhouse #1: Four Evaporators	N/A
30.	Cistern Barrel Filling Station	N/A
31.	Regauge Barrel Dumping	N/A
32.	Thin Stillage Tanks	N/A
33.	Misc. Indoor Process/Storage Tanks (Bldg 3)	N/A
34.	Misc. Outdoor Process/Storage Tanks (Bldg 3)	N/A
35.	Misc. Process Tanks in Cistern Area	N/A
36.	Misc. Process Tanks in Regauge Area	N/A
37.	Tank Farm Storage Tanks	N/A
38.	Misc. Process/Storage Tanks (Chill Rm)	N/A
39.	Misc. Process/Storage Tanks (Bldg 33, 26, 39)	N/A
40.	Misc. Process/Storage Tanks (Bldg 33, 26)	N/A
41.	Misc. Bldg. 45 Process/Storage Tanks	N/A
42.	Misc. Bldg. 52 Process/Storage Tanks	N/A
~~37.~~	~~Pot Still Pressure Relief~~	~~NA~~

Commented [MZ7]: KDAQ: The #1 Cooling Tower was replaced in 2019.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Particulate matter, sulfur dioxide, and visible emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

3. As requested by the permittee, the permittee shall limit source-wide non-fugitive emissions of VOC and NO_x to less than 250 tons per year on a 12-month rolling total basis. [401 KAR 52:020, Section 10]

   Compliance Demonstration Method:

   Compliance shall be demonstrated by calculating the monthly and 12-month rolling total VOC and NO_x emissions from all non-fugitive emissions sources and maintaining records of the monthly and 12-month rolling total VOC and NO_x emissions from these sources. Monthly VOC and NO_x emissions for these sources shall be calculated using the most recent emission factors approved by the Division. 12-month rolling total emissions for each semiannual period will be reported in accordance with Section F, based upon paragraph 5.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS(CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS(CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following address:

Division for Air Quality	Air Enforcement Branch
Frankfort Regional Office	Atlanta Federal Center
200 Fair Oaks, 3rd floor	61 Forsyth St. SW
Frankfort, KY 40601	Atlanta, GA 30303-8960

10. In accordance with 401 KAR ~~52:030~~52:020, Section 22~~3(1)(d)~~, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee~~. If a KYEIS emissions survey is not mailed to the permittee, then the permittee shall comply with all other emissions reporting requirements in this permit~~.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the 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;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

o. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

p. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

   No construction authorized by this permit.

5. Testing Requirements

   Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

6. Acid Rain Program Requirements

   If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;
      (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
      (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
      (5) This requirement does not relieve the source of other local, state or federal notification requirements.

   b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

   c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

8. Ozone Depleting Substances

   a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
      (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
      (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
      (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
      (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
      (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
      (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

   b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

NA

SECTION I - COMPLIANCE SCHEDULE

NA

Trinity Consultants
1717 Dixie Hwy, Ste 900, Covington, KY 41011 / P 859.341.8100 / F 859.341.1021 / **trinityconsultants.com**

SUBMITTED VIA KENTUCKY ONLINE GATEWAY

August 11, 2020

Ms. Melissa Duff
Director
Kentucky Division for Air Quality
300 Sower Boulevard
Frankfort, Kentucky 40601
melissa.duff@ky.gov

RE: Significant Permit Revision Application for the Plant Expansion Project
Buffalo Trace Distillery (AI #1373, Source ID 21-073-00009)
Activity #: APE20180001

Dear Ms. Duff:

Trinity Consultants ("Trinity") is pleased to submit this Significant Permit Revision Application on behalf of Buffalo Trace Distillery ("BTD") in support of the Plant Expansion Project in Frankfort, Kentucky ("Frankfort distillery"). Based on our analysis of the applicability criteria in 401 KAR 52:020, Section 16, we have determined that the permit action can be processed by the Kentucky Division for Air Quality ("KDAQ") as a Significant Permit Revision.

The enclosed information is being summitted to KDAQ to satisfy the construction and modification obligations of 401 KAR 52:020, Section 3(1)(a) for new equipment at the Frankfort distillery. Although BTD submitted a Significant Permit Revision application on 1/30/2020, this application serves as a revised version of the 1/30/2020 submittal. Specifically, the following updates were made to this August 2020 application:

- Using the results of testing performed on May 28, 2020, revised NO_X and CO emission factors for Boiler #9 (EU 08) and de-rated Boiler #9 to 80% of its nameplate capacity. The source test report documenting the derivation of these NO_X and CO emission factors was submitted by Kenvirons to KDAQ on July 20, 2020. As described in the test report and as discussed with KDAQ, the potential emission calculations presented in this application reflect the average results of Runs 3-4 for NO_X and CO emissions and the de-rated capacity of Boiler #9. The revised potential emission calculations for the distillery are presented in the DEP7007N forms included in Attachment A.

- Updated the basis for the proposed limits. The only Prevention of Significant Deterioration ("PSD") avoidance limit requested in this application restricts project emissions of NO_X from the new fossil fuel boilers (EU16 and EU30) to less than 40 tons per year ("tpy") to avoid triggering the Prevention of Significant Deterioration ("PSD") permitting requirements of 401 KAR 51:017 for the expansion project. To preserve the distillery's status as an existing minor PSD source, BTD also requests voluntary limits on rolling 12-month totals of non-fugitive NO_X and VOC emissions under 401 KAR 52:020, Section 10, as documented in the DEP7007V forms included in Attachment A. However, these distillery-wide limits are not necessary to avoid PSD permitting.

- Updated the construction timelines for expansion equipment in the application forms included in Attachment A based on the current project schedule.

- Added process ID (EU 32-05) for combustion emissions from the proposed regenerative thermal oxidizer (RTO) that will control emissions from the new dryhouse. Calculated emissions for this process ID are presented in the DEP7007N form included in Attachment A.

- Updated/refined exhaust parameters for the existing and new dryhouse as part of the Air Toxics dispersion modeling analysis submitted to KDAQ on July 16, 2020 to demonstrate that acetaldehyde emissions satisfy the requirements of 401 KAR 63:020. These updated stack parameters are presented in the DEP7007N form included in Attachment A.

Additionally, this application serves as the corrective action to address unsatisfied permitting requirements for new equipment either already installed and operating at the Frankfort distillery or in the process of being installed, as disclosed by Audit Finding #6 (Operation of Air Emissions Sources without a Permit) of the June 4, 2019 Environmental Audit Report submitted to KDAQ.

TECHNICAL INFORMATION FOR PLANT EXPANSION PROJECT

As described in the prior disclosure and associated submittals, BTD has invested significant efforts in implementing the following three (3) primary corrective actions to satisfy the outstanding potential violations documented by the 6/4/2019 Environmental Audit Report submitted to KDAQ:[1]

1. Preparation of supplemental information to satisfy the regulatory obligations not met by the original Title V renewal application, which the KDAQ filed under Activity Number APE20180001. Under a separate submittal that was sent to KDAQ on 1/30/2020[2], BTD filled the remaining gaps (e.g., updated the emissions unit/process ID index; revised DEP7007AI, A, B, EE, N, V, and DD forms; requested VOC and NO_X emissions limits to maintain the distillery's classification as an existing minor source under the Prevention of Significant Deterioration (PSD) permitting program; and provided regulatory applicability determinations for the existing distillery as well as the support facilities). Specifically, this application addressed Audit Finding #6 (Operation of Air Emissions Sources without a Permit), #8 (Insignificant Activities List is Not Current), and #10 (Boiler Compliance) for existing equipment at the Frankfort distillery.

2. Submission of supplemental information for the Boiler 12 (EU 16) Minor Permit Application, which KDAQ filed under Activity Number APE20180003. This supplement was submitted to KDAQ on 9/24/2019. This boiler installation was the first construction activity associated with the Plant Expansion Project that is detailed in the next corrective action.

3. Development of permit application materials to satisfy the construction and operation obligations of 401 KAR 52:020, Section 3(1)(a) for new equipment at the Frankfort distillery. These application materials serve as the corrective action to address unsatisfied permitting requirements for new equipment either already installed and operating at the Frankfort distillery or in the process of being

[1] BTD made the following additional submittals related to the findings of the audit report: (1) Supplement to TVR Application for Existing Boilers was submitted on 9/25/2019; Supplement to TVR Application for Existing Emergency Engines was submitted on 10/4/2019; and Supplement to TVR Application for Existing Gasoline Dispensing Facilities was submitted on 10/4/2019.

[2] A revision to the 1/30/2020 Title V renewal application is also being submitted to KDAQ on 8/11/2020.

installed, as disclosed by Audit Finding #6 (Operation of Air Emissions Sources without a Permit) of the 6/4/2019 Environmental Audit Report submitted to KDAQ.

The submittal included herein addresses this third corrective action by including the project description and regulatory applicability analysis. Attachments to this submittal include the following:

- **Attachment A** presents the required DEP7007 Forms, including Form AI, A, B, EE, N, V, and DD.[3]
- **Attachment B** provides BTD's suggested revisions to the Title V permit to accommodate the Plant Expansion Project.

Project Description

To meet market demand, the Frankfort distillery is in the midst of an expansion that will continue over the next five years to more than double the Distillery's production.

In order to avoid phased permit applications, this comprehensive application documents the initial activities that have already been built and are operational, activities that are in the process of being constructed, as well as planned expansion activities that have not yet commenced construction. The anticipated construction dates are included in the DEP7007 Forms provided in Attachment A. Here is a summary of activities related to the Plant Expansion Project for the Frankfort distillery:

1. Installed a new 179 MMBtu/hr natural gas-fired boiler for generating steam (proposed EU 16 - Boiler 12) on 12/1/2018, which when used in combination with Boiler 10, Boiler 11, and/or Boiler 9 satisfies the existing steam demands for the pre-expansion activities. Once the expansion is complete, BTD expects that the peak demands of short-term steam generation will exceed an equivalent heat input capacity of 250 MMBtu/hr.
2. Installation of fourteen (14) planned new barrel warehouse (proposed EU 06-002).
3. Installation of fourteen (14) 5 MMBtu/hr natural gas-fired hot water heaters (proposed EU 30), where one heater will be installed in each new barrel warehouse.
4. Removal of bottling lines #1 through #8 [Insignificant Activities (IAs) 16-23 in the existing permit] and replacement with high speed/capacity bottling lines A, B, C, and D (proposed EU 07). Miscellaneous process/storage tanks associated with the new bottling lines were also installed at this time.
5. Expansion of cooking operations, with two (2) additional cookers (40,000 gallon each). While these new units represent twice the capacity of the existing cookers, they are not considered to be an appreciable source of air emissions.
6. Expanded cooling operations by replacing the existing cooling tower in 2019 with a two-cell counterflow cooling tower (proposed IA25) and installing two similar units (proposed IA48 and IA49).
7. Doubling the fermentation capacity by adding twelve (12) new 92,000-gallon fermentation vessels (proposed EU 03-002).
8. Added emergency electricity generation to critical control operations and firewater pump capabilities, including two (2) equivalent Clarke Firewater Pump Engines on the Farm (proposed EU 27 and EU

[3] Changes to the application forms relative to the 1/30/2020 application submittal are denoted with yellow highlighting in Attachment A.

28), another Clarke Firewater Pump Engine near the S rick house (proposed EU 29), and a backup generator with a diesel-fired engine (proposed EU 26).

9. Increase of milling capacity by adding up to three (3) new hammer mills with process cyclone(s) (proposed EU 02-002, 02-003, and 02-004).
10. Once the support facilities have been installed, a new still house [with beer still (proposed EU 31-001) and doubler still (proposed EU 31-002)] and dry house [with two centrifuges (proposed EU 32-001), steam dryers (proposed EU 32-002), and conveying cyclone separators (proposed EU 32-004)] will be installed. BTD intends to install units that have the same production capacities as the existing process units.
11. Replacing the Wastewater Treatment Plant (proposed IA24B).

Regulatory Review

The following subsections discuss the applicability of regulatory requirements for the installation and operation of the Plant Expansion Project.

Prevention of Significant Deterioration

Federal construction permitting programs regulate new and modified sources of attainment pollutants under the PSD permitting program and new and modified sources of non-attainment pollutants under Non-Attainment New Source Review (NA-NSR). The Frankfort distillery is located in Franklin County, Kentucky, which is designated as in attainment/unclassifiable for all pollutants. Therefore, PSD permitting is potentially applicable to the facility. The PSD preconstruction permitting program in Kentucky has been approved by the US EPA and incorporated into the Kentucky State Implementation Plan (SIP) under 401 KAR 51:017 to implement the federal requirements of 40 CFR 51.166 or 52.21.

For the purposes of the PSD permitting program, a *major stationary source* can be summarized as:

- One of the 28 listed stationary sources that emits, or has the potential to emit, 100 tons per year (tpy) or more of any regulated NSR pollutant, where fugitive emissions from the listed source category must be included in the total; or
- Any source not belonging to one of the listed source categories that emits, or has the potential to emit, 250 tpy or more of any regulated NSR pollutant, where fugitive emissions are not included in the total.

PSD Evaluation of Minor Distillery Source and Expansion

As part of the Title V renewal application (Activity Number APE20180001), BTD requested voluntary emissions limits for the entire facility of less than 250 tpy for VOC and NO_X emissions from all non-fugitive sources. However, voluntary emissions limits were not requested for all "fossil fuel boilers (or combinations thereof) totaling more than 250 MMBtu/hr heat input", which represent a nested source operating in support of the distillery.

As an existing minor stationary source, PSD permitting is triggered for the distillery operations only if the project itself is considered a major stationary source. As demonstrated by Table 1, maximum potential emissions from the entire Plant Expansion Project are less than 250 tpy of each regulated PSD pollutant. However, BTD remains willing to accept the voluntary source-wide emissions limits (i.e., less than 250 tpy of VOC and NO_X emissions from all non-fugitive sources) that BTD requested as part of the Title V renewal application.

The distillery's PTE is further limited by accepting an operational restriction on the quantity of beverages bottled by bottling lines A, B, C, and D (proposed EU 07) of less than 50,000,000 proof gallons per year. With this operational limitation, the VOC PTE for EU 07 is limited to no more than 27.5 tpy.

Additionally, the new dry house will be equipped with a thermal oxidation system to control VOC emissions associated with the expansion project. As documented in this application, BTD is requesting a voluntary VOC emissions limit of less than 16 tpy for the new dry house.

Table 1. Entire Plant Expansion Project's PTE Compared to PSD MSTs

Emission Units	Pollutant	Annual Emissions		Comparison to PSD Major Source Threshold	Voluntary Emissions Limit
		Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)		
Primary SIC Distillery Expansion Project + Support SIC Boilers Associated with Expansion Project	VOC*	3,031	2,940	NA	
	Non-Fugitive VOCs	191	100	N < 250 tpy	**
	NO_X*	50.7	50.7	N < 250 tpy	**
	CO*	91.7	91.7	N < 250 tpy	
	PT*	133.3	133.3	NA	
	Non-Fugitive PT	133.3	133.3	N < 250 tpy	
	PM_{10}*	70.9	70.9	NA	
	Non-Fugitive PM_{10}	70.9	70.9	N < 250 tpy	
	$PM_{2.5}$*	28.4	28.4	NA	
	Non-Fugitive $PM_{2.5}$	28.4	28.4	N < 250 tpy	
	SO_2*	0.65	0.65	N < 250 tpy	

* The primary stationary source is the distillery operations, which is not one the 28 listed source categories, therefore, fugitives are not represented in the total emissions across the site when comparing to the MST.
** As part of the Title V renewal application, BTD has requested a less than 250 tpy emissions limit for both VOC and NO_X.

PSD Evaluation of Major Fossil Fuel Boiler Source and Expansion

BTD acknowledges that the fossil fuel boilers used to support the distillery operations have a total heat input capacity greater than 250 MMBtu/hr and have potential emissions in excess of 100 tpy of a regulated NSR pollutant (i.e., NO_X and CO) prior to the Plant Expansion Project. Therefore, the fossil fuel-fired boilers are identified as an existing *major stationary source* under the PSD program.

Pursuant to 401 KAR 51:001, Section 1(114), *major modification* means a physical change in or a change in the method of operation of a *major stationary source* that results in a significant emissions increase and a significant net emissions increase of a regulated NSR pollutant. In determining whether a "project" would be considered a *major modification* of an emission unit and therefore potentially subject to the permitting requirements of the PSD program, the regulations require a two-step test. The first step is to determine if such activity is a *physical* or *operational change*, and if it is, the second step is to determine whether there is a significant increase in emissions because of the change.

In reference to PSD, both Boiler 12 (proposed EU 16) and the new warehouse heaters (proposed EU 30) are newly constructed and therefore meet the first step of the PSD applicability evaluation. Accordingly, BTD evaluated the second step of the applicability test to determine if the expansion of the fossil fuel-fired boilers meets the definition of a *major modification*. As detailed in the following paragraphs, by accepting a 40 tpy NO_X limit on the new fossil fuel boilers, BTD can classify this Plant Expansion Project as a minor modification.

For new construction, the *project emission increase* (PEI) is equal to the *potential to emit* (PTE) minus the *baseline actual emissions* (BAE). As a new unit, the BAE is zero. If the PEI exceeds the Significant Emission Rate (SER) threshold for any of the regulated NSR pollutants (e.g., 40 tpy for NO_X, 100 tpy for CO, etc.), then the permittee must undergo PSD review for that pollutant.

As shown in **Table 2**, which summarizes the uncontrolled and controlled emissions increase for the nested support boilers project, the only pollutant in excess of the SER is NO_X. To preclude triggering PSD, BTD is requesting a synthetic emissions limit of less than 40 tons NO_X per 12-month rolling period for combined emissions from EU 16 and EU 30. Compliance with this 40 tpy synthetic emissions limit will be demonstrated by tracking fuel usage in EU 30 and using Continuous Emissions Monitoring System (CEMS) data for EU 16. When accounting for full capacity continuous operation of this equipment using worst-case emission factors, total NO_X emissions are above the SER by 18%. When considering the anticipated operating schedule of this equipment and the use of CEMS data to determine actual rather than worst-case emissions from Boiler 12, BTD will easily comply with this limit.

Table 2. Nested Support Boiler's PTE Compared to PSD MSTs

Emission Units	Pollutant†	Emissions Increase		As a PSD Major, Could Project Exceed SER?	Synthetic Emissions Limit
		Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)		
Support SIC Boilers Associated with Expansion Project: Boiler 12 (EU 16) + Fourteen Indirect Heat Exchanger at 5 MMBtu/hr ea (EU 30)	VOC	5.89	5.89	N < 40 tpy	
	NO_X	**47.2**	**47.2**	**Y > 40 tpy**	**Yes**
	CO	89.9	89.9	N < 100 tpy	
	PT	8.13	8.13	N < 25 tpy	
	PM_{10}	8.13	8.13	N < 15 tpy	
	$PM_{2.5}$	8.13	8.13	N < 10 tpy	
	SO_2	0.64	0.64	N < 40 tpy	

† Support SIC Boilers are on the 28 listed stationary sources; therefore, the emissions presented include fugitive emissions when comparing against the MST or SER.

Post Expansion Facility-Wide Emissions Summary for Minor Distillery and Major Nested Source Boilers

Table 3 presents the comprehensive emissions summary for the entire post-expansion facility and identifies requested emission limits. In addition to controlling VOC emissions from the dryers, the proposed thermal oxidation system will also reduce organic Hazardous Air Pollutant (HAP) emissions. The site-wide PTE for HAP both before and after the project is shown in **Table 3.** As indicated by this table, the emissions of the maximum individual HAP (acetaldehyde) is over the HAP major threshold of 10 tpy, whereas total HAPs is slightly below the 25 tpy threshold. As a result, BTD is also requesting synthetic emissions limits for total HAP and single HAP of less than 25 and 10 tpy, respectively.

Table 3. Title V Emissions Summary (Existing and Plant Expansion Project)

Emission Units	Pollutant	Annual Emissions		Comparison to Title V / HAP Major Threshold	Voluntary Emissions Limit
		Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)		
Facility-Wide: Primary SIC Distillery + All Heat Exchangers	VOC	5,327	5,236	NA	
	Non-Fugitive VOCs	**387**	**296**	**Y > 100 tpy**	**
	NO_X	**215**	**215**	**Y > 100 tpy**	**
	CO	**151**	**151**	**Y > 100 tpy**	**No**
	PT	3,226	724	NA	
	Non-Fugitive PT	**242**	**187**	**Y > 100 tpy**	**No**
	PM_{10}	510	252	NA	
	Non-Fugitive PM_{10}	**130**	**103**	**Y > 100 tpy**	**No**
	$PM_{2.5}$	89.1	51.9	NA	
	Non-Fugitive $PM_{2.5}$	58.3	45.5	N < 100 tpy	
	SO_2	2.17	2.17	N < 100 tpy	
	CO_2e	271.115	271,115	NA	
	Total HAPs	24.3	17.1	N < 25 tpy	**Yes**
	Acetaldehyde	**14.9**	9.27	**Y > 10 tpy**	**Yes**
	Formaldehyde	1.17	1.14	N < 10 tpy	
	Hexane	3.98	3.98	N < 10 tpy	
	Lead	2.53E-07	2.53E-07	N < 10 tpy	
	Methanol	2.94	1.81	N < 10 tpy	
	Propionaldehyde	0.04	0.04	N < 10 tpy	

** As part of the Title V renewal application, BTD has requested a less than 250 tpy emissions limit for both VOC and NO_X.

PERMITTING REQUIREMENTS

Qualification for Treatment as a Significant Revision

Section 16 of 401 KAR 50:020 states that significant permit revision procedures shall be used for revisions that:

(a) Involve significant changes in the monitoring requirements or a relaxation in the reporting or recordkeeping requirements contained in the permit; or
(b) Do not qualify as administrative permit amendments or minor permit revisions.

Since the changes BTD is seeking do not qualify as administrative permit amendments or minor permit revisions, this application is being submitted as a significant permit revision.

Pursuant to Section 4 and Section 16 of 401 KAR 50:020, when applying for a significant permit revision, complete applications shall be submitted using Forms DEP7007AI to DD, except that the source must only provide the information related to the change and a certification by a responsible official.

This application package provides information required under 401 KAR 52:020, Sections 4 and 16 for this purpose. The appropriate DEP7007 forms (AI, A, B, EE, N, V, and DD) covering the Plant Expansion Project are provided in **Attachment A**.

*****

If you have any questions regarding this submittal, please contact me at 859.341.8100 x104.

Sincerely,

TRINITY CONSULTANTS

Maren Seibold
Managing Consultant

Attachments

cc: Michael Kennedy, KDAQ
Rick Shewekah, KDAQ
Liz Natter, EEC
Harlen Wheatley, Buffalo Trace
Andrew Leet, Buffalo Trace
Mary Tortorice, Sazerac
Heather Davis, Heather Davis Law
Laura McAfee, Beveridge & Diamond
Mitchell Denham, Dressman Benzinger LaVelle
Mike Zimmer, Trinity Consultants

ATTACHMENT A

DEP7007 Forms (AI, A, B, EE, N, V, and DD)

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007AI

Administrative Information

___ Section AI.1: Source Information

___ Section AI.2: Applicant Information

___ Section AI.3: Owner Information

___ Section AI.4: Type of Application

___ Section AI.5: Other Required Information

___ Section AI.6: Signature Block

___ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

___ Additional Documentation attached

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section AI.1: Source Information

Physical Location Address:	**Street:**	113 Great Buffalo Trace				
	City:	Frankfort	**County:**	Franklin	**Zip Code:**	40601
Mailing Address:	**Street or P.O. Box:**	*Same as physical address*				
	City:		**State:**		**Zip Code:**	

Standard Coordinates for Source Physical Location

Longitude: -84.871° E (decimal degrees) **Latitude:** 38.216694° N (decimal degrees)

Primary (NAICS) Category: Distilleries **Primary NAICS #:** 312140

Classification (SIC) Category: Distilled and Blended Liquors **Primary SIC #:** 2085

Briefly discuss the type of business conducted at this site: The site produces distilled spirits. Grain is delivered, ground, and introduced to mash cookers. The mash is fed to fermenters and then to distillation columns and condensers. The resulting liquid is stored in tanks, transferred to barrels for aging, and/or sent to the bottling area for packaging. Barrels of bourbon are stored in rick houses for aging. The spent grain is dried and sold as distiller's dried grain. Beverage ingredients are received in bulk for blending, and other distilled spirits are received by the facility in bulk and sent to the bottling area for packaging.

Description of Area Surrounding Source: ☐ Rural Area ☐ Industrial Park ☐ Residential Area ☐ Urban Area ☐ Industrial Area ☑ Commercial Area

Is any part of the source located on federal land? ☐ Yes ☑ No

Number of Employees: 474

Approximate distance to nearest residence or commercial property: Adjacent **Property Area:** 430 Acres **Is this source portable?** ☐ Yes ☑ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:	☑ Currently Hold	☐ Need	☐ N/A
Solid Waste:	☐ Currently Hold	☐ Need	☑ N/A
RCRA:	☐ Currently Hold	☐ Need	☑ N/A
UST:	☐ Currently Hold	☐ Need	☑ N/A

Type of Regulated Waste Activity: ☐ Mixed Waste Generator ☑ Generator ☐ Recycler ☐ Other: _____ ☐ U.S. Importer of Hazardous Waste ☐ Transporter ☐ Treatment/Storage/Disposal Facility ☐ N/A

Section AI.2: Applicant Information

Applicant Name: Buffalo Trace Distillery

Title: (if individual)

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: (if individual)

Phone: (502) 223-7641

Technical Contact

Name: Andrew Leet

Title: Environmental Engineer

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: aleet@buffalotrace.com

Phone: (859) 705-8187

Air Permit Contact for Source

Name: Andrew Leet

Title: Environmental Engineer

Mailing Address:
Street or P.O. Box: 113 Great Buffalo Trace
City: Frankfort **State:** KY **Zip Code** 40601

Email: aleet@buffalotrace.com

Phone: (859) 705-8187

Section AI.3: Owner Information

☑ **Owner same as applicant**

Name:

Title:

Mailing Address: **Street or P.O. Box:**

City: **State:** **Zip Code:**

Email:

Phone:

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position
Wholly-owned subsidiary of the Sazerac Company; New Orleans, LA	

Section AI.4: Type of Application

Current Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ General Permit ☐ Registration ☐ None

Requested Action: *(check all that apply)*

☐ Name Change	☐ Initial Registration	☑ Significant Revision	☐ Administrative Permit Amendment
☐ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide OperatingPermit
☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice
☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities
☐ Ownership Change	☐ Closure		

Requested Status: ☑ Title V ☐ Conditional Major ☐ State-Origin ☐ PSD ☐ NSR ☑ Other: PSD-Avoidance

Is the source requesting a limitation of potential emissions? ☑ Yes ☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter		☑ Single HAP	*10 tpy (facility-wide)*
☑ Volatile Organic Compounds (VOC)	*250 tpy (facility-wide, non-fugitive) {Same as Title V Renewal}*	☑ Combined HAPs	*25 tpy (facility-wide)*
☐ Carbon Monoxide		☐ Air Toxics (40 CFR 68, Subpart F)	
☑ Nitrogen Oxides	*250 tpy (facility-wide, non-fugitive) {Same as Title V Renewal} plus 40 tpy for EU 16 and 30*	☐ Carbon Dioxide	
☐ Sulfur Dioxide		☐ Greenhouse Gases (GHG)	
☐ Lead		☐ Other	

For New Construction:

Proposed Start Date of Construction: *(MM/YYYY)* *12/1/2018*

Proposed Operation Start-Up Date: *(MM/YYYY)* *3/1/2022*

For Modifications:

Proposed Start Date of Modification: *(MM/YYYY)*

Proposed Operation Start-Up Date: *(MM/YYYY)*

Applicant is seeking coverage under a permit shield. ☑ Yes ☐ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- [x] DEP7007A Indirect Heat Exchangers and Turbines
- [x] DEP7007B Manufacturing or Processing Operations
- [ ] DEP7007C Incinerators and Waste Burners
- [ ] DEP7007F Episode Standby Plan
- [ ] DEP7007J Volatile Liquid Storage
- [ ] DEP7007K Surface Coating or Printing Operations
- [ ] DEP7007L Mineral Processes
- [ ] DEP7007M Metal Cleaning Degreasers
- [x] DEP7007N Source Emissions Profile
- [ ] DEP7007P Perchloroethylene Dry Cleaning Systems
- [ ] DEP7007R Emission Offset Credit
- [ ] DEP7007S Service Stations
- [ ] DEP7007T Metal Plating and Surface Treatment Operations
- [x] DEP7007V Applicable Requirements and Compliance Activities
- [ ] DEP7007Y Good Engineering Practice and Stack Height Determination
- [ ] DEP7007AA Compliance Schedule for Non-complying Emission Units
- [ ] DEP7007BB Certified Progress Report
- [ ] DEP7007CC Compliance Certification * *Refer to Env Audit Voluntary Disclosure*
- [x] DEP7007DD Insignificant Activities
- [x] DEP7007EE Internal Combustion Engines
- [ ] DEP7007FF Secondary Aluminum Processing
- [ ] DEP7007GG Control Equipment
- [ ] DEP7007HH Haul Roads
- [ ] Confidentiality Claim
- [ ] Ownership Change Form
- [ ] Secretary of State Certificate
- [ ] Flowcharts or diagrams depicting process
- [ ] Digital Line Graphs (DLG) files of buldings, roads, etc.
- [ ] Site Map
- [ ] Map or drawing depicting location of facility
- [ ] Safety Data Sheet (SDS)
- [ ] Emergency Response Plan
- [ ] Other: _____

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the 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 information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.

Harlen Wheatley
Authorized Signature

8-11-20
Date

Harlen Wheatley
Type or Printed Name of Signatory

Master Distiller
Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Section AI.7: Notes, Comments, and Explanations
The DEP7007N forms included with this application reflect the use of these source test results for EU 08, as well as
revised stack parameters that were used in the acetaldehyde modeling submitted to KDAQ on July 16, 2020.
Additional information for the proposed RTO associated with the new dryhouse is also included.

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007A

Indirect Heat Exchangers and Turbines

___ Section A.1: General Information

___ Section A.2: Operating and Fuel Information

___ Section A.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.

____ Manufacturer's specifications

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section A.1: General Information

Emission Unit #	Emission Unit Name	Process ID	Process Name	Identify General Type: Indirect Heat Exchanger, Gas Turbine, or Combustion Turbine	Indirect Heat Exchanger Configuration	Manufacturer	Model No./ Serial No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	SCC Code	SCC Units	Control Device ID	Stack ID
008	Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr)	1	Natural Gas Combustion	Indirect Heat Exchanger	Horizontally-Opposed	Zurn Industries	Burner: 9AODAR	01/1972	10200601	MMscf	NA	S-008
014	Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Burner	Burner: Model: CN4-200, SN: W-3696	09/2002	10200602	MMscf	NA	S-014
015	Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Boiler/ Limpsfield Burner	Burner: LCNOAL175/ 00514	09/2002	10200602	MMscf	NA	S-015
015	"	4	GNS Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Boiler/ Limpsfield Burner	Burner: LCNOAL175/ 00514	09/2002	10200502	Mgal	NA	"
016	Indirect Heat Exchanger, Boiler #12 179 MMBtu/hr	1	Natural Gas Combustion	Indirect Heat Exchanger	Industrial Watertube Boiler	Cleaver Brooks Boiler/ Limpsfield Burner	Burner: LCNOAL175/ 00514	12/2018	10200601	MMscf	NA	S-016
020	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	1	Natural Gas Combustion	Indirect Heat Exchanger	Various	Various	Various	1998-2019	10200602	MMscf	NA	S-020

Emission Unit #	Emission Unit Name	Process ID	Process Name	Identify General Type: Indirect Heat Exchanger, Gas Turbine, or Combustion Turbine	Indirect Heat Exchanger Configuration	Manufacturer	Model No./ Serial No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	SCC Code	SCC Units	Control Device ID	Stack ID
030	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	1	Natural Gas Combustion	Indirect Heat Exchanger	Various	Various	Various	2017 - 2022	10200603	MMscf	NA	S-030

Section A.2: Operating and Fuel Information

Emission Unit #	If multipurpose unit, identify the percentage of use by purpose				Rated Capacity Heat Input *(MMBTU/hr)*	Rated Capacity Power Output		Describe Operating Scenario (only if this unit will be used in different configurations)	Classify Fuel as Primary or Secondary	Identify Fuel Type: Coal, Natural Gas, Wood, Biomass, Landfill/Digester Gas, Fuel Oil # (specify 1-6), or Other	Heat Content (HHV)		Maximum Operating Hours	Ash Content *(%)*	Sulfur Content *(%)*
	Space Heat	Process Heat	Power	Emergency			*(Specify units: hp, MW, or lb steam/hr)*					*(Specify units: Btu/lb, Btu/gal, or Btu/scf)*			
008-1	na	100%	na	na	140.8	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
014-1	na	100%	na	na	60.5	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
015-1	na	100%	na	na	60.5	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
015-4	na	100%	na	na	60.5	Unk		na	Secondary	GNS	69,095.4	Btu/gal	8,760	N/A	N/A
016-1	na	100%	na	na	179.2	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
020-1	na	100%	na	na	9.8 Total	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A
030-1	na	100%	na	na	70.0 Total	Unk		na	Primary	Natural Gas	1,020	Btu/scf	8,760	N/A	N/A

Section A.3: Notes, Comments, and Explanations

For 008-01, used the results of the testing performed on May 28, 2020, revised NOX and CO emission factors for Boiler #9 (EU 08) and de-rated Boiler #9 to 80% of its nameplate capacity. The source test report documenting the derivation of these NOX and CO emission factors was submitted by Kenvirons to KDAQ on July 20, 2020. As described in the test report and as discussed with KDAQ, the potential emission calculations presented in this application reflect the average results of Runs 3-4 for NOX and CO emissions and the de-rated capacity of Boiler #9.

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
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DEP7007B

Manufacturing or Processing Operations

___ Section B.1: Process Information
___ Section B.2: Materials and Fuel Information
___ Section B.3: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG.
___ Attach a flow diagram
___ Attach SDS

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, August 11, 2020*

Section B.1: Process Information

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
002	Hammer Mill Group and Receiver Process Cyclone		1	Hammer Mill and Receiver Process Cyclone (01-006)	NA	NA	01/1969	Continuous	NA	NA
002	Hammer Mill Group and Receiver Process Cyclone		2	Hammer Mill (01-006B) and Receiver Process Cyclone	NA	NA	09/2022	Continuous	NA	NA
002	Hammer Mill Group and Receiver Process Cyclone		3	Hammer Mill (01-006C) and Receiver Process Cyclone	NA	NA	09/2022	Continuous	NA	NA
002	Hammer Mill Group and Receiver Process Cyclone		4	Hammer Mill (01-006D) and Receiver Process Cyclone	NA	NA	09/2022	Continuous	NA	NA
As part of disclosure and expansion project, please add three new process IDs to EU 002 to include three hammer mills.										
003	Fermentation Process		1	Fermentation Vessels (12)	NA	NA	1944 1/1/1969	Batch		
Note: Each of 12 fermenters is ~92,087 gallons.										
003	Fermentation Process		2	Fermentation Vessels (4)	NA	NA	05/2019	Batch		
003	Fermentation Process		3	Fermentation Vessels (8)	NA	NA	01/2021	Batch		
As part of disclosure and expansion project, please add two new process IDs to EU 003 to include twelve fermenation vessels.										
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator		1	Cyclone Separators from No. 1 Rotary Dryer (03-001)	NA	NA	01/1976	Continuous	NA	NA
			2	No. 1 Rotary Steam Tube Dryer (03-001)	NA	NA	01/1976	Continuous	NA	NA

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
Included a new process ID for the dryer emissions.										
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator		1	Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	NA	NA	01/1973	Continuous	NA	NA
			2	Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)	NA	NA	01/1969	Continuous	NA	NA
			3	Centrifuge	NA	NA	01/1900	Continuous	NA	NA
Included a new process ID for venting from dryer and screens/presses/conveyors in addition to the cyclone separator.										
032	DDGS Dryhouse #2		1	Two Centrifuges	NA	NA	05/2022	Continuous	NA	NA
			2	Two Steam Dryers	NA	NA	05/2022	Continuous	NA	NA
			3	Two Steam Dryers - By-pass	NA	NA	05/2022	Continuous	NA	NA
			4	Pneumatic conveying cyclone separator from Rotary Dryers	NA	NA	05/2022	Continuous	NA	NA
			5	Natural Gas and Process Gas Combustion at RTO	NA	NA	05/2022	Continuous	NA	NA
As part of disclosure and expansion project, please add a new emissions unit with three process IDs to include a new future dryhouse.										
006	Aging		1	Warehouse Aging	NA	NA	1936 - 1952	Continuous	NA	NA
Moved barrel filling and dumping to IA list.										

Emission Unit #	Emission Unit Name	Describe Emission Unit	Process ID	Process Name	Manufacturer	Model No.	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Is the Process Continuous or Batch?	Number of Batches per 24 Hours *(if applicable)*	Hours per Batch *(if applicable)*
006	Aging		2	Warehouse Aging on Farm	NA	NA	2017 - 2022	Continuous	NA	NA
As part of disclosure and expansion project, please add a new process ID to EU 006 to include four aging warehouses per year on the Farm, for a total of fourteen.										
007	Bottling Lines A, B, C, & D (07-008a-d)		1	Loading losses	NA	NA	2019	Continuous	NA	NA
As part of disclosure and expansion project, please add a new EU 007 to represent the bottling lines.										
021	No. 1 Bourbon Distillation System		1	Beer Still #1 S/N 0269	NA	NA	1956	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
021	No. 1 Bourbon Distillation System		2	Doubler Still #2, S/N 0733	NA	NA	1956	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
022	Vodka Distillation System		1	Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494	NA	NA	1967	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
023	Platinum Distillation System		1	Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804	NA	NA	2011	Continuous	NA	NA
Moved from IA list to a significant emissions unit.										
024	Bldg 3 Loadout Station		1	Loading losses	NA	NA	2015	Batch	18	0.67
Moved from IA list to a significant emissions unit.										
025	Regauge Loadout Station		1	Loading losses	NA	NA	2008	Batch	21	0.67
Moved from IA list to a significant emissions unit.										
031	No. 2 Bourbon Distillation System		1	Beer Still #10	NA	NA	06/2022	Continuous	NA	NA
031	No. 2 Bourbon Distillation System		2	Doubler Still #11	NA	NA	06/2022	Continuous	NA	NA
As part of disclosure and expansion project, please add a new emissions unit with two process IDs to include a new future still house.										

Section B.2: Materials and Fuel Information

**Maximum yearly fuel usage rate only applies if applicant request operating restrictions through federally enforceable limitations.*

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input	(Specify Units/hr)	Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output	(Specify Units/hr)	Fuel Type	Maximum Hourly Fuel Usage Rate	(Specify Units)	Maximum Yearly Fuel Usage Rate	(Specify Units)	Sulfur Content (%)	Ash Content (%)
002-2	Hammer Mill Group and Receiver Process Cyclone	Grain Input	25.2	tons/hr	25.20	Milled Grain	25.2	tons/hr	NA	NA	NA	NA	NA	NA	NA
002-3	Hammer Mill Group and Receiver Process Cyclone	Grain Input	25.2	tons/hr	25.20	Milled Grain	25.2	tons/hr	NA	NA	NA	NA	NA	NA	NA
002-4	Hammer Mill Group and Receiver Process Cyclone	Grain Input	25.2	tons/hr	25.20	Milled Grain	25.2	tons/hr	NA	NA	NA	NA	NA	NA	NA
003-1	Fermentation Process	Grain Input	0.456	MBU/hr	12.77	Beer			NA	NA	NA	NA	NA	NA	NA
		Yeast	12.07	lbs/hr	0.0060				NA	NA	NA	NA	NA	NA	NA
Updated the maximum hourly operating rate from 11.19 MBU/hr to 0.468 MBU/hr for all 12 mash fermenters.															
003-2	Fermentation Process	Grain Input	0.152	MBU/hr	4.26	Beer			NA	NA	NA	NA	NA	NA	NA
		Yeast	4.02	lbs/hr	0.0020				NA	NA	NA	NA	NA	NA	NA
003-3	Fermentation Process	Grain Input	0.304	MBU/hr	8.51	Beer			NA	NA	NA	NA	NA	NA	NA
		Yeast	8.05	lbs/hr	0.0040				NA	NA	NA	NA	NA	NA	NA
004-1	DDGS Dryhouse #1: Cyclone Separators from No. 1 Rotary Dryer	DDGS	2.5	tph	2.5	DDGS	2.5	tph	NA	NA	NA	NA	NA	NA	NA
The output from No. 1 Dryer is 1 to 2.5 tons per hour, not 23.6 tph.															
004-2	DDGS Dryhouse #1: No. 1 Rotary Steam Tube Dryer	Thicker Stillage Syrup Recycled DDGS	19.2	tph	19.2	DDGS	2.5	tph	NA	NA	NA	NA	NA	NA	NA
Note: Input based on a DDGS of 300 gpm (or 81.87 tph), where 61.1% of the mass enters the dryer, or 50 tons/hr. Then we scaled that value by the output from No. 1 Dryer (2.5 tph/6.5 tph)															
Included a new process ID for the dryer emissions.															

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input	(Specify Units/hr)	Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output	(Specify Units/hr)	Fuel Type	Maximum Hourly Fuel Usage Rate	(Specify Units)	Maximum Yearly Fuel Usage Rate	(Specify Units)	Sulfur Content (%)	Ash Content (%)
005-1	DDGS Dryhouse #1: Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	DDGS	4.0	tph	4.0	DDGS	4	tph	NA	NA	NA	NA	NA	NA	NA
The output from Rotary Dryers No. 2 through 4 is up to 4 tons per hour, not 12.6 tph.															
005-2	DDGS Dryhouse #1: Nos. 2 - 4 Rotary Steam Tube Dryers	Thicker Stillage Syrup Recycled DDGS	30.8	tph	30.8	DDGS	4	tph	NA	NA	NA	NA	NA	NA	NA
Input based on a DDGS of 300 gpm (or 81.87 tph), where 61.1% of the mass enters the dryer, or 50 tons/hr. Then we scaled that value by the output from the three dryers (4 tph/6.5 tph).															
Included a new process ID for the dryer emissions.															
005-3	DDGS Dryhouse #1: Screens/ Presses/ Conveyors	Thick Stillage	18,000	gal/hr	81.9	Wet Cake + Thin Slop	81.9	tph	NA	NA	NA	NA	NA	NA	NA
Note: Input based on a DDGS of 300 gpm (or 81.87 tph).															
Included a new process ID for operation of screens/presses.															
032-1	DDGS Dryhouse #2; Two Centrifuges	Thick Stillage	18,000	gal/hr	81.9	Wet Cake + Thin Slop	81.9	tph	NA	NA	NA	NA	NA	NA	NA
032-2	DDGS Dryhouse #2; Two Steam Dryers	Thicker Stillage Syrup Recycled DDGS	50.0	tph	50.0	DDGS	6.5	tph	NA	NA	NA	NA	NA	NA	NA
032-3	DDGS Dryhouse #2; Two Steam Dryers - By-pass	"	6.5	tph	"	"	6.5	tph	"	"	"	"	"	"	"
032-4	DDGS Dryhouse #2; Pneumatic conveying cyclone separator from Rotary Dryers	DDGS	6.5	tph	6.5	DDGS	6.5	tph	NA	NA	NA	NA	NA	NA	NA
032-5	DDGS Dryhouse #2; Natural Gas and Process Gas Combustion at RTO	DDGS	11 3.5	lb/hr (avg VOC loading) MMBtu/hr (NG flow)	N/A	DDGS	.		NA	NA	NA	NA	NA	NA	NA

Emission Unit #	Emission Unit Name	Name of Raw Materials Input	Maximum Quantity of Each Raw Material Input	(Specify Units/hr)	Total Process Weight Rate for Emission Unit (tons/hr)	Name of Finished Materials	Maximum Quantity of Each Finished Material Output	(Specify Units/hr)	Fuel Type	Maximum Hourly Fuel Usage Rate	(Specify Units)	Maximum Yearly Fuel Usage Rate	(Specify Units)	Sulfur Content (%)	Ash Content (%)
006-1	Aging	White Dog	69.47	barrels/hr	N/A	Aged Distilled Spirits			NA	NA	NA	NA	NA	NA	NA
Moved barrel filling and dumping to IA list.															
006-2	Aging	Distilled Spirits	93.97	barrels/hr	N/A	Aged Distilled Spirits			NA	NA	NA	NA	NA	NA	NA
007-1	Bottling Lines A, B, C, & D (07-008a-d)	Aged Distilled Spirits	5.71	Mgal/hr	N/A	Bottled Aged Distilled Spirits			NA	NA	NA	NA	NA	NA	NA
021-1	No. 1 Bourbon Distillation System: Beer Still	Sour Mash (Beer)	17.669	Mgal/hr	N/A	Low Wine			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
021-2	No. 1 Bourbon Distillation System: Doubler Still	Low Wine	1.304	Mgal/hr	N/A	High Wine			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
022-1	Vodka Distillation System	Sour Mash (Beer)	2.188	Mgal/hr	N/A	Spirits			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
023-1	Platinum Distillation System	Sour Mash (Beer)	0.816	Mgal/hr	N/A	Spirits			NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
024-1	Bldg 3 Loadout Station	40-193 proof spirits	4.50	Mgal/hr	N/A	40-193 proof spirits	4.50	Mgal/hr	NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit.															
025-1	Regauge Loadout Station	80-145 Proof Bourbons	5.25	Mgal/hr	N/A	80-145 Proof Bourbons	5.25	Mgal/hr	NA	NA	NA	NA	NA	NA	NA
Moved from IA list to a significant emissions unit. Maximum process rate is seven (7) tanker trucks (6,000 gal each) in 8-hr shift at a max average proof of 120.															
031-1	No. 2 Bourbon Distillation System: Beer Still	Sour Mash (Beer)	17.669	Mgal/hr	N/A	Low Wine			NA	NA	NA	NA	NA	NA	NA
031-2	No. 2 Bourbon Distillation System: Doubler Still	Low Wine	1.304	Mgal/hr	N/A	High Wine			NA	NA	NA	NA	NA	NA	NA

Section B.3: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007EE

Internal Combustion Engines

___ Section EE.1: General Information
___ Section EE.2: Operating Information
___ Section EE.3: Design Information
___ Section EE.4: Fuel Information
___ Section EE.5: Emission Factor Information
___ Section EE.6: Notes, Comments, and Explanations

Additional Documentation

__ Complete DEP7007AI, DEP7007N, DEP7007V, and DEP7007GG

__ Attach EPA certification of the engine

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, August 11, 2020*

Section EE.1: General Information

Emission Unit #	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Date Reconstructed/ Modified	List Applicable Regulations
019	G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine	N/A	S-019-1	Generac	SG070	2007	9/24/2007	11/2007	na	40 CFR 60 Subpart JJJJ (Gap Engine)
019	G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068)	N/A	S-019-2	Cummins	75GGHF	2006	5/1/2006	07/2006	na	40 CFR 63 Subpart ZZZZ (Existing Engine)

Section EE.1: General Information

Emission Unit #	Emission Unit Name	Control Device ID	Stack ID	Manufacturer	Model Number	Model Year	Date of Manufacture	Proposed/Actual Date of Construction Commencement *(MM/YYYY)*	Date Reconstructed/ Modified	List Applicable Regulations
026	G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line)	N/A	S-019	Caterpillar/ Perkins	C7.1	2018	2018	2018	na	40 CFR 63 Subpart ZZZZ 40 CFR 60 Subpart IIII
027	FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm)	N/A	S-020	John Deere	6068HFC48A	2016	2016	2016	na	40 CFR 63 Subpart ZZZZ 40 CFR 60 Subpart IIII
028	FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm)	N/A	S-021	John Deere	6068HFC48A	2016	2016	2016	na	40 CFR 63 Subpart ZZZZ 40 CFR 60 Subpart IIII
029	FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house)	N/A	S-022	John Deere	6090HFC47B	2018	2018	2018	na	40 CFR 63 Subpart ZZZZ 40 CFR 60 Subpart IIII

Section EE.2: Operating Information

Emission Unit #	Engine Purpose (Identify if Non-Emergency, Emergency,Fire/Water Pump, Black-start engine for combustion turbine, Engine Testing)	Hours Operated	Is this engine a rental? *(Yes/No)*	Rental Time Period *(hrs)*	Alternate Operating Scenarios (Describe any operating scenarios in which the engine may be used in a different configuration)
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion					
019	Emergency	500	No	na	
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion					
019	Emergency	500	No	na	
G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line); Diesel Combustion					
026	Emergency	500	No	na	
FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion					
027	Fire/Water Pump	500	No	na	
FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion					
028	Fire/Water Pump	500	No	na	
FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house); Diesel Combustion					
029	Fire/Water Pump	500	No	na	

Section EE.3: Design Information

Emission Unit #	Engine Type (Identify all that apply: Commercial, Institutional, Stationary, Non-Road)	Ignition Type (Identify if either Compression or Spark Ignition)	Engine Family (Identify all that apply: 2-stroke, 4-stroke, Rich Burn, Lean Burn)	Maximum Engine Power *(bhp)*	Maximum Engine Speed *(rpm)*	Total Displacement *(L)*	Number of Cylinders
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion							
019	Stationary	Spark Ignition	4-Stroke, Lean Burn	107	1,800	6.8	10
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion							
019	Stationary	Spark Ignition	4-Stroke, Lean Burn	126	1,800	6.8	10
G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line); Diesel Combustion							
026	Stationary	Compression Ignition	4-Stroke	315	1,800	7.0	6
FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion							
027	Stationary	Compression Ignition	4-Stroke	315	1,760	6.8	6
FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion							
028	Stationary	Compression Ignition	4-Stroke	315	1,760	6.8	6
FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house); Diesel Combustion							
029	Stationary	Compression Ignition	4-Stroke	400	2,100	9.0	6

Section EE.4: Fuel Information

Emission Unit #	Identify if Primary, Secondary, or Tertiary Fuel	Fuel Type (Identify if Diesel, Gasoline, Natural Gas, Liquefied Petroleum Gas (LPG), Landfill/Digester Gas, or Other)	Fuel Grade	Percent Time Used *(%)*	Maximum Fuel Consumption	Heat Content	Sulfur Content *(%)*	SCC Code	SCC Units
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion									
019	Primary	Natural Gas	na	100	1,009 scf/hr	1,020 Btu/scf	Neg.	20200202	MMcf NG Burned
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion									
019	Primary	Natural Gas	na	100	1,017 scf/hr	1,020 Btu/scf	Neg.	20200202	MMcf NG Burned
G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line); Diesel Combustion									
026	Primary	Diesel	na	100	11.4 gal/hr	1,020 Btu/scf	Neg.	20200102	Mgal Diesel Burned
FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion									
027	Primary	Diesel	na	100	16.1 gal/hr	1,020 Btu/scf	Neg.	20200102	Mgal Diesel Burned
FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion									
028	Primary	Diesel	na	100	16.1 gal/hr	1,020 Btu/scf	Neg.	20200102	Mgal Diesel Burned
FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house); Diesel Combustion									
029	Primary	Diesel	na	100	20.4 gal/hr	1,020 Btu/scf	Neg.	20200102	Mgal Diesel Burned

Section EE.5: Emission Factor Information

Emission factors expressed here are based on the potential to emit.

Emission Unit #	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion					
019	Primary	PM/PM10/PM2.5	10.2	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	NOx	4161.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	SO2	0.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	VOC	120.4	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO	323.3	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO2	119316.9	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-1
019	Primary	N2O	0.22	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	CH4	2.25	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	Formaldehyde	53.9	lb/MMcf NG Burned	AP-42 Table 3.2-2
019	Primary	Ammonia	18.0	lb/MMcf NG Burned	SCAQMD Document, 12/2016
019	Primary	Lead	0.00050	lb/MMcf NG Burned	AP-42 Table 1.4-2
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion					
019	Primary	PM/PM10/PM2.5	10.2	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	NOx	4161.6	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	SO2	0.60	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	VOC	120	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO	323	lb/MMcf NG Burned	AP-42 Table 3.2-2, 07/2000
019	Primary	CO2	119,317	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-1
019	Primary	N2O	0.22	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	CH4	2.25	lb/MMcf NG Burned	40 CFR 98, Subpart C, Table C-2
019	Primary	Formaldehyde	53.9	lb/MMcf NG Burned	AP-42 Table 3.2-2
019	Primary	Ammonia	18.0	lb/MMcf NG Burned	SCAQMD Document, 12/2016
019	Primary	Lead	5.00E-04	lb/MMcf NG Burned	AP-42 Table 1.4-2

Emission Unit #	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line); Diesel Combustion					
026	Primary	PM/PM10/PM2.5	6.4	lb/Mgal Diesel Burned	EPA Annual Certification Data Test Results
026	Primary	NOx	159.1	lb/Mgal Diesel Burned	EPA Annual Certification Data Test Results
026	Primary	SO2	0.21	lb/Mgal Diesel Burned	AP-42 Table 3.4-1 (S is sulfur content in %)
026	Primary	VOC	8.6	lb/Mgal Diesel Burned	EPA Annual Certification Data Test Results
026	Primary	CO	45.4	lb/Mgal Diesel Burned	EPA Annual Certification Data Test Results
026	Primary	CO2	33,557	lb/Mgal Diesel Burned	EPA Annual Certification Data Test Results
026	Primary	N2O	0.18	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
026	Primary	CH4	0.91	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
026	Primary	Benzene	0.128	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
026	Primary	Toluene	0.056	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
026	Primary	Xylene	3.90E-02	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion					
027	Primary	PM/PM10/PM2.5	3.2	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
027	Primary	NOx	106.5	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
027	Primary	SO2	0.21	lb/Mgal Diesel Burned	AP-42 Table 3.4-1 (S is sulfur content in %)
027	Primary	VOC	4	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet (as HC)
027	Primary	CO	19	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
027	Primary	CO2	22,338	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-1
027	Primary	N2O	0.18	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
027	Primary	CH4	0.91	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
027	Primary	Benzene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
027	Primary	Toluene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
027	Primary	Xylene	3.90E-02	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion					
028	Primary	PM/PM10/PM2.5	3.2	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
028	Primary	NOx	106.5	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
028	Primary	SO2	0.21	lb/Mgal Diesel Burned	AP-42 Table 3.4-1 (S is sulfur content in %)
028	Primary	VOC	4	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet (as HC)
028	Primary	CO	19	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
028	Primary	CO2	22,338	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-1
028	Primary	N2O	0.18	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
028	Primary	CH4	0.91	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
028	Primary	Benzene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
028	Primary	Toluene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
028	Primary	Xylene	3.90E-02	lb/Mgal Diesel Burned	AP-42 Table 3.3-2

Emission Unit #	Fuel	Pollutant	Emission Factor	Emission Factor Units	Source of Emission Factor
FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house); Diesel Combustion					
029	Primary	PM/PM10/PM2.5	3.5	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
029	Primary	NOx	122.3	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
029	Primary	SO2	0.21	lb/Mgal Diesel Burned	AP-42 Table 3.4-1 (S is sulfur content in %)
029	Primary	VOC	2	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet (as HC)
029	Primary	CO	29	lb/Mgal Diesel Burned	Manufacturer Emissions Data Sheet
029	Primary	CO2	22,338	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-1
029	Primary	N2O	0.18	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
029	Primary	CH4	0.91	lb/Mgal Diesel Burned	40 CFR 98, Subpart C, Table C-2
029	Primary	Benzene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
029	Primary	Toluene	0.1	lb/Mgal Diesel Burned	AP-42 Table 3.3-2
029	Primary	Xylene	3.90E-02	lb/Mgal Diesel Burned	AP-42 Table 3.3-2

Section EE.6: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary

__ Section N.2: Stack Information

__ Section N.3: Fugitive Information

__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
001	Grain and Distiller's Dried Grain Handling	1	Grain Unloading (01-001)	NA	NA	F-001	56.00	PM10	0.500	Prior KyEIS	100.00%	-	28.0	-	123	-
							56.00	PM2.5	0.009	Prior KyEIS	100.00%	-	0.504	-	2.21	-
							56.00	PT	0.900	Prior KyEIS	100.00%	-	50.4	-	221	-
001	Grain and Distiller's Dried Grain Handling	2	Grain Conveying/Elevator (01-002)	NA	NA	F-001	56.00	PM10	0.500	Prior KyEIS	100.00%	90.0%	28.0	2.80	123	12.3
							56.00	PM2.5	0.100	Prior KyEIS	100.00%	90.0%	5.60	0.560	24.5	2.45
							56.00	PT	10.0	Prior KyEIS	100.00%	90.0%	560	56.0	2,453	245
001	Grain and Distiller's Dried Grain Handling	3	Grain Hammermill Conveyor (01-005)	NA	NA	F-001	25.20	PM10	1.20	Prior KyEIS	100.00%	90.0%	30.2	3.02	132	13.2
							25.20	PM2.5	0.024	Prior KyEIS	100.00%	90.0%	0.605	0.060	2.65	0.265
							25.20	PT	2.40	Prior KyEIS	100.00%	90.0%	60.5	6.05	265	26.5
001	Grain and Distiller's Dried Grain Handling	4	Distiller's dried grain loading/conveyor (03-005)	NA	NA	F-001	33.00	PM10	0.010	Prior KyEIS	100.00%	-	0.330	-	1.45	-
							33.00	PM2.5	0.010	Prior KyEIS	100.00%	-	0.330	-	1.45	-
							33.00	PT	0.310	Prior KyEIS	100.00%	-	10.2	-	44.8	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
002	Hammer Mill Group and Receiver Process Cyclone	1	Hammer Mill and Receiver Process Cyclone (01-006)	NA	NA	S-002	25.20	PM10	0.060	Prior KyEIS	100.00%	-	1.51	-	6.62	-
							25.20	PM2.5	0.001	Prior KyEIS	100.00%	-	0.030	-	0.132	-
							25.20	PT	0.120	Prior KyEIS	100.00%	-	3.02	-	13.2	-
002	Hammer Mill Group and Receiver Process Cyclone	2	Hammer Mill (01-006B) and Receiver Process Cyclone	NA	NA	S-002B	25.20	PM10	0.060	Prior KyEIS	100.00%	-	1.51	-	6.62	-
							25.20	PM2.5	0.001	Prior KyEIS	100.00%	-	0.030	-	0.132	-
							25.20	PT	0.120	Prior KyEIS	100.00%	-	3.02	-	13.2	-
002	Hammer Mill Group and Receiver Process Cyclone	3	Hammer Mill (01-006C) and Receiver Process Cyclone	NA	NA	S-002C	25.20	PM10	0.060	Prior KyEIS	100.00%	-	1.51	-	6.62	-
							25.20	PM2.5	0.001	Prior KyEIS	100.00%	-	0.030	-	0.132	-
							25.20	PT	0.120	Prior KyEIS	100.00%	-	3.02	-	13.2	-
002	Hammer Mill Group and Receiver Process Cyclone	4	Hammer Mill (01-006D) and Receiver Process Cyclone	NA	NA	S-002D	25.20	PM10	0.060	Prior KyEIS	100.00%	-	1.51	-	6.62	-
							25.20	PM2.5	0.001	Prior KyEIS	100.00%	-	0.030	-	0.132	-
							25.20	PT	0.120	Prior KyEIS	100.00%	-	3.02	-	13.2	-
003	Fermentation Process	1	Fermentation Vessels (12)	NA	NA	S-003	0.456	VOC	14.3	AP-42-Tab 9.12.3-1	100.00%	-	6.50	-	28.5	-
							0.456	Ethanol	14.2	AP-42-Tab 9.12.3-1	100.00%	-	6.48	-	28.4	-
							0.456	Ethyl Acetate	0.046	AP-42-Tab 9.12.3-1	100.00%	-	0.021	-	0.092	-
							0.456	Isoamyl Alcohol	0.013	AP-42-Tab 9.12.3-1	100.00%	-	0.006	-	0.026	-
							0.456	Isobutyl Alcohol	0.004	AP-42-Tab 9.12.3-1	100.00%	-	0.002	-	0.008	-
							0.456	CO2	13.6	Note 2	100.00%	-	6.19	-	27.1	-
							0.456	Acetaldehyde	0.057	Note 1	100.00%	-	0.026	-	0.115	-
							0.456	Propionaldehyde	0.004	Note 1	100.00%	-	0.002	-	0.008	-
							0.456	Methanol	0.002	Note 1	100.00%	-	8.65E-04	-	0.004	-
							0.456	Formaldehyde	0.002	Note 1	100.00%	-	8.65E-04	-	0.004	-
							0.456	HAPs	0.065	Sum of HAPs	100.00%	-	0.030	-	0.130	-

Corrected VOC EF from 14.2 to 14.263 lbs/1000 bushels (MBU) Source: AP-42, Table 9.12.3-1. Added other non-HAP compounds with emission factors established by AP-42. Estimated HAP and CO2 emissions per Notes 1 and 2, respectively.

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
003	Fermentation Process	2	Fermentation Vessels (4)	NA	NA	S-003B	0.152	VOC	14.3	AP-42-Tab 9.12.3-1	100.00%	-	2.17	-	9.50	-
							0.152	Ethanol	14.2	AP-42-Tab 9.12.3-1	100.00%	-	2.16	-	9.45	-
							0.152	Ethyl Acetate	0.046	AP-42-Tab 9.12.3-1	100.00%	-	0.007	-	0.031	-
							0.152	Isoamyl Alcohol	0.013	AP-42-Tab 9.12.3-1	100.00%	-	0.002	-	0.009	-
							0.152	Isobutyl Alcohol	0.004	AP-42-Tab 9.12.3-1	100.00%	-	6.08E-04	-	0.003	-
							0.152	CO2	13.6	Note 2	100.00%	-	2.06	-	9.04	-
							0.152	Acetaldehyde	0.057	Note 1	100.00%	-	0.009	-	0.038	-
							0.152	Propionaldehyde	0.004	Note 1	100.00%	-	5.79E-04	-	0.003	-
							0.152	Methanol	0.002	Note 1	100.00%	-	2.88E-04	-	0.001	-
							0.152	Formaldehyde	0.002	Note 1	100.00%	-	2.88E-04	-	0.001	-
							0.152	HAPs	0.065	Sum of HAPs	100.00%	-	0.010	-	0.043	-
003	Fermentation Process	3	Fermentation Vessels (8)	NA	NA	S-003C	0.304	VOC	14.3	AP-42-Tab 9.12.3-1	100.00%	-	4.34	-	19.0	-
							0.304	Ethanol	14.2	AP-42-Tab 9.12.3-1	100.00%	-	4.32	-	18.9	-
							0.304	Ethyl Acetate	0.046	AP-42-Tab 9.12.3-1	100.00%	-	0.014	-	0.061	-
							0.304	Isoamyl Alcohol	0.013	AP-42-Tab 9.12.3-1	100.00%	-	0.004	-	0.017	-
							0.304	Isobutyl Alcohol	0.004	AP-42-Tab 9.12.3-1	100.00%	-	0.001	-	0.005	-
							0.304	CO2	13.6	Note 2	100.00%	-	4.13	-	18.1	-
							0.304	Acetaldehyde	0.057	Note 1	100.00%	-	0.017	-	0.076	-
							0.304	Propionaldehyde	0.004	Note 1	100.00%	-	0.001	-	0.005	-
							0.304	Methanol	0.002	Note 1	100.00%	-	5.77E-04	-	0.003	-
							0.304	Formaldehyde	0.002	Note 1	100.00%	-	5.77E-04	-	0.003	-
							0.304	HAPs	0.065	Sum of HAPs	100.00%	-	0.020	-	0.086	-
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	1	Cyclone Separators from No. 1 Rotary Dryer (03-001)	NA	NA	S-004-1	2.5	PM10	1.50	Prior KyEIS	100.00%	65.00%	3.75	1.31	16.4	5.75
							2.5	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	1.73	0.604	7.56	2.64
							2.5	PT	3.00	Prior KyEIS	100.00%	65.00%	7.50	2.63	32.9	11.5
							2.5	VOC	0.494	See Note 3	100.00%	-	1.23	-	5.40	-
							2.5	Acetaldehyde	0.020	See Note 4	100.00%	-	0.050	-	0.221	-
							2.5	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Formaldehyde	0.015	See Note 4	100.00%	-	0.038	-	0.166	-
							2.5	HAPs	0.035	Sum	100.00%	-	0.088	-	0.387	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	2	No. 1 Rotary Steam Tube Dryer (03-001)	NA	NA	S-004-2	2.5	VOC	3.56	See Note 6	100.00%	-	8.90	-	39.0	-
							2.5	Acetaldehyde	0.220	See Note 7	100.00%	-	0.550	-	2.41	-
							2.5	Acrolein	0.013	See Note 7	100.00%	-	0.033	-	0.144	-
							2.5	Methanol	0.044	See Note 7	100.00%	-	0.110	-	0.483	-
							2.5	Formaldehyde	0.001	See Note 7	100.00%	-	0.004	-	0.016	-
							2.5	HAPs	0.279	Sum	100.00%	-	0.697	-	3.05	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	1	Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	NA	NA	S-005-1	4.00	PM10	1.50	Prior KyEIS	100.00%	65.00%	6.00	2.10	26.3	9.20
							4.00	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	2.76	0.966	12.1	4.23
							4.00	PT	3.00	Prior KyEIS	100.00%	65.00%	12.0	4.20	52.6	18.4
							4.00	VOC	0.494	See Note 3	100.00%	-	1.97	-	8.65	-
							4.00	Acetaldehyde	0.020	See Note 4	100.00%	-	0.081	-	0.353	-
							4.00	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Formaldehyde	0.015	See Note 4	100.00%	-	0.061	-	0.266	-
							4.00	HAPs	0.035	Sum	100.00%	-	0.141	-	0.619	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	2	Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)	NA	NA	S-005-2	4.00	VOC	3.56	See Note 6	100.00%	-	14.2	-	62.4	-
							4.00	Acetaldehyde	0.220	See Note 7	100.00%	-	0.880	-	3.85	-
							4.00	Acrolein	0.013	See Note 7	100.00%	-	0.053	-	0.231	-
							4.00	Methanol	0.044	See Note 7	100.00%	-	0.177	-	0.773	-
							4.00	Formaldehyde	0.001	See Note 7	100.00%	-	0.006	-	0.025	-
							4.00	HAPs	0.279	Sum	100.00%	-	1.11	-	4.88	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	3	Centrifuge	NA	NA	S-005-3	18,000	VOC	4.62E-05	See Note 8	100.00%	-	0.832	-	3.64	-
							18,000	Acetaldehyde	4.90E-07	See Note 8B	100.00%	-	0.009	-	0.039	-
							18,000	Acrolein	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Methanol	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Formaldehyde	-	See Note 8B	100.00%	-	-	-	-	-
							18,000	HAPs	4.60E-06	Sum	100.00%	-	0.083	-	0.362	-
Per audit disclosure, added emissions of VOCs and HAPs from this new process ID.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
032	DDGS Dryhouse #2	1	Two Centrifuges	NA	NA	S-032-1	18,000	VOC	4.62E-05	See Note 8	100.00%	-	0.832	-	3.64	-
							18,000	Acetaldehyde	4.90E-07	See Note 8B	100.00%	-	0.009	-	0.039	-
							18,000	Acrolein	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Methanol	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Formaldehyde	-	See Note 8B	100.00%	-	-	-	-	-
							18,000	HAPs	4.60E-06	Sum	100.00%	-	0.083	-	0.362	-
032	DDGS Dryhouse #2	2	Two Steam Dryers	NA	NA	S-032-2	6.50	VOC	3.56	See Note 6	100.00%	90.0%	23.1	2.31	101	10.1
							6.50	Acetaldehyde	0.220	See Note 7	100.00%	90.0%	1.43	0.143	6.26	0.626
							6.50	Acrolein	0.013	See Note 7	100.00%	90.0%	0.086	0.009	0.375	0.037
							6.50	Methanol	0.044	See Note 7	100.00%	90.0%	0.287	0.029	1.26	0.126
							6.50	Formaldehyde	0.001	See Note 7	100.00%	90.0%	0.009	9.25E-04	0.041	0.004
							6.50	HAPs	0.279	Sum	100.00%	90.0%	1.81	0.181	7.93	0.793
Per audit disclosure and expansion project, BTD will voluntarily install and operate an RTO to control emissions from the dryers.																
032	DDGS Dryhouse #2	3	Two Steam Dryers - By-pass	NA	NA	S-032-2	6.50	VOC	3.56	See Note 6	100.00%	-	23.1	-	5.78	-
							6.50	Acetaldehyde	0.220	See Note 7	100.00%	-	1.43	-	0.357	-
							6.50	Acrolein	0.013	See Note 7	100.00%	-	0.086	-	0.021	-
							6.50	Methanol	0.044	See Note 7	100.00%	-	0.287	-	0.072	-
							6.50	Formaldehyde	0.001	See Note 7	100.00%	-	0.009	-	0.002	-
							6.50	HAPs	0.279	Sum	100.00%	-	1.81	-	0.453	-
Per audit disclosure and expansion project, the #2 Dryhouse requires a by-pass for maintenance, startup, shut-down, and malfunction periods. Please include an operational restriction of no more than 500 hours per year.																
032	DDGS Dryhouse #2	4	Pneumatic conveying cyclone separator from Rotary Dryers	NA	NA	S-032-3	6.50	PM10	1.50	Prior KyEIS	100.00%	-	9.75	-	42.7	-
							6.50	PM2.5	0.690	Prior KyEIS	100.00%	-	4.49	-	19.6	-
							6.50	PT	3.00	Prior KyEIS	100.00%	-	19.5	-	85.4	-
							6.50	VOC	0.494	See Note 3	100.00%	-	3.21	-	14.1	-
							6.50	Acetaldehyde	0.020	See Note 4	100.00%	-	0.131	-	0.574	-
							6.50	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							6.50	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							6.50	Formaldehyde	0.015	See Note 4	100.00%	-	0.099	-	0.432	-
							6.50	HAPs	0.035	Sum	100.00%	-	0.230	-	1.01	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
032	DDGS Dryhouse #2	5	Natural Gas and Process Gas Combustion at RTO	NA	NA	S-032-2	0.004	CO2	119,317	†	100.00%	-	433	-	1,898	-
							0.004	CO	84.0	*	100.00%	-	0.305	-	1.34	-
							0.004	0.00	119,440	††	100.00%	-	434	-	1,900	-
							0.004	HAPs	1.89	‡	100.00%	-	0.007	-	0.030	-
							0.004	Hexane	1.80	‡	100.00%	-	0.007	-	0.029	-
							0.004	Formaldehyde	0.075	‡	100.00%	-	2.72E-04	-	0.001	-
							0.004	CH4	2.25	†††	100.00%	-	0.008	-	0.036	-
							0.004	N2O	0.225	†††	100.00%	-	8.17E-04	-	0.004	-
							0.004	NOX	100.0	AP-42 Table 1.4-1, small uncontrolled boiler	100.00%	-	0.363	-	1.59	-
							0.004	PM10	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	PM2.5	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	PT	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	SO2	0.600	**	100.00%	-	0.002	-	0.010	-
							0.004	VOC	5.50	**	100.00%	-	0.020	-	0.087	-
006	Aging	1	Warehouse Aging	NA	NA	F-006	69.5	VOC	6.90	AP-42-Tab 9.12.3-1	100.00%	-	479	-	2,100	-
Even though EF did not change, potential emissions changed based on revised process rate.																
006	Aging	2	Warehouse Aging on Farm	NA	NA	F-006B	94.0	VOC	6.90	AP-42-Tab 9.12.3-1	100.00%	-	648	-	2,840	-
007	Bottling Lines A, B, C, & D (07-008a-d)	1	Loading losses	NA	NA	S-007	5.71	VOC	1.10	EIIP's Section 3.1.1 Charging to an Empty Vessel	100.00%		6.28	-	27.5	-
Per audit disclosure and expansion project, BTD is requesting an operational restriction of no more than 50,000,000 gallons per year.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
008	Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr)	1	Natural Gas Combustion	NA	NA	S-008	0.138	CO2	119,317	† EPA's GHG Reporting Rule (40 CFR 98), Table C-1	100.00%	-	16,470	-	72,140	-
							0.138	CO	15.9	June 2020 Kenvirons Source Test	100.00%	-	2.19	-	9.61	-
							0.138	CO2e	119,440	†† Scaled GHG by GWP	100.00%	-	16,487	-	72,215	-
							0.138	HAPs	1.89	‡ Sum of HAPs, AP-42 Section 1.4 Table 1.4-3 (7/98)	100.00%	-	0.261	-	1.14	-
							0.138	Hexane	1.80	‡	100.00%	-	0.248	-	1.09	-
							0.138	Formaldehyde	0.075	‡	100.00%	-	0.010	-	0.045	-
							0.138	CH4	2.25	††† EPA's GHG Reporting Rule (40 CFR 98), Table C-2	100.00%	-	0.311	-	1.36	-
							0.138	N2O	0.225	†††	100.00%	-	0.031	-	0.136	-
							0.138	NOX	185	June 2020 Kenvirons Source Test	100.00%	-	25.5	-	112	-
							0.138	PM10	7.60	** AP-42 Section 1.4 Table 1.4-2 (7/98)	100.00%	-	1.05	-	4.60	-
							0.138	PM2.5	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	PT	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	SO2	0.600	**	100.00%	-	0.083	-	0.363	-
							0.138	VOC	5.50	**	100.00%	-	0.759	-	3.33	-
Updated maximum heat input rating. Updated a few emissions factors. Changed NOX EF to 280 lbs/MMBtu per AP-42 Section 1.4 Table 1.4-1 (7/98), factor for large (>100 MMBtu/hr) boiler with pre-NSPS burners																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
014	Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	NA	NA	S-014	0.059	CO2	119,317	†	100.00%	-	7,077	-	30,998	-
							0.059	CO	84.0	*	100.00%	-	4.98	-	21.8	-
							0.059	CO2e	119,440	††	100.00%	-	7,084	-	31,030	-
							0.059	HAPs	1.89	‡	100.00%	-	0.112	-	0.491	-
							0.059	Hexane	1.80	‡	100.00%	-	0.107	-	0.468	-
							0.059	Formaldehyde	0.075	‡	100.00%	-	0.004	-	0.019	-
							0.059	CH4	2.25	†††	100.00%	-	0.133	-	0.585	-
							0.059	N2O	0.225	†††	100.00%	-	0.013	-	0.058	-
							0.059	NOX	100.0	AP-42 Table 1.4-1, small uncontrolled boiler	100.00%	-	5.93	-	26.0	-
							0.059	PM10	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PM2.5	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PT	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	SO2	0.600	**	100.00%	-	0.036	-	0.156	-
							0.059	VOC	5.50	**	100.00%	-	0.326	-	1.43	-
Updated maximum heat input rating. Updated a few emissions factors.																
015	Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr	1	Natural Gas Combustion	NA	NA	S-015	0.059	CO2	119,317	†	100.00%	-	7,077	-	30,998	-
							0.059	CO	84.0	*	100.00%	-	4.98	-	21.8	-
							0.059	HAPs	1.89	††	100.00%	-	0.112	-	0.491	-
							0.059	Hexane	1.80	‡	100.00%	-	0.107	-	0.468	-
							0.059	Formaldehyde	0.075	‡	100.00%	-	0.004	-	0.019	-
							0.059	CO2e	119,440	‡	100.00%	-	7,084	-	31,030	-
							0.059	CH4	2.25	†††	100.00%	-	0.133	-	0.585	-
							0.059	N2O	0.225	*	100.00%	-	0.013	-	0.058	-
							0.059	NOX	50.0	AP-42 Table 1.4-1, small boiler with LNB	100.00%	-	2.97	-	13.0	-
							0.059	PM10	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PM2.5	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	PT	7.60	**	100.00%	-	0.451	-	1.97	-
							0.059	SO2	0.600	**	100.00%	-	0.036	-	0.156	-
							0.059	VOC	5.50	**	100.00%	-	0.326	-	1.43	-
Updated maximum heat input rating. Updated a few emissions factors. Changed NOX EF to 50 lbs/MMBtu per AP-42 Section 1.4 Table 1.4-1 (7/98), factor for large (>100 MMBtu/hr) boiler with LNBs.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
015	"	4	GNS Combustion	NA	NA	S-015	0.088	CO	5.00	σ AP-42 Section 1.3 Table 1.3-1 (5/10)	100.00%	-	0.438	-	1.92	-
							0.088	NOX	20.0	σ	100.00%	-	1.75	-	7.67	-
							0.088	PM10	3.30	AP-42 Section 1.3 Table 1.3-1 & 2 (5/10)	100.00%	-	0.289	-	1.27	-
							0.088	PM2.5	3.30	σσ AP-42 Section 1.3 Table 1.3-1 & 2 (5/10)	100.00%	-	0.289	-	1.27	-
							0.088	PT	3.30	σσ	100.00%	-	0.289	-	1.27	-
							0.088	SO2	2.13	AP-42 Section 1.3 Table 1.3-1 (5/10)	100.00%	-	0.187	-	0.817	-
							0.088	VOC	0.200	σσσ AP-42 Section 1.3 Table 1.3-3 (5/10)	100.00%	-	0.018	-	0.077	-
							0.088	CO2	10,425	†	100.00%	-	913	-	3,998	-
							0.088	CH4	0.168	†††	100.00%	-	0.015	-	0.064	-
							0.088	N2O	0.017	†††	100.00%	-	0.001	-	0.006	-
							0.088	CO2e	10,435	††	100.00%	-	914	-	4,002	-
							0.088	HAPs	0.068	Sum of HAPs, AP-42 Section 1.4 Table 1.4-3 (7/98)	100.00%	-	0.006	-	0.026	-
016	Indirect Heat Exchanger, Boiler #12 179 MMBtu/hr	1	Natural Gas Combustion	NA	NA	S-016	0.176	CO2	119,317	†	100.00%	-	20,962	-	91,815	-
							0.176	CO	84.0	*	100.00%	-	14.8	-	64.6	-
							0.176	CO2e	119,440	††	100.00%	-	20,984	-	91,910	-
							0.176	HAPs	1.89	‡	100.00%	-	0.332	-	1.45	-
							0.176	Hexane	1.80	‡	100.00%	-	0.316	-	1.39	-
							0.176	Formaldehyde	0.075	‡	100.00%	-	0.013	-	0.058	-
							0.176	CH4	2.25	†††	100.00%	-	0.395	-	1.73	-
							0.176	N2O	0.225	†††	100.00%	-	0.040	-	0.173	-
							0.176	NOX	37.1	Vendor guarantee (30 ppm NOx @ 3% O2) with LNB and FGR	100.00%	-	6.52	-	28.6	-
							0.176	PM10	7.60	**	100.00%	-	1.34	-	5.85	-
							0.176	PM2.5	7.60	**	100.00%	-	1.34	-	5.85	-
							0.176	PT	7.60	**	100.00%	-	1.34	-	5.85	-
							0.176	SO2	0.600	**	100.00%	-	0.105	-	0.462	-
							0.176	VOC	5.50	**	100.00%	-	0.966	-	4.23	-

Included in summary table for Title V renewal update, even though it was covered in a separate activity number.

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
017	Thunder Gas Tank: 1,120 gallon Gasoline Dispensing Tank 01	1	Breathing Losses	NA	NA	S-017	0.011	VOC	2.46	TankESP, AP-42 Section 7.1	100.00%	-	0.028	-	0.120	-
		2	Working Losses	NA	NA	S-017	0.011	VOC	3.65	TankESP, AP-42 Chapter 7	100.00%	-	0.041	-	0.179	-
		3	Loading Losses	NA	NA	S-017	0.011	VOC	11.7	AP-42 Section 5.2	100.00%	-	0.131	-	0.574	-
018	Farm Tank: 250 gallon Gasoline Dispensing Tank 02	1	Breathing Losses	NA	NA	S-018	0.003	VOC	6.54	TankESP, AP-42 Section 7.1	100.00%	-	0.016	-	0.072	-
		2	Working Losses	NA	NA	S-018	0.003	VOC	2.24	TankESP, AP-42 Chapter 7	100.00%	-	0.006	-	0.024	-
		3	Loading Losses	NA	NA	S-018	0.003	VOC	11.7	AP-42 Section 5.2	100.00%	-	0.029	-	0.128	-
019	G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine	1	Natural Gas Combustion	NA	NA	S-019-1	1.009E-03	PM10	10.2	AP-42 Table 3.2-2, 07/2000	100.00%	-	0.010	-	0.003	-
							1.009E-03	PM2.5	10.2	""	100.00%	-	0.010	-	0.003	-
							1.009E-03	PT	10.2	""	100.00%	-	0.010	-	0.003	-
							1.009E-03	NOx	4,162	""	100.00%	-	4.20	-	1.05	-
							1.009E-03	SO2	0.600	""	100.00%	-	6.05E-04	-	1.51E-04	-
							1.009E-03	VOC	120	""	100.00%	-	0.121	-	0.030	-
							1.009E-03	CO	323	""	100.00%	-	0.326	-	0.082	-
							1.009E-03	CO2	119,317	†	100.00%	-	120	-	30.1	-
							1.009E-03	N2O	0.225	†††	100.00%	-	2.27E-04	-	5.67E-05	-
							1.009E-03	CH4	2.25	†††	100.00%	-	0.002	-	5.67E-04	-
							1.009E-03	Formaldehyde	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-
							1.009E-03	Ammonia	18.0	SCAQMD Document, 12/2016	100.00%	-	0.018	-	0.005	-
							1.009E-03	Lead	5.00E-04	AP-42 Table 1.4-2	100.00%	-	5.05E-07	-	1.26E-07	-
							1.009E-03	HAPs	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
019	G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068)	2	Natural Gas Combustion	NA	NA	S-019-2	1.017E-03	PM10	10.2	AP-42 Table 3.2-2, 07/2000	100.00%	-	0.010	-	0.003	-
							1.017E-03	PM2.5	10.2	""	100.00%	-	0.010	-	0.003	-
							1.017E-03	PT	10.2	""	100.00%	-	0.010	-	0.003	-
							1.017E-03	NOx	4,162	""	100.00%	-	4.23	-	1.06	-
							1.017E-03	SO2	0.600	""	100.00%	-	6.10E-04	-	1.53E-04	-
							1.017E-03	VOC	120	""	100.00%	-	0.122	-	0.031	-
							1.017E-03	CO	323	""	100.00%	-	0.329	-	0.082	-
							1.017E-03	CO2	119,317	†	100.00%	-	121	-	30.3	-
							1.017E-03	N2O	0.225	†††	100.00%	-	2.29E-04	-	5.72E-05	-
							1.017E-03	CH4	2.25	†††	100.00%	-	0.002	-	5.72E-04	-
							1.017E-03	Formaldehyde	53.9	AP-42 Table 3.2-2	100.00%	-	0.055	-	0.014	-
							1.017E-03	Ammonia	18.0	SCAQMD Document, 12/2016	100.00%	-	0.018	-	0.005	-
							1.017E-03	Lead	5.00E-04	AP-42 Table 1.4-2	100.00%	-	5.09E-07	-	1.27E-07	-
							1.009E-03	HAPs	53.9	AP-42 Table 3.2-2	100.00%	-	0.054	-	0.014	-
020	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	1	Natural Gas Combustion	NA	NA	S-020	9.608E-03	CO2	119,317	†	100.00%	-	1,146	-	5,021	-
							9.608E-03	CO	84.0	*	100.00%	-	0.807	-	3.53	-
							9.608E-03	HAPs	1.89	††	100.00%	-	0.018	-	0.079	-
							9.608E-03	CO2e	119,440	‡	100.00%	-	1,148	-	5,026	-
							9.608E-03	CH4	2.25	†††	100.00%	-	0.022	-	0.095	-
							9.608E-03	N2O	0.225	*	100.00%	-	0.002	-	0.009	-
							9.608E-03	NOX	100.0	AP-42 Section 1.4 Table 1.4-1 (7/98)	100.00%	-	0.961	-	4.21	-
							9.608E-03	PM10	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	PM2.5	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	PT	7.60	**	100.00%	-	0.073	-	0.320	-
							9.608E-03	SO2	0.600	**	100.00%	-	0.006	-	0.025	-
							9.608E-03	VOC	5.50	**	100.00%	-	0.053	-	0.231	-

Per audit disclosure, added emissions of criteria pollutants and HAPs from this existing process.

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
021	No. 1 Bourbon Distillation System	1	Beer Still #1 S/N 0269	NA	NA	S-021-1A	2.08	VOC	0.321	See Note 9	100.00%	-	0.668	-	2.93	-
							2.08	Acetaldehyde	0.016	See Note 9	100.00%	-	0.034	-	0.150	-
							2.08	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Methanol	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Formaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	HAPs	0.019	Sum	100.00%	-	0.039	-	0.169	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
021	No. 1 Bourbon Distillation System	2	Doubler Still #2, S/N 0733	NA	NA	S-021-2A	1.19	VOC	0.321	See Note 9	100.00%	-	0.380	-	1.67	-
							1.19	Acetaldehyde	0.016	See Note 9	100.00%	-	0.020	-	0.085	-
							1.19	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Methanol	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Formaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	HAPs	0.019	Sum	100.00%	-	0.022	-	0.096	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
022	Vodka Distillation System	1	Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494	NA	NA	S-022A	1.04	VOC	0.321	See Note 9	100.00%	-	0.334	-	1.46	-
							1.04	Acetaldehyde	0.016	See Note 9	100.00%	-	0.017	-	0.075	-
							1.04	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	Methanol	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	Formaldehyde	7.06E-04	See Note 10	100.00%	-	7.35E-04	-	0.003	-
							1.04	HAPs	0.019	Sum	100.00%	-	0.019	-	0.085	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
023	Platinum Distillation System	1	Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804	NA	NA	S-023A	0.389	VOC	0.321	See Note 9	100.00%	-	0.125	-	0.546	-
							0.389	Acetaldehyde	0.016	See Note 9	100.00%	-	0.006	-	0.028	-
							0.389	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	Methanol	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	Formaldehyde	7.06E-04	See Note 10	100.00%	-	2.74E-04	-	0.001	-
							0.389	HAPs	0.019	Sum	100.00%	-	0.007	-	0.032	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
024	Bldg 3 Loadout Station	1	Loading losses	NA	NA	S-024	4.50	VOC	0.693	AP-42 Section 5.2.2.1.1, Engineering Calculations	100.00%	-	3.12	-	13.7	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
025	Regauge Loadout Station	1	Loading losses	NA	NA	S-025	5.25	VOC	0.889	AP-42 Section 5.2.2.1.1, Engineering Calculations	100.00%	-	4.67	-	20.4	-
Per audit disclosure, added emissions of VOCs and HAPs from this existing process.																
026	G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line)	1	Diesel Combustion	NA	NA	S-019	1.140E-02	PM10	6.36	EPA Annual Certification Data Test Results	100.00%	-	0.073	-	0.018	-
							1.140E-02	PM2.5	6.36	""	100.00%	-	0.073	-	0.018	-
							1.140E-02	PT	6.36	""	100.00%	-	0.073	-	0.018	-
							1.140E-02	NOx	159	""	100.00%	-	1.81	-	0.453	-
							1.140E-02	SO2	0.208	AP-42 Table 3.4-1 (S is sulfur content in %)	100.00%	-	0.002	-	5.92E-04	-
							1.140E-02	VOC	8.63	""	100.00%	-	0.098	-	0.025	-
							1.140E-02	CO	45.4	""	100.00%	-	0.518	-	0.130	-
							1.140E-02	CO2	33,557	""	100.00%	-	383	-	95.6	-
							1.140E-02	N2O	0.181	†††	100.00%	-	0.002	-	5.16E-04	-
							1.140E-02	CH4	0.906	†††	100.00%	-	0.010	-	0.003	-
							1.140E-02	Benzene	0.128	AP-42 Table 3.3-2	100.00%	-	0.001	-	3.64E-04	-
							1.140E-02	Toluene	0.056	""	100.00%	-	6.39E-04	-	1.60E-04	-
							1.140E-02	Xylene	0.039	""	100.00%	-	4.45E-04	-	1.11E-04	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
027	FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm)	1	Diesel Combustion	NA	NA	S-020	1.610E-02	PM10	3.22	Manufacturer Emissions Data Sheet	100.00%	-	0.052	-	0.013	-
							1.610E-02	PM2.5	3.22	""	100.00%	-	0.052	-	0.013	-
							1.610E-02	PT	3.22	""	100.00%	-	0.052	-	0.013	-
							1.610E-02	NOx	106	""	100.00%	-	1.71	-	0.429	-
							1.610E-02	SO2	0.208	AP-42 Table 3.4-1 (S is sulfur content in %)	100.00%	-	0.003	-	8.36E-04	-
							1.610E-02	VOC	3.54	Manufacturer Emissions Data Sheet (as HC)	100.00%	-	0.057	-	0.014	-
							1.610E-02	CO	19.3	""	100.00%	-	0.311	-	0.078	-
							1.610E-02	CO2	22,338	†	100.00%	-	360	-	89.9	-
							1.610E-02	N2O	0.181	†††	100.00%	-	0.003	-	7.30E-04	-
							1.610E-02	CH4	0.906	†††	100.00%	-	0.015	-	0.004	-
							1.610E-02	Benzene	0.128	AP-42 Table 3.3-2	100.00%	-	0.002	-	5.15E-04	-
							1.610E-02	Toluene	0.056	""	100.00%	-	9.02E-04	-	2.26E-04	-
							1.610E-02	Xylene	0.039	""	100.00%	-	6.29E-04	-	1.57E-04	-
028	FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm)	1	Diesel Combustion	NA	NA	S-021	1.610E-02	PM10	3.22	Manufacturer Emissions Data Sheet	100.00%	-	0.052	-	0.013	-
							1.610E-02	PM2.5	3.22	""	100.00%	-	0.052	-	0.013	-
							1.610E-02	PT	3.22	""	100.00%	-	0.052	-	0.013	-
							1.610E-02	NOx	106	""	100.00%	-	1.71	-	0.429	-
							1.610E-02	SO2	0.208	AP-42 Table 3.4-1 (S is sulfur content in %)	100.00%	-	0.003	-	8.36E-04	-
							1.610E-02	VOC	3.54	Manufacturer Emissions Data Sheet (as HC)	100.00%	-	0.057	-	0.014	-
							1.610E-02	CO	19.3	""	100.00%	-	0.311	-	0.078	-
							1.610E-02	CO2	22,338	†	100.00%	-	360	-	89.9	-
							1.610E-02	N2O	0.181	†††	100.00%	-	0.003	-	7.30E-04	-
							1.610E-02	CH4	0.906	†††	100.00%	-	0.015	-	0.004	-
							1.610E-02	Benzene	0.128	AP-42 Table 3.3-2	100.00%	-	0.002	-	5.15E-04	-
							1.610E-02	Toluene	0.056	""	100.00%	-	9.02E-04	-	2.26E-04	-
							1.610E-02	Xylene	0.039	""	100.00%	-	6.29E-04	-	1.57E-04	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
029	FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house)	1	Diesel Combustion	NA	NA	S-022	2.042E-02	PM10	3.54	Manufacturer Emissions Data Sheet	100.00%	-	0.072	-	0.018	-
							2.042E-02	PM2.5	3.54	""	100.00%	-	0.072	-	0.018	-
							2.042E-02	PT	3.54	""	100.00%	-	0.072	-	0.018	-
							2.042E-02	NOx	122	""	100.00%	-	2.50	-	0.624	-
							2.042E-02	SO2	0.208	AP-42 Table 3.4-1 (S is sulfur content in %)	100.00%	-	0.004	-	0.001	-
							2.042E-02	VOC	1.61	Manufacturer Emissions Data Sheet (as HC)	100.00%	-	0.033	-	0.008	-
							2.042E-02	CO	29.0	""	100.00%	-	0.591	-	0.148	-
							2.042E-02	CO2	22,338	†	100.00%	-	456	-	114	-
							2.042E-02	N2O	0.181	†††	100.00%	-	0.004	-	9.25E-04	-
							2.042E-02	CH4	0.906	†††	100.00%	-	0.019	-	0.005	-
							2.042E-02	Benzene	0.128	AP-42 Table 3.3-2	100.00%	-	0.003	-	6.52E-04	-
							2.042E-02	Toluene	0.056	""	100.00%	-	0.001	-	2.86E-04	-
							2.042E-02	Xylene	0.039	""	100.00%	-	7.97E-04	-	1.99E-04	-
030	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	1	Natural Gas Combustion	NA	NA	S-030	6.863E-02	CO2	119,317	†	100.00%	-	8,188	-	35,865	-
							6.863E-02	CO	84.0	*	100.00%	-	5.76	-	25.2	-
							6.863E-02	CO2e	119,440	††	100.00%	-	8,197	-	35,902	-
							6.863E-02	HAPs	1.89	‡	100.00%	-	0.130	-	0.568	-
							6.86E-02	Hexane	1.80	‡	100.00%	-	0.124	-	0.541	-
							6.86E-02	Formaldehyde	0.075	‡	100.00%	-	0.005	-	0.023	-
							6.863E-02	CH4	2.25	†††	100.00%	-	0.154	-	0.676	-
							6.863E-02	N2O	0.225	*	100.00%	-	0.015	-	0.068	-
							6.863E-02	NOX	61.9	Manufacturer's specification	100.00%	-	4.25	-	18.6	-
							6.863E-02	PM10	7.60	**	100.00%	-	0.522	-	2.28	-
							6.863E-02	PM2.5	7.60	**	100.00%	-	0.522	-	2.28	-
							6.863E-02	PT	7.60	**	100.00%	-	0.522	-	2.28	-
							6.863E-02	SO2	0.600	**	100.00%	-	0.041	-	0.180	-
							6.863E-02	VOC	5.50	**	100.00%	-	0.377	-	1.65	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
031	No. 2 Bourbon Distillation System	1	Beer Still #10	NA	NA	S-031-1A	2.08	VOC	0.321	See Note 9	100.00%	-	0.668	-	2.93	-
							2.08	Acetaldehyde	0.016	See Note 9	100.00%	-	0.034	-	0.150	-
							2.08	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Methanol	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	Formaldehyde	7.06E-04	See Note 10	100.00%	-	0.001	-	0.006	-
							2.08	HAPs	0.019	Sum	100.00%	-	0.039	-	0.169	-
031	No. 2 Bourbon Distillation System	2	Doubler Still #11	NA	NA	S-031-1B	1.19	VOC	0.321	See Note 9	100.00%	-	0.380	-	1.67	-
							1.19	Acetaldehyde	0.016	See Note 9	100.00%	-	0.020	-	0.085	-
							1.19	Propionaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Methanol	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	Formaldehyde	7.06E-04	See Note 10	100.00%	-	8.37E-04	-	0.004	-
							1.19	HAPs	0.019	Sum	100.00%	-	0.022	-	0.096	-

N.1: PSD Emission Summary for Expansion Project Only

Emission Units	Pollutant	Annual Emissions		Comparison to PSD Major Source Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Primary SIC Distillery Expansion Project + Support SIC Boilers Associated with Expansion Project	VOC	3,031	2,940	NA	
	Non-Fugitive VOCs	191	100	N < 250 tpy	
	NOX	50.7	50.7	N < 250 tpy	
	CO	91.7	91.7	N < 250 tpy	
	PT	133	133	NA	
	Non-Fugitive PT	133	133	N < 250 tpy	
	PM10	70.9	70.9	NA	
	Non-Fugitive PM10	70.9	70.9	N < 250 tpy	
	PM2.5	28.4	28.4	NA	
	Non-Fugitive PM2.5	28.4	28.4	N < 250 tpy	
	SO2	0.655	0.655	N < 250 tpy	

Emission Units	Pollutant	Annual Emissions		Major, Could Project Exceed SER?	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Support SIC Boilers Associated with Expansion Project: Boiler 12 (EU 16) + Fourteen Indirect Heat Exchanger at 5 MMBtu/hr ea (EU 30)	VOC	5.89	5.89	N < 40 tpy	
	NOX	47.2	47.2	Y > 40 tpy	Yes
	CO	89.9	89.9	N < 100 tpy	
	PT	8.13	8.13	N < 25 tpy	
	PM10	8.13	8.13	N < 15 tpy	
	PM2.5	8.13	8.13	N < 10 tpy	
	SO2	0.642	0.642	N < 40 tpy	

* Only the fossil fuel boilers used to support the distilling operations are classified as a major stationary source.

N.1: Title V Emission Summary (Existing and Expansion Project)

Emission Units	Pollutant	Annual Emissions		Comparison to Title V / HAP Major Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Facility-Wide: Primary SIC Distillery + All Heat Exchangers	VOC	5,327	5,236	NA	
	Non-Fugitive VOCs	387	296	Y > 100 tpy	See Title V app
	NOX	215	215	Y > 100 tpy	See Title V app
	CO	151	151	Y > 100 tpy	No
	PT	3,226	724	NA	
	Non-Fugitive PT	242	187	Y > 100 tpy	No
	PM10	510	252	NA	
	Non-Fugitive PM10	130	103	Y > 100 tpy	No
	PM2.5	89.1	51.9	NA	
	Non-Fugitive PM2.5	58.3	45.5	N < 100 tpy	
	SO2	2.17	2.17	N < 100 tpy	
	CO2e	271,115	271,115	NA	
	HAPs	24.3	17.1	N < 25 tpy	Yes
	Acetaldehyde	14.9	9.27	Y > 10 tpy	Yes
	Formaldehyde	1.17	1.14	N < 10 tpy	
	Hexane	3.98	3.98	N < 10 tpy	
	Lead	2.53E-07	2.53E-07	N < 10 tpy	
	Methanol	2.94	1.81	N < 10 tpy	
	Propionaldehyde	0.040	0.040	N < 10 tpy	

Section N.2: Stack Information

UTM Zone: 16

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
Hammer Mill Group and Receiver Process Cyclone; Hammer Mill and Receiver Process Cyclone (01-006)									
S-002	002-1	5.6	95	512	4,231,972	686,290	70,628	Amb	49.0
Hammer Mill Group and Receiver Process Cyclone; Hammer Mill (01-006B) and Receiver Process Cyclone									
S-002B	002-2	5.6	95	512	4,231,975	686,296	70,628	Amb	49.0
TBD									
Hammer Mill Group and Receiver Process Cyclone; Hammer Mill (01-006C) and Receiver Process Cyclone									
S-002C	002-3	5.6	95	512	4,231,978	686,296	70,628	Amb	49.0
TBD									
Hammer Mill Group and Receiver Process Cyclone; Hammer Mill (01-006D) and Receiver Process Cyclone									
S-002D	002-4	5.6	95	512	4,231,981	686,296	70,628	Amb	49.0
TBD									
Fermentation Process; Fermentation Vessels (12)									
S-003	003-1	0.75	46	511.68	4,231,982	686,323	1,325	Amb	50.0
Fermentation Process; Fermentation Vessels (4)									
S-003B	003-1	0.75	46	511.68	4,231,967	686,317	1,325	Amb	50.0
Fermentation Process; Fermentation Vessels (8)									
S-003C	003-1	0.75	46	511.68	4,231,961	686,318	1,325	Amb	50.0
DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator; Cyclone Separators from No. 1 Rotary Dryer (03-001)									
S-004-1	004-1	9.80	40.0	512	4,231,985	686,296	105,942	89	23
DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator; No. 1 Rotary Steam Tube Dryer (03-001)									
S-004-2	004-2	2.50	50.8	512	4,232,031	686,273	14,726	300	50.0
Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator; Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4									
S-005-1	005-1	9.80	40.0	512	4,231,985	686,290	105,942	89	23
Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator; Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)									
S-005-2	005-2	3.95	47.2	512	4,232,031	686,278	36,750	300	50
S-005-3	005-3	3.95	47.0	512	4,232,031	686,284	36,750	300	50
S-005-4	005-4	3.95	47.3	512	4,232,031	686,289	36,750	300	50
DDGS Dryhouse #2; Two Centrifuges									
S-032-1	032-1	1.00	40.0	512	4,231,985	686,296	2,356	89	50.0
DDGS Dryhouse #2; Two Steam Dryers									
S-032-2	032-2	1.92	40.0	512	4,232,115	686,302	8,686	200	50.0
TBD									

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
DDGS Dryhouse #2; Two Steam Dryers - By-pass									
S-032-2	032-3	*1.92*	*40.0*	*512*	*4,232,115*	*686,295*	*8,686*	*200*	*50.0*
TBD									
DDGS Dryhouse #2; Pneumatic conveying cyclone separator from Rotary Dryers									
S-032-3	032-4	*2.00*	*40.0*	*512*	*4,231,985*	*686,290*	*9,425*	*89*	*50.0*
TBD									
Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr); Natural Gas Combustion									
S-008	008-1	16.40	69.0	515	4,231,925	686,302	1,765,700	280	138
Indirect Heat Exchanger, Boiler #10 (14-001) 60.5 MMBtu/hr; Natural Gas Combustion									
S-014	014-1	3.75	40.0	515	4,231,904	686,305	18,766	300	28
Indirect Heat Exchanger, Boiler #11 (15-001) 60.5 MMBtu/hr; Natural Gas Combustion									
S-015	015-1	3.75	40.0	515	4,231,925	686,302	18,766	300	28
Indirect Heat Exchanger, Boiler #12 179 MMBtu/hr; Natural Gas Combustion									
S-016	016-1	4.50	62.7	507	4,231,881	686,304	47,713	400	50.0
Thunder Gas Tank: 1,120 gallon Gasoline Dispensing Tank 01; Breathing Losses									
S-017	017-1	0.25	6.0	512	4,232,365	686,634	Neg	AMB	Neg
Farm Tank: 250 gallon Gasoline Dispensing Tank 02; Breathing Losses									
S-018	018-1	0.17	4.0	722	4,232,618	686,553	Neg	AMB	Neg
G001: Generac Generator, Model SG070-K366.8N18HBYYC, with a natural gas-fired, 107 bhp, V10, EPA Certified, 6.8L Ford Engine; Natural Gas Combustion									
S-019-1	019-1	0.25	25.0	512	4,232,018	686,378	221	650	75.0
G002: Cummins Generator, Model GGHF-5764905, with a NG-fired, 126 bhp, EPA Certified, 6.8L Cummins Engine (WGS-1068); Natural Gas Combustion									
S-019-2	019-2	0.25	46.0	512	4,231,960	686,316	221	650	75.0
G003: Caterpillar Generator (CAT00C71HWG200496), diesel-fired, 315 bhp, 150 kW, C7.1 In-line 6, 4-cycle, 7.01L, EPA Certified (near new bottling line); Diesel Combustion									
S-019	026-1	0.25	6.0	522	4,232,158	686,750	221	650	75.0
FP01: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion									
S-020	027-1	0.25	6.0	774	4,233,189	687,034	221	650	75.0
FP02: Clark Fire Pump Engines (6068HFC48), diesel-fired, assumed to be 315 bhp, In-Line, 4 Stroke Cycle, 6.8L, V6, Tier 3 Certified (on Farm); Diesel Combustion									
S-021	028-1	0.25	6.0	774	4,233,189	687,034	221	650	75.0
FP03: Clark Fire Pump Engine (JW6H-UFADFO 2100 311 2), diesel-fired, 400 bhp, In-Line, 4 Stroke Cycle, 9L V6, Tier 3 Certified (near S rick house); Diesel Combustion									
S-022	029-1	0.25	6.0	508	4,232,248	687,009	221	650	75.0
Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea; Natural Gas Combustion									
S-020	020-1	0.50	90.0	515	4,232,140	686,846	589	400	50.0
Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea; Natural Gas Combustion									
S-030	030-1	0.50	90.0	741	4,233,084	686,820	589	400	50.0

Stack ID	Identify all Emission Units (with Process ID) and Control Devices that Feed to Stack	Stack Physical Data			Stack UTM Coordinates		Stack Gas Stream Data		
		Equivalent Diameter *(ft)*	Height *(ft)*	Base Elevation *(ft)*	Northing *(m)*	Easting *(m)*	Flowrate *(acfm)*	Temperature *(°F)*	Exit Velocity *(ft/sec)*
No. 1 Bourbon Distillation System; Beer Still #1 S/N 0269									
S-021-1A	021-1	0.50	30.0	515	4,231,926	686,330	295	200	25.0
No. 1 Bourbon Distillation System; Doubler Still #2, S/N 0733									
S-021-2A	021-2	0.50	30.0	515	4,231,927	686,335	295	200	25.0
Vodka Distillation System; Vodka Still #3 S/N 08846 (48255 gal/day), Distillation Column Still #4 S/N 10494									
S-022A	022-1	0.50	50.0	515	4,231,926	686,325	295	200	25.0
Platinum Distillation System; Platinum Still #7 S/N 1297, Still #8 S/N 2803, Still #9 S/N 2804									
S-023A	023-1	0.50	50.0	515	4,231,926	686,321	295	200	25.0
No. 2 Bourbon Distillation System; Beer Still #10									
S-031-1A	031-1	*0.50*	*50.0*	*512*	*4,231,929*	*686,351*	*295*	*200*	*25.0*
TBD									
No. 2 Bourbon Distillation System; Doubler Still #11									
S-031-1B	031-2	*0.50*	*50.0*	*512*	*4,231,926*	*686,351*	*295*	*200*	*25.0*
TBD									
Bottling Lines A, B, C, & D (07-008a-d); Loading losses									
S-007	007-1	*1.00*	*80.0*	*505*	*4,232,119*	*686,816*	*2,356*	*AMB*	*50.0*
TBD									
Bldg 3 Loadout Station; Loading losses									
S-024	024-1	2.00	12.0	515	4,232,057	686,303	Neg	AMB	Neg
Regauge Loadout Station; Loading losses									
S-025	025-1	2.00	12.0	508	4,232,164	686,520	Neg	AMB	Neg

Section N.3: Fugitive Information

UTM Zone: 16

Emission Unit #	Emission Unit Name	Process ID	Area Physical Data		Area UTM Coordinates		Area Release Data	
			Length of the X Side *(ft)*	Length of the Y Side *(ft)*	Northing *(m)*	Easting *(m)*	Release Temperature *(°F)*	Release Height *(ft)*
Grain and Distiller's Dried Grain Handling; Grain Unloading (01-001)								
F-001	Grain and Distiller's Dried Grain Handling	1	60.0	110.0	4,231,950	686,290	Amb	50.0
Aging; Warehouse Aging								
F-006	Aging	1	150.0	150.0	4,232,170	686,690	Amb	90.0
Represents the centroid of the property.								
Aging; Warehouse Aging on Farm								
F-006B	Aging	2	120.0	303.0	4,233,065	686,733	Amb	90.0
Represents the centroid of the property.								

Section N.4: Notes, Comments, and Explanations
Note 1: HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 9 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that acetaldehyde, propionaldehyde, formaldehyde, and methanol were 0.402%, 0.0267%, 0.0133%, and 0.0133% of VOC, respectively.
Note 2: Assume one mole of both ethanol and CO2 is generated during fermentation, thus EF for CO2 = 14.2 lbs EtOH/MBU * 44 lbs/lb-mol CO2 / 46 lbs/lb-mol EtOH * 1 mol CO2 / 1 mol of EtOH.
Note 3. Engineering Judgement. For cooling cyclone, 0.494 lbs/ton is 90% LPL from measured stack testing at LINCOLNWAY ENERGY, LLC - NEVADA, IA for S70, which is cooling cyclone for DDGS. For the mass balance around the cooling cyclone, this translates into a 69.0% VOC loss rate.
Note 4. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 69% VOC loss rate divided by the process weight in tons.
Note 5. Engineering Judgement based on raw material sampling that did not contain this HAP.
Note 6. Engineering Judgement. For dryer, the 3.56 lbs/ton is the average of three one-hour test runs measured at MGPI on August 25, 2016 on the inlet of a new dryer system running at 6.49 tons of DDGS per hour.
Note 7. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 11 of 28, TSD App A which references testing performed at similar facilities https://permits.air.idem.in.gov/40029f.pdf. This document shows that acetaldehyde, acrolein, methanol, and formaldehyde were 6.18%, 0.37%, 1.24%, and 0.04% of VOC, respectively.
Note 8. Engineering Judgement. For screens/presses, 0.046 lbs/Mgal is from measured average stack testing at POET - Mitchell stack testing results from April 18, 2017 with a 1.3 safety factor. For the mass balance around the screens/presses, this translates into a 1.24% VOC loss rate.
Note 8B. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 1.24% VOC loss rate divided by the process weight in tons.
Note 8C. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, scaled the measured EtOH concentration to the excepted ratio of a specific HAP to EtOH concentration as represented from the "TO" emissions unit shown in Daniel Brady & Gregory C. Pratt (2007) Volatile Organic Compound Emissions from Dry Mill Fuel Ethanol Production, Journal of the Air & Waste Management Association, 57:9, 1091-1102, DOI: 10.3155/1047-3289.57.9.1091
Note 9. Engineering Judgement. VOCs and Acetaldehyde were derived from Oregon DEQ Permit 05-0006-ST-01 for Columbia Pacific Bio-Refinery, see page 67of 75. Assumed process vent scrubber could achieve 98% CE for VOC and 65% CE for acetaldehyde (and other OHAPs) based on same source. Process scrubber returns material back to still so this is not treated as a control device. https://www.oregon.gov/deq/Programs/Documents/CPBREthanolAQPermitRtC.pdf
Note 10. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 8 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that propionaldehyde, formaldehyde, and methanol were 0.22%, 0.22%, and 0.22% of VOC, respectively.
Note 11. The base height and UTM coordinates represent the approximate centerpoint of the Buffalo Trace distillery. G001 is located in the process chiller area; G002 is located near the control room for the distillery.
Note 12. Manufacturer's information is used for the G001 stack height. G002 is assumed to have a similar stack. Engineering estimates are used for other stack parameters.
Note 13. The stack location information presented in Section N.2 represents the approximate centerpoint of the facility.

Note 14. The stack parameters for the dryhouses were refined as part of the acetaldehyde modeling evaluation submitted to KDAQ on July 16, 2020. The Section N.2 form reflects these refinements.
Note 15. EU 32-05 was added to the N.1 form to represent emissions from the combustion of natural gas and process gas at the proposed RTO associated with the new dryhouses.

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

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DEP7007V

Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)

___ Section V.2: Monitoring Requirements

___ Section V.3: Recordkeeping Requirem

___ Section V.4: Reporting Requirements

___ Section V.5: Testing Requirements

___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, August 11, 2020*

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
N/A	Facility-Wide	401 KAR 52:020, Section 10	VOC NOX	na	< 250 tpy	VOC and NOX emissions from non-fugitive sources will not equal or exceed 250 tons on a rolling 12-month basis.	Comply with existing monitoring requirements, calculate emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
N/A	Facility-Wide	To preclude MACT	HAP	na	< 10 tpy Single HAP < 25 tpy Total HAPs	Individual HAP and total HAP emissions from facility-wide sources will not equal or exceed 10 and 25 tons, respectively, on a rolling 12-month basis.	Comply with existing monitoring requirements, calculate emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limits.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
Fossil fuel-fired boilers with Plant Expansion Project	Boiler 12 (EU 16) & fourteen (14) 5 MMBtu/hr heat exchangers (EU 30)	To preclude 401 KAR 51:017	NO_X	na	< 40 tpy	NO_X emissions from fossil fuel-fired boilers from the Plant Expansion Project, including fugitives, will not equal or exceed 40 tons on a rolling 12-month basis.	Comply with existing monitoring requirements, calculate emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
003-1 004-1 004-2 005-1 005-2 005-3	Fermentation Process DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices
003-1	Fermentation Process	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard fermentation practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
004-1	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	6.34 lb/hr	na	The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the cyclone separator is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
005-1	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	401 KAR 61:020, Section 3(2)(a)	PM	10.4 lb/hr	na	The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the cyclone separator is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 61:020, Section 3(1)(a)	Opacity	40%	na	NA	Visual observations and maintaining a log of the observations.
004-1 004-2 005-1 005-2 005-3	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard DDGS practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	401 KAR 59:015, Section 4(1)(b)	PM	0.1 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 4(2)+(a)	Opacity	20%	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 5(1)(b)	SO2	0.8 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1)Optimize the water column pressure relief devices over each vessel to avoid releasees. 2) Implement industry standard good operating and maintenance practices to minimize VOC emissions from the process vent condensers.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
024-1 025-1	Bldg 3 Loadout Station Regauge Loadout Station	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization:	
			VOC	na	na	Operate and maintain any affected source in a manner consistent with safety and good air pollution control practices for minimizing emissions.	Follow standard operating procedures for tanker truck loading.
			VOC	na	na	Minimize product spills and clean up spills as expeditiously as practicable.	"
002-2 002-3 002-4	Hammer Mill Group and Receiver Process Cyclone	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	26.54 lb/hr	na	The process cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	Compliance is assured when the process cyclones are operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.
003-2 003-3	Fermentation Process	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
		401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard fermentation practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
032-1 032-2 032-3 032-4	DDGS Dryhouse #2	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices
032-2 032-3	DDGS Dryhouse #2: Two Centrifuges and Two Steam Dryers	401 KAR 52:020, Section 10	VOC	na	< 16 tph	VOC emissions from 032-2 and 032-3 shall not exceed 16 tons on a rolling 12-month basis.	Comply with monitoring requirements, calculate emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limits.
032-2 032-3	DDGS Dryhouse #2: Two Steam Dryers and Two Steam Dryers - By-pass	401 KAR 52:020, Section 10	VOC	na	< 16 tph	i. The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance. ii. The permittee shall use the data collected during the performance test to calculate and record the average combustion temperature. This average combustion temperature is the minimum set point for the thermal oxidizer. The minimum-operating limit for thermal oxidizers is 28°C (50°F) below the minimum set point temperature.	The permittee shall voluntarily install and operate an thermal oxidation system to control emissions from the steam dryers. The permittee must monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance shall be demonstrated by monitoring and recording the combustion temperature, averaged over 3 hours.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
032-3	DDGS Dryhouse #2: Two Steam Dryers - By-pass	401 KAR 52:020, Section 10	VOC	na	500 hrs/yr	To allow for maintenance, performance evaluation, startup, shut-down, and malfunction periods, the by-pass from the RTO shall not exceed 500 hours per year.	Monitor and record the hours when operators bypassed the RTO while the emissions unit was in operattion.
032-1 032-2 032-3 032-4	DDGS Dryhouse #2	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard DDGS practices for specific recipes to minimize the release of VOCs. 2) Maintain the operating temperatures within targeted ranges.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
032-4	DDGS Dryhouse #2	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	11.46 lb/hr	na	The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the cyclone separator is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.
006-2	Warehouse Aging on Farm	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard aging practices to minimize the release of VOCs.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
007-1	Bottling Lines A, B, C, & D (07-008a-d)	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1) Follow industry standard bottling practices to minimize the release of VOCs.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.
007-1	Bottling Lines A, B, C, & D (07-008a-d)	401 KAR 52:020, Section 10	VOC	na	50,000,000 proof gallons (PG) per year	Total gallons of material bottled through 007-1 shall not exceed 50,000,000 PG per year.	Monitor and record the PG of material bottled.
026-1	G003: Caterpillar Generator	NESHAP ZZZZ: 40 CFR 63.6590(c)	na	na	na	Meet the requirements of NESHAP ZZZZ by complying with NSPS IIII.	Comply with NSPS IIII.
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4202, 60.4205(b) & 60.4206; Table 1 of 40 CFR 89.112	NMHC + NOX	4.0 g/kW-hr	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4202, 60.4205(b) & 60.4206; Table 1 of 40 CFR 89.112	CO	3.5 g/kW-hr	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4202, 60.4205(b) & 60.4206; Table 1 of 40 CFR 89.112	PM	0.20 g/kW-hr	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4207(b)	na	na	na	Use diesel fuel that meets requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	Purchase only compliant diesel fuel.
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4211(a)	na	na	na	Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions. Change only those emission-related settings that are permitted by the manufacturer. Meet the requirements of 40 CFR parts 89, 94, and/or 1068, as they apply to you.	Maintain records of maintenance conducted on the engine consistent with the operating requirements of 40 CFR 60.4211(a).
026-1	G003: Caterpillar Generator	NSPS IIII: 40 CFR 60.4211(f)	na	na	na	Operate according to the requirements in (f)(1) through (3) to be considered an emergency stationary ICE.	Monitor hours of operation in emergency and non-emergency service and the reason the engine was in operation during that time.
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NESHAP ZZZZ: 40 CFR 63.6590(c)	na	na	na	Meet the requirements of NESHAP ZZZZ by complying with NSPS IIII.	Comply with NSPS IIII.
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4205(c), 60.4206, Table 4	NMHC + NOx	4.0 g/kW-hr (3.0 g/hp-hr)	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4205(c), 60.4206, Table 4	CO	3.5 g/kW-hr (2.6 g/hp-hr)	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4205(c), 60.4206, Table 4	PM	0.20 g/kW-hr (0.15 g/hp-hr)	na	Emission standard is applicable over the entire life of the engine.	Purchase engine certified to the emission standards and install and configure according to the manufacturer specifications (60.4211(c)).

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4207(b)	na	na	na	Use diesel fuel that meets requirements of 40 CFR 80.510(b) for nonroad diesel fuel.	Purchase only compliant diesel fuel.
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4211(a)	na	na	na	Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions. Change only those emission-related settings that are permitted by the manufacturer. Meet the requirements of 40 CFR parts 89, 94, and/or 1068, as they apply to you.	Maintain records of maintenance conducted on the engine consistent with the operating requirements of 40 CFR 60.4206 and 40 CFR 60.4211(a).
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	NSPS IIII: 40 CFR 60.4211(f)	na	na	na	Operate according to the requirements in (f)(1) through (3) to be considered an emergency stationary ICE.	Monitor hours of operation in emergency and non-emergency service and the reason the engine was in operation during that time.
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	401 KAR 59:015, Section 4(1)(b)	PM	0.1 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 4(2)(a)	Opacity	20%	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
		401 KAR 59:015, Section 5(1)(b)	SO2	0.8 lbs/MMBtu	na	na	Compliance demonstrated based on sole combustion of natural gas fuel
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	401 KAR 59:015, Section 7	PM, Opacity, SO2	na	na	During a startup period or shutdown period, the permittee shall comply with the work practice standards in Section 7 of 401 KAR 59:015.	Recordkeeping
031-1 031-2	No. 2 Bourbon Distillation System (Beer Still #10 and Doubler Still #11)	401 KAR 63:020	Toxics	na	na	Do not emit toxics substances in quantity or duration that would be harmful.	Best management practices

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
031-1 031-2	No. 2 Bourbon Distillation System (Beer Still #10 and Doubler Still #11)	401 KAR 50:012 S1(2)	VOC	na	na	Shall be operated to maintain compliance with 401 KAR 50:012 Section 1(2), the following specific practices targeting VOC emissions minimization: 1)Optimize the water column pressure relief devices over each vessel to avoid releasees. 2) Implement industry standard good operating and maintenance practices to minimize VOC emissions from the process vent condensers.	As a major air contaminant source for which there is no standard specified in 401 KAR 50 to 65 for VOC emissions, the source shall apply control procedures that are reasonable, available, and practical. Keep records of work practice standards.

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
003-1	Fermentation Process	VOC	401 KAR 52:020, Section 10	Feed Rate	Monitor the grain input in tons on a monthly basis.
004-1 004-2	DDGS Dryhouse #1: No. 1 Rotary Dryer	PM	401 KAR 52:020, Section 10	Production Rate	Track monthly DDGS produced in tons and monthly operating hours.
005-1 005-2	Dryhouse #1: Three Rotary Dryers	Opacity	401 KAR 52:020, Section 10	Visible emissions	Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM	na	NG Usage	Track monthly usage in MMscf
		Opacity	na	Visible emissions	na
		SO2	na	NG Usage	Track monthly usage
002-2 002-3 002-4	Hammer Mill Group and Receiver Process Cyclone	PM	401 KAR 52:020, Section 10	Production Rate	Track the grain processing rate in tons and hours of operation on a monthly basis.
		Opacity	401 KAR 52:020, Section 10	Visible emissions	Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.
003-2 003-3	Fermentation Process	na	401 KAR 52:020, Section 10	Feed Rate	Monitor the grain input in tons on a monthly basis.

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
032-2 032-3	DDGS Dryhouse #2: Two Steam Dryers and Two Steam Dryers - By-pass	VOC	401 KAR 52:020, Section 10	Temperature	The permittee shall maintain records of the following information for the thermal oxidizer: 1. All 3-hour periods (during DDGS production operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements.
032-3	DDGS Dryhouse #2: Two Steam Dryers - By-pass	VOC	401 KAR 52:020, Section 10	Hours of bypass	Monitor the hours of bypass while the emissions unit is in operation on a monthly basis.
032-4	DDGS Dryhouse #2	PM Opacity	401 KAR 52:020, Section 10 401 KAR 52:020, Section 10	Production Rate Visible emissions	Track monthly DDGS produced in tons Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.
006-2	Warehouse Aging on Farm	na	401 KAR 52:020, Section 10	Storage Quantity	Monitor the number of barrels stored on a yearly basis.
007-1	Bottling Lines A, B, C, & D (07-008a-d)	na	401 KAR 52:020, Section 10	Production Rate	Monitor the quantity of product bottled in PG on a monthly basis.
026-1	G003: Caterpillar Generator	na	NSPS IIII: 40 CFR 60.4209(a)	Operating Hours	Install a non-resettable hour meter prior to startup of the engine and monitor hours of operation.
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	na	NSPS IIII: 40 CFR 60.4209(a)	Operating Hours	Install a non-resettable hour meter prior to startup of the engine and monitor hours of operation.
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	PM Opacity SO2	na na na	NG Usage Visible emissions NG Usage	Track monthly usage in MMscf na Track monthly usage

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
Facility-wide	N/A	VOC and NO_X	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	Calculate facility-wide non-fugitive emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
Facility-wide	N/A	HAP	To preclude MACT	Monthly and rolling 12-month emissions totals	Calculate facility-wide emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
003-1	Fermentation Process	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
004-1 004-2 005-1 005-2	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	PM Opacity	401 KAR 52:020, Section 10, 401 KAR 52:020, Section 10,	Production Rate Visible emissions	Record monthly DDGS produced in tons and monthly operating hours. A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.
004-1 004-2 005-1 005-2 005-3	DDGS Dryhouse #1: No. 1 Rotary Dryer Dryhouse #1: Three Rotary Dryers	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM Opacity SO2	na na na	NG Usage Visible emissions NG Usage	Keep a record of amount of natural gas combusted in MMscf on a monthly basis. na Keep a record of amount of natural gas combusted on a monthly basis.
021-1 021-2 022-1 023-1	No. 1 Bourbon Distillation System Vodka Distillation System Platinum Distillation System	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
024-1 025-1	Bldg 3 Loadout Station Regauge Loadout Station	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
Fossil fuel-fired boilers with Plant Expansion Project	Boiler 12 (EU 16) & fourteen (14) 5 MMBtu/hr heat exchangers (EU 30)	NOX	To preclude 401 KAR 51:017	Monthly and rolling 12-month emissions totals	Calculate facility-wide emissions on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
002-2 002-3 002-4	Hammer Mill Group and Receiver Process Cyclone	PM Opacity	401 KAR 52:020, Section 10, 401 KAR 52:020, Section 10,	Production Rate Visible emissions	Record grain processing rate in tons and hours of operation on a monthly basis. A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.
003-2 003-3	Fermentation Process	na VOC	401 KAR 52:020, Section 10 401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)	Feed Rate	Record the grain input in tons on a monthly basis. Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
032-1 032-2 032-3 032-4	DDGS Dryhouse #2	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
032-2 032-3	DDGS Dryhouse #2: Two Centrifuges and Two Steam Dryers	VOC	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	Calculate and record emissions from 032-2 and 032-3 on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
032-2 032-3	DDGS Dryhouse #2: Two Steam Dryers and Two Steam Dryers - By-pass	VOC	401 KAR 52:020, Section 10	Temperature	The permittee shall maintain records of the following information for the thermal oxidizer: 1. All 3-hour periods (during DDGS production operations) during which the average combustion chamber temperature of the thermal oxidizer is more than 28°C (50°F) below the average combustion chamber temperature of the thermal oxidizer determined during the most recent performance test which demonstrated compliance. Each occurrence shall be considered a deviation from permit requirements.
032-3	DDGS Dryhouse #2: Two Steam Dryers - By-pass	VOC	401 KAR 52:020, Section 10	Hours of bypass	Record the hours of bypass while the emissions unit is in operation on a monthly basis.

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
032-4	DDGS Dryhouse #2	PM	401 KAR 52:020, Section 10,	Production Rate	Record monthly DDGS produced in tons and monthly operating hours.
		Opacity	401 KAR 52:020, Section 10,	Visible emissions	A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.
006-2	Warehouse Aging on Farm	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
006-2	Warehouse Aging on Farm	na	401 KAR 52:020, Section 10	Storage Quantity	Maintain records of the number of barrels stored on a yearly basis.
007-1	Bottling Lines A, B, C, & D (07-008a-d)	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained
007-1	Bottling Lines A, B, C, & D (07-008a-d)	na	401 KAR 52:020, Section 10	Production Rate	Maintain records of the quantity of product bottled in PG on a monthly basis.
007-1	Bottling Lines A, B, C, & D (07-008a-d)	VOC	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	Calculate and record emissions from 007-1 on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.
026-1	G003: Caterpillar Generator	na	NSPS IIII: 40 CFR 60.4214(b)	Operating Hours	Maintain records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.
027-1 028-1 029-1	FP01: Clark Fire Pump FP02: Clark Fire Pump FP03: Clark Fire Pump	na	NSPS IIII: 40 CFR 60.4214(b)	Operating Hours	Maintain records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	PM	na	NG Usage	Keep a record of amount of natural gas combusted in MMscf on a monthly basis.
		Opacity	na	Visible emissions	na
		SO2	na	NG Usage	Keep a record of amount of natural gas combusted on a monthly basis.
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	PM, Opacity, SO2	401 KAR 59:015, Section 7(1)(d)	Logs	Document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence.
031-1 031-2	No. 2 Bourbon Distillation System (Beer Still #10 and Doubler Still #11)	VOC	401 KAR 52:020, Section 10, 401 KAR 50:012, Section 1(2)		Records that demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are maintained

Section V.4: Reporting Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Reported	Description of Reporting
Facility-wide	N/A	VOC NO_X	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	In each SAMR, report monthly and rolling 12-month emissions totals for the distillery (non-fugitives only) and fossil fuel-fired boilers (including fugitives) for each month of the semiannual period.
Facility-wide	N/A	HAP	To preclude MACT	Monthly and rolling 12-month emissions totals	In each SAMR, report monthly and rolling 12-month emissions totals for the distillery and fossil fuel-fired boilers for each month of the semiannual period.
Fossil fuel-fired boilers with Plant Expansion Project	Boiler 12 (EU 16) & fourteen (14) 5 MMBtu/hr heat exchangers (EU 30)	NOX	To preclude 401 KAR 51:017	Monthly and rolling 12-month emissions totals	In each SAMR, report monthly and rolling 12-month emissions totals for the distillery and fossil fuel-fired boilers for each month of the semiannual period.
032-2 032-3	DDGS Dryhouse #2: Two Centrifuges and Two Steam Dryers	VOC	401 KAR 52:020, Section 10	Monthly and rolling 12-month emissions totals	In each SAMR, report monthly and rolling 12-month emissions totals for 032-2 and 032-3 for each month of the semiannual period.
032-3	DDGS Dryhouse #2: Two Steam Dryers - By-pass	VOC	401 KAR 52:020, Section 10	Monthly and rolling 12-month hours of bypass	In each SAMR, report monthly and rolling 12-month bypass hours totals for 032-3 for each month of the semiannual period.
007-1	Bottling Lines A, B, C, & D (07-008a-d)	VOC	401 KAR 52:020, Section 10	Monthly and rolling 12-month gallons throughput totals	In each SAMR, report monthly and rolling 12-month gallon throughput totals for 007-1 for each month of the semiannual period.

Section V.5: Testing Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Tested	Description of Testing
004-1	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	PM, Opacity	401 KAR 59:005 Section 2 (2) 401 KAR 50:045 Section 4	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.
020-1	Indirect Heat Exchanger, Six Units < 2.0 MMBtu/hr ea	PM, Opacity, SO2	401 KAR 59:015, Section 8	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.
032-4	DDGS Dryhouse #2	PM, Opacity	401 KAR 59:005 Section 2 (2) 401 KAR 50:045 Section 4	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.
032-2	DDGS Dryhouse #2: Two Steam Dryers	VOC	401 KAR 59:005 Section 2 (2) 401 KAR 50:045 Section 4	Initial	The permittee shall conduct initial performance demonstration for 032-2 for control efficiency test and establishing the minimum temperature set point(s) for the thermal oxidations system using US EPA Reference Methods.
030-1	Indirect Heat Exchanger, Fourteen (14) Hot Water Units at 5 MMBtu/hr ea	PM, Opacity, SO2	401 KAR 59:015, Section 8	As required	Testing, using Reference Methods specified in 401 KAR 50:015, shall be conducted at such times as may be required by the Cabinet.

Section V.6: Notes, Comments, and Explanations

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD

Insignificant Activities

___ Section DD.1: Table of Insignificant Activities
___ Section DD.2: Signature Block
___ Section DD.3: Notes, Comments, and Explanations

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *August 11, 2020*

Section DD.1: Table of Insignificant Activities

*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3… etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
1.	Grain Cleaner Receiver Cyclone	01-003	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
2.	Grain Bin Loading	01-004	401 KAR 59:010	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
3.	Meal Bin Loading	01-007	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
4.	Beer Well	02-002	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~5.~~	~~Vent Condenser~~	~~02-003~~	~~None~~	See Note 1
~~6.~~	~~Vent Scrubber Condenser~~	~~02-004~~	~~None~~	See Note 1
~~7.~~	~~Column Condenser~~	~~02-006~~	~~None~~	See Note 1
5.	Two (2) Spirits Process Vessels and Storage Tanks (103,925 gal ea)	02-007	None	1.75 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
6.	Heads and Tails Tanks	02-008	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
7.	Receiving Cistern Tanks	02-009	None	1.0 tpy VOC
~~11.~~	~~Beer Still Pressure Relief~~	~~02-010~~	~~401 KAR 50:055~~	See Note 2
~~12.~~	~~Mini-Still Pressure Relief~~	~~02-10a~~	~~401 KAR 50:055~~	See Note 2
~~13.~~	~~Doubler Still Pressure Relief~~	~~02-011~~	~~401 KAR 50:055~~	See Note 2
~~14.~~	~~Column Still Pressure Relief~~	~~02-012~~	~~401 KAR 50:055~~	See Note 2
8.	Distiller's Dried Grain Conveying	03-004	401 KAR 61:020	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~16.~~	~~#1 Fill Line (Processing and bottling operations)~~	~~07-002~~	~~None~~	See Note 3
~~17.~~	~~#2 Fill Line (Processing and bottling operations)~~	~~07-002a~~	~~None~~	See Note 3
~~18.~~	~~#3 Fill Line (Processing and bottling operations)~~	~~07-002b~~	~~None~~	See Note 3
~~19.~~	~~#4 Fill Line (Processing and bottling operations)~~	~~07-002c~~	~~None~~	See Note 3
~~20.~~	~~#5 Fill Line (Processing and bottling operations)~~	~~07-002d~~	~~None~~	See Note 3
~~21.~~	~~#6 Fill Line (Processing and bottling operations)~~	~~07-002e~~	~~None~~	See Note 3
~~22.~~	~~#7 Fill Line (Processing and bottling operations)~~	~~07-002f~~	~~None~~	See Note 3
~~23.~~	~~#8 Fill Line (Processing and bottling operations)~~	~~07-002g~~	~~None~~	See Note 3
9.	Blanton Fill Line #1	07-005	None	1.1 tpy VOC
10.	Blanton Fill Line #2	07-005a	None	1.1 tpy VOC
11.	Blanton/Weller Fill Line	07-005b	None	1.1 tpy VOC
12.	#52 Fill Line	07-005c	None	2.6 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
13.	Labeling/Case Sealing	07-006	None	Neg.
14.	Case Printing	07-007	None	Neg.
15.	Blended Used Oil Tank	09-010	None	Neg.
16.	Caustic Tanks-NaOH	09-011	None	None
17.	Unpaved Roads	11-001	401 KAR 63:010	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
~~33.~~	~~Mobile Sources~~	~~NA~~	~~401 KAR 63:010~~	See Note 4
18.	Maintenance Equipment	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
19.	Evaporative Chiller	NA	401 KAR 63:010	None
20.	Three (3) 10,000 gallons Grain Cookers	NA	401 KAR 63:010	None
~~37.~~	~~Pot Still Pressure Relief~~	~~NA~~	~~None~~	See Note 2
21.	Two (2) Platinum Process Vessels and Storage Tanks (10,200 gal ea)	NA	None	0.32 tpy VOC
22.	Two (2) Bourbon Process Vessels and Storage Tanks (13,800 gal ea)	NA	None	0.54 tpy VOC
23.	Micro Distillation System	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
24.	Wastewater Treatment Plant	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
24B	Replacement Wastewater Treatment Plant	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
25.	Replacement Cooling Tower #1	NA	401 KAR 59:010	0.013 tpy PM10
26.	Bitters Operations	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
27.	Equipment Leaks Components	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
28.	Dryhouse #1: Two (2) Open-top Thick Stillage Storage Tanks (110,000 gallon ea)	NA	None	1.15 tpy VOC
29.	Dryhouse #1: Four Evaporators	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
30.	Cistern Barrel Filling Station	NA	None	1.0 tpy VOC
31.	Regauge Barrel Dumping	NA	None	1.6 tpy VOC

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
32.	Thin Stillage Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
33.	Misc. Indoor Process/ Storage Tanks in Bldg. 3	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
34.	Misc. Outdoor Process/ Storage Tanks Near Bldg. 3	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
35.	Misc. Process Tanks in Cistern Area (CR5, CR17-CR23)	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
36.	Misc. Process Tanks in Regauge (R2-R6, R10)	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
37.	Tank Farm Storage Tanks (S3-S5)	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
38.	Misc. Bldg. 33 Process/Storage Tanks in Chill Room	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
39.	Misc. Bldg. 33, 26, & 39 Process/Storage Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
40.	Misc. Bldg. 33 & 26 Process/Storage Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
41.	Misc. Bldg. 45 Process/Storage Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
42.	Misc. Bldg. 52 Process/Storage Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
43.	Plant Expansion: Equipment Leaks Components	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
44.	Two Cookers (40,000 gal ea) with Drop Tanks	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
45.	Bldg. 81 Process/Storage Tanks in Ledgends Hall	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
46.	DDGS Dryhouse #2: Two Open-Top Thick Stillage Storage Tanks (110,000 gallon ea)	NA	None	1.1 tpy VOC
47.	DDGS Dryhouse #2: Two Evaporators	NA	None	< 5 tpy Nonhazardous Regulated Air Pollutant < 0.5 tpy Combined HAPs
48.	Cooling Tower #2	NA	None	0.006 tpy PM10
49.	Cooling Tower #3	NA	None	0.006 tpy PM10

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE 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 INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

By:

Authorized Signature	Date
Harlen Wheatley	Master Distiller
Type/Print Name of Signatory	Title of Signatory

Section DD.3: Notes, Comments, and Explanations
Note 1. Moved to significant EU.
Note 2. This is part of Still emissions (Refer to DEP7007B and DEP7007N forms).
Note 3. The #1 - #8 Fill Lines have been shutdown. The shutdown dates for each line are as follows: #1 on 3/19, #2 on 1/19, #3 on 3/19, #4 on 1/19, #5 on 10/18, #6 on 12/18, #7 on 12/18, #8 on 10/18.
Note 4. Mobile sources are not covered under Title V of the Clean Air Act.

ATTACHMENT B

Suggested Draft Permit

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, Kentucky 40601
(502) 564-3999

Final

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name:	**Buffalo Trace Distillery, Inc.**
Mailing Address:	**P.O. Box 619, Frankfort, KY 40601**
Source Name:	**Buffalo Trace Distillery, Inc.**
Mailing Address:	**~~101 Wilkinson Boulevard~~113 Great Buffalo Trace** **Frankfort, KY 40601**
Source Location:	**~~101 Wilkinson Boulevard~~ 113 Great Buffalo Trace~~**~~**
Permit:	**~~V-12-056~~V-20-XXX**
Agency Interest:	**1373**
Activity:	**APE20120002**
Review Type:	**Title V, Operating**
Source ID:	**21-073-00009**
Regional Office:	**Frankfort Regional Office** **200 Fair Oaks Lane 3rd Floor** **Frankfort, KY 40601** **(502) 564-3358**
County:	**Franklin**
Application Complete Date:	**~~January 30, 2013~~**
Issuance Date:	
~~August 14, 2013~~ Revision Date:	
Expiration Date:	**~~August 14, 2018~~**

John S. Lyons, Director
Division for Air Quality

Version 06/26/09

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Permit Number	Permit type	Activity#	Complete Date	Issuance Date	Summary of Action
V-07-038	**Renewal**	**APE20070001**	**10/12/2007**	**4/28/2008**	**Renewal**
V-12-056	**Renewal**	**APE20120002**	**1/30/2013**	**8/14/ 2013**	**Renewal**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality (Division) hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes (KRS) Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Energy and Environment Cabinet (Cabinet) or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Emissions Unit 01 **(01-001, 01-002, 01-005 & 03-005)**
Grain and Distiller's Dried Grain Handling

Description:

Equipment includes: Grain unloading/receiving hopper with partial enclosure, conveyors, bucket elevators,. distiller's dried grain conveying, storage, and loadout
(01-001 and 01-002) Design operating rate for grain loading/conveyor: 56 tons/hr
Construction commenced: 1974
(01-005) Design operating rate for hammermill conveyor: 25.2 tons/hr
Construction commenced: 1974
(03-005) Design operating rate for distiller's dried grain loading: 33 tons/hr
Construction commenced: 1969

APPLICABLE REGULATIONS:

401 KAR 63:010, Fugitive emissions

1. **Operating Limitations:**

   a. Pursuant to 401 KAR 63:010, Section 3, reasonable precautions shall be taken to prevent particulate matter from becoming airborne. Such reasonable precautions shall include, when applicable, but not limited to the installation and utilization of hoods, fans, and fabric filters to enclose and vent the emissions generated from the processing of dust generating materials, or use of water sprays or other measures to suppress the dust emissions during handling.

   b. Pursuant to 401 KAR 63:010, Section 3, discharge of visible fugitive emissions beyond the property line is prohibited.

2. **Emission Limitations:**

   NA

3. **Testing Requirements:**

   NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the amount (in tons) of grain received and processed on a monthly basis.

b. Pursuant to 401 KAR 52:020, section 10, the permittee shall monitor the amount (in tons) of distiller's dried grain processed on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain received and processed ~~shall be maintained~~ on a monthly basis.

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of distiller's dried grain processed ~~shall be maintained~~ on a monthly basis.

c. Records shall be kept of reasonable precaution implementation used to prevent particulate matter from being airborne.

6. Specific Reporting Requirements:

See Section F

7. Specific Control Equipment Operating Conditions:

NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 02 (01-006) Hammer Mill and Receiver Process Cyclone

Description:

Equipment: Hammer mill and receiver process cyclone
Design operating rate: 25.2 tons/hr milled grain
Construction commenced: 1969

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations

1. **Operating Limitations:**

   NA

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions into the open air shall not exceed [$4.10(P)^{0.67}$] lbs/hour for based on a three-hour-average where P is the processing rate in tons/hour.

      Compliance Demonstration Method:
      The emission unit shall be deemed in compliance when the hammer mill and receiver process cyclone are operated, consistent with manufacturer's specifications and standard operating procedures.

   b. Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 40% opacity based on a six-minute-average.

3. **Testing Requirements:**

   Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

4. **Specific Monitoring Requirements:**

   ~~a.~~ Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 02 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. ~~the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs~~.

~~c.~~b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate and hours of operation on a month~~week~~ly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, ~~the permittee shall~~ records of grain processed and hours of operation shall be maintained on a month~~week~~ly basis.

b. ~~The permittee shall keep records of visual observation and any M~~method 9 observation ~~performed.~~The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

7. Specific Control Equipment Operating Conditions:

a. The process cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 02B (02-002, 02-003 & 02-004) New Hammer Mills and Receiver Process Cyclones

Description:
Equipment: Three (3) hammer mills and associated receiver process cyclones
Design operating rate: 25.2 tons/hr milled grain each
Construction commenced: 2022

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations

1. **Operating Limitations:**

   NA

2. **Emission Limitations:**

   a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions into the open air shall not exceed [$3.59(P)^{0.62}$] lbs/hour for based on a three-hour-average where P is the processing rate in tons/hour.

      Compliance Demonstration Method:
      The emission unit shall be deemed in compliance when the hammer mill and receiver process cyclone are operated, consistent with manufacturer's specifications and standard operating procedures.

   b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute-average.

3. **Testing Requirements:**

   Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. **Specific Monitoring Requirements:**

   a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 02B and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate in tons and hours of operation on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, records of grain processed and hours of operation shall be maintained on a monthly basis.

b. The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

7. Specific Control Equipment Operating Conditions:

a. The process cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 03 (02-001, ~~and~~02-005, 03-002 & 03-003) Fermentation Process

Description:

Equipment ~~includes~~: 12 fermentation vessels ~~and distilling process~~ constructed in 1969
4 fermentation vessels constructed in 2019
8 fermentation vessels constructed in 2021
~~Construction commenced: 1969~~

APPLICABLE REGULATIONS:

~~NA~~401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 03 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Follow industry standard fermentation practices for specific recipes to minimize the release of VOCs, and

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph b.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall limit emissions from EU 03 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

NA

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain input in ~~bushels~~ tons on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain input in ~~bushels~~ tons ~~shall be maintained~~ on a monthly basis.

~~a.~~b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 04 (03-001) Rotary Dryer and Cyclone Separator

Description:

Equipment: No. 1 Rotary steam tube dryer and pneumatic conveying cyclone separator
Control equipment: Cyclone
Design operating rate: 23.62.5 tons/hr distiller's dried grain with solubles
Construction commenced: 1976

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations, applicable to an emission unit that commenced on or after July 2, 1975.

401 KAR 50:012, General application

401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:NA

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 04 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Implement industry standard good operating and maintenance practices to minimize VOC emissions each dryer system, and

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee shall limit emissions from EU 04 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

1.2.Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions into the open air shall not exceed [$3.59(P)^{0.62}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour.

Compliance Demonstration Method:
The emission unit shall be deemed to be in compliance when the cyclone is operated, consistent with manufacture's specification and standard operating procedures.

b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute-average.

2.3.Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section (4).

~~a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a qualitative visual observation of the opacity of emission from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs.~~

~~b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate and hours of operation on a weekly basis.~~

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 04 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate (in tons), the quantity of Distiller's Dried Grain with Solubles (DDGS) produced (in tons), and hours of operation on a monthly basis.

3.5.Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of monthly~~weekly~~ grain processed, DDGS produced, and ~~weekly~~ hours of operation ~~shall be maintained~~.

b. ~~The permittee shall keep records of visual observation and any method 9 observation performed.~~ The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

~~b.~~c. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

4.6.Specific Reporting Requirements:

See Section F

5.7.Specific Control Equipment Operating Conditions:

a. The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 05 (03-002 and 03-003) ~~Four~~ Three Rotary Dryers and Cyclone Separator

Description:

Equipment: ~~Four~~ Three rotary steam tube dryers and pneumatic conveying cyclone separator
Control equipment: Cyclone
Design operating rate for dryers (total): ~~12.6~~4.0 tons/hr distiller's dried grain
Construction commenced on or before 1969
Design operating rate for cyclone separator: ~~27.85~~4.0 tons/hr distiller's dried grain
Construction commenced: 1973

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing process operations
401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

a. ~~NA~~The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 04 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Implement industry standard good operating and maintenance practices to minimize VOC emissions each dryer system

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall limit emissions from EU 05 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 61:020, Section 3(2)(a), particulate emissions into the open air shall not exceed [$4.10(P)^{0.67}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour.

Compliance Demonstration Method:

The emission unit shall be deemed in compliance when rotary dryer and the cyclone separator are operated, consistent with manufacture's specification and standard operating procedures.

b. Pursuant to 401 KAR 61:020, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 40% opacity based on a six-minute-average.

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 05 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.~~the permittee shall perform a qualitative visual observation of the opacity of emissions from the stack on a weekly basis and maintain a log of the observations. If emissions from the stack are seen, the permittee shall determine the opacity of emissions by U.S. EPA Reference Method 9 and initiate an inspection of the unit for any necessary repairs.~~

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate (in tons), the quantity of DDGS produced (in tons), and hours of operation on a month~~week~~ly basis.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of month~~week~~ly grain processed, DDGS produced, and hours of operation ~~shall be maintained~~.

b. The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10].

c. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a. The cyclone shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 32 (32-001, 32-002, 32-003 & 32-004) DDGS Dryhouse #2

Description:

Equipment: Two centrifuges (32-001), two steam dryers (32-002), bypass for each steam dryer (32-003) and pneumatic conveying cyclone separator from rotary dryers (32-004)
Control equipment: Scrubber and thermal oxidizer (control 032-002)
Cyclone (controls 32-004)
Design operating rate for dryers (total): 6.5 tons/hr distiller's dried grain
Construction commenced: 2022

APPLICABLE REGULATIONS:

401 KAR 59:010, New process operations
401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 32 and associated control equipment in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Implement industry standard good operating and maintenance practices to minimize VOC emissions each dryer system

(2) Maintain the operating temperatures within targeted ranges.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall limit emissions from EU 32 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

d. The permittee shall install and operate a thermal oxidation system to control emissions from the steam dryers. The average combustion chamber temperature in any 3-hour period shall not fall more than 28°C (50°F) below the combustion temperature limit established during the most recent performance test, which demonstrated compliance. This combustion temperature limit shall be determined based on the average combustion temperature during the performance test. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See 4. Specific Monitoring Requirements, paragraph d. and 5. Specific Recordkeeping Requirements, paragraph d.

e. The permittee shall limit operation of the thermal oxidizer by-pass to 500 hours per year to allow for maintenance, performance evaluation, startup, shutdown, and malfunction periods. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See 4. Specific Monitoring Requirements, paragraph e. and 5. Specific Recordkeeping Requirements, paragraph e.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:010, Section 3(2), particulate emissions into the open air shall not exceed [$3.59(P)^{0.62}$] lbs/hour based on a three-hour-average where P is the processing rate in tons/hour.

Compliance Demonstration Method:
The emission unit shall be deemed in compliance when the separator is operated consistent with manufacture's specification and standard operating procedures.

b. Pursuant to 401 KAR 59:010, Section 3(1)(a), any continuous emissions into the open air shall not equal or exceed 20% opacity based on a six-minute-average.

c. The permittee shall limit VOC emissions from EU 32 to no more than 16 tons per rolling 12-month period. [401 KAR 52:020 Section 10]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

Compliance shall be demonstrated by calculating the monthly and 12-month rolling total VOC emissions from EU 32 and maintaining records of the monthly and 12-month rolling total VOC emissions from this source. Monthly VOC emissions shall be calculated using the most recent emission factors approved by the Division.

3. **Testing Requirements:**

The permittee shall conduct initial performance demonstration for 032-2 for control efficiency test and establishing the minimum temperature set point(s) for the thermal oxidations system using US EPA Reference Methods.

4. **Specific Monitoring Requirements:**

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall perform a weekly qualitative visual observation during daylight hours of the opacity of emissions at each stack for EU 32 and maintain a log of the observations. If visible emissions from the stacks are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated, and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

b. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain processing rate (in tons), the quantity of DDGS produced (in tons), and hours of operation on a monthly basis.

c. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs.

d. Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the hours when operators bypassed the thermal oxidizer while the emissions unit was in operation.

5. **Specific Record Keeping Requirements:**

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of monthly grain processed, DDGS produced, and hours of operation.

b. The permittee shall maintain a log of any qualitative visual observations of the emissions from the stack, any corrective actions performed and any U.S. EPA Reference Method 9 readings performed [401 KAR 52:020, Section 10]

c. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

d. Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the temperature in the firebox of the thermal oxidizer or immediately downstream of the firebox before any substantial heat exchange occurs. Compliance with the combustion temperature limit shall be demonstrated by recording the combustion temperature, averaged over 3 hours.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the hours when operators bypassed the thermal oxidizer while the emissions unit was in operation.

f. Pursuant to 401 KAR 52:020, Section 10, the permittee shall calculate and record VOC emissions from 32-002 and 32-003 on a monthly basis, and aggregate monthly emissions to rolling 12-month totals to compare to the 16 ton per rolling 12-month period limit.

6. Specific Reporting Requirements:

See Section F.

7. Specific Control Equipment Operating Conditions:

a. The cyclone separator represented as EU 32-004 shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices [401 KAR 50:055].

b. See Section E - Control Equipment Conditions for further requirements.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 06-001 (05-001) ~~Barrel Filling,~~ Aging~~, and Dumping~~

Description:

Equipment ~~includes~~: ~~Barrel filling stations,~~Sixteen (16) warehouses for product aging ~~in warehouses, and barrel dumping~~
Construction commenced: 1936-1952~~69.~~

APPLICABLE REGULATIONS:

NA

1. **Operating Limitations:**

   NA

2. **Emission Limitations:**

   NA

3. **Testing Requirements:**

   NA

4. **Specific Monitoring Requirements:**

   Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the number of barrels stored on a yearly basis.

5. **Specific Record Keeping Requirements:**

   Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the number of barrels stored on a yearly basis.

6. **Specific Reporting Requirements:**

   See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 06-002 Aging on Farm

Description:

Equipment: Fourteen (14) warehouses for product aging
Construction commenced: 2018-2022

APPLICABLE REGULATIONS:

401 KAR 50:012, General application

1. Operating Limitations:

a. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 06-002 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Follow industry standard aging practices to minimize the release of VOCs.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph a.

2. Emission Limitations:

NA

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the number of barrels stored on a yearly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall record the number of barrels stored on a yearly basis.

b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units 21 (21-001, 21-002), 22 (22-001), and 23 (23-001) Distillation Systems

Description:

EU 21-001: No. 1 Bourbon Distillation System – Beer Still #1
Construction commenced: 1956
EU 21-002: No. 1 Bourbon Distillation System – Doubler Still #2
Construction commenced: 1956
EU 22-001: Vodka Distillation System – Vodka Still #3 and Distillation Column Still #4
Construction commenced: 1967
EU 23-001: Platinum Distillation System – Platinum Still #7, Still #8, and Still #9
Construction commenced: 2011
EU 31-001: No. 2 Bourbon Distillation System – Beer Still #10
Construction commenced: 2022
EU 31-002: No. 2 Bourbon Distillation System – Doubler Still #11
Construction commenced: 2022

APPLICABLE REGULATIONS:

401 KAR 50:012, General application
401 KAR 63:020, Potentially hazardous matter or toxic substances

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall not allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants. [401 KAR 63:020, Section 3]

Compliance Demonstration Method:
Based upon the emission rates of toxics and hazardous air pollutants determined by the Cabinet using information provided in the application and supplemental information submitted by the source, the Cabinet determines the affected facility to be in compliance with 401 KAR 63:020.

~~a.~~b. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 21-001, 21-002, 22-001, ~~and~~ 23-001, 31-001, and 31-002 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Optimize the water column pressure relief devices over each vessel to avoid releasees.

(2) Implement industry standard good operating and maintenance practices to minimize VOC emissions from the process vent condensers.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph b.

c. The permittee shall limit emissions from EUs 21, 22, ~~and~~ 23, and 31 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee to when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

NA

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the grain input in bushels on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of grain input in bushels on a monthly basis.

b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Units 24 (24-001) and 25 (25-001) Loadout Stations

Description:

EU 24-001: Building 3 Loadout Station
Construction commenced: 2015
EU 25-001: Regauge Loadout Station
Construction commenced: 2008

APPLICABLE REGULATIONS:

401 KAR 50:012, General application

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 24 and EU 25 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Minimize product spills and clean up spills as expeditiously as practicable.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph a.

b. The permittee shall limit emissions from EUs 24 and 25 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

NA

5. Specific Record Keeping Requirements:

a. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 07 (07-001) Bottling Lines

Description:

Equipment: Bottling Lines A, B, C, & D
Construction commenced: 2019

APPLICABLE REGULATIONS:

401 KAR 50:012, General application

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. To maintain compliance with 401 KAR 50:012 Section 1(2), the permittee shall operate and maintain EU 07 in a manner consistent with safety and good air pollution control practices for minimizing VOC emissions, including the following: [401 KAR 50:012 Section 1(2)]

(1) Follow industry standard bottling practices to minimize the release of VOCs.

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements, paragraph b.

b. The permittee shall limit emissions from EU 07 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

c. The permittee shall limit total gallons of material bottled through EU 07 to 50,000,000 proof gallons (PG) per year. [401 KAR 52:020, Section 10]

Compliance Demonstration Method:
See 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements, paragraph a.

2. Emission Limitations:

NA

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

NA

4. Specific Monitoring Requirements:

Pursuant to 401 KAR 52:020, Section 10, the permittee shall monitor the quantity of product bottled in proof gallon on a monthly basis.

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the quantity of product bottled in proof gallon on a monthly basis.

b. The permittee shall maintain records to demonstrate the work practice standards required by 401 KAR 50:012, Section 1(2) are satisfied [401 KAR 50:012, Section 1(2); 401 KAR 52:020, Section 10].

c. Pursuant to 401 KAR 52:020, Section 10, the permittee shall calculate and record emissions from 007-1 on a monthly basis, aggregate monthly emissions to rolling 12-month totals to compare to requested limit.

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 08 (09-001) Indirect Heat Exchanger

Description:

Horizontally-opposed-natural gas-fired indirect heat exchanger
Fuel: Natural Gas
~~Tertiary fuel: Off spec alcohol~~
Maximum continuous rating: ~~176~~140.8 MMBtu/hr
Construction commenced: 1972

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources
401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations:**

~~To preclude 40 CFR 63, Subpart JJJJJJ, this unit shall meet the definition of "gas fired unit under this Subpart. This unit shall only burn liquid fuel during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined 48 hours during any calendar year [40 CFR 63.11195(e)].~~

~~**Compliance Demonstration Method**:~~

a. ~~To demonstrate compliance with this requirement the permittee shall meet the recordkeeping requirements in Paragraph 5 (b).~~During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(2) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(3) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(4) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(5) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph c.

b. The permittee shall limit emissions from EU 08 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu~~/hr~~ on a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4 (2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions from the unit shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance Demonstration Method:
These units are considered to be in compliance with the allowable PM, SO2 and opacity limitation while burning natural gas.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirement:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

b. See Section F

5. Specific Recordpeeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted on a monthly basis.

~~The permittee shall maintain records of the reason fuel oil is burned (gas curtailment, gas supply emergencies, or periodic testing on liquid fuel) and the number of hours liquid fuel is burned on a monthly basis [401 KAR 50:020, Section 10].~~

b. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit~~s~~ 14 ~~& 15~~ (14-001 ~~and 14-002~~) ~~Two~~ Indirect Heat Exchanger~~s~~

Description:

~~Two (2) identical n~~Natural gas fired indirect heat exchanger~~s.~~
~~Tertiary Fuel: Off spec alcohol~~
Fuel: Natural Gas
Maximum continuous rating: ~~58~~60.5 MMBtu~~-~~/hr~~, each.~~
Construction commenced: May 9, 2002~~.~~

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to a steam generating unit with a capacity of less than 100 MMBtu/hr but greater than 10 MMBtu/hr which commenced on or after June 9, 1989.

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources
401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating limitations:**

~~To preclude 40 CFR 63, Subpart JJJJJJ, this unit shall meet the definition of "gas fired unit under this Subpart. This unit shall only burn liquid fuel during periods of gas curtailment, gas supply emergencies, or periodic testing on liquid fuel. Periodic testing of liquid fuel shall not exceed a combined 48 hours during any calendar year [40 CFR 63.11195(e)].~~

~~**Compliance Demonstration:**~~

a. ~~To demonstrate compliance with this requirement the permittee shall meet the recordkeeping requirements in Paragraph 5(b).~~During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

~~(1)~~(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph d.

c. The permittee shall limit emissions from EU 14 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NOx emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions ~~from each unit~~ shall not exceed 0.1 lb/MMBtu ~~each~~ upon a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4 (2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

c. The sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu~~, each~~ based on a twenty- hour average [401 KAR 59:015, Section 5(1)(c)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The~~se~~ unit~~s~~ is~~are~~ considered to be in compliance with the allowable PM, SO2 and opacity limitation while burning natural gas [401 KAR 52:020, Section 10].

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

4. Monitoring Requirements:

The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted in ~~each~~ the unit on a monthly basis.

~~b. The permittee shall maintain records of the reason fuel oil is burned (gas curtailment, gas supply emergencies, or periodic testing on liquid fuel) and the number of hours liquid fuel is burned on a monthly basis [401 KAR 52:020, Section 10].~~

b. The permittee shall record and maintain records of the fuel combusted in this emission unit during each calendar month [40 CFR 60 Subpart Dc, Section 60.48c(g)(2)].

c. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

a. The permittee shall maintain records required by 40 CFR 60, Subpart Dc, as identified by 5. Specific Recordkeeping Requirements, paragraph b., for a period of two (2) years following the date of such record [40 CFR 60.48c(i)].

b. The reporting period required for the reports required under 40 CFR 60, Subpart Dc is each six (6)-month period. All reports shall be submitted to the Administrator and shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.48c(j)].

c. See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 15 (14-002) Indirect Heat Exchanger

Description:

Natural gas fired indirect heat exchanger
Primary Fuel: Natural Gas
Co-Fired Secondary Fuel: Grain Neutral Spirits (GNS) (Non-Hazardous Secondary Material)
Maximum continuous rating: 60.5 MMBtu/hr
Construction commenced: May 9, 2002. Burner changed in 2008; no capacity increase.

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applicable to a steam generating unit with a capacity of less than 100 MMBtu/hr but greater than 10 MMBtu/hr which commenced on or after June 9, 1989[1]

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall 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 at all times. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved [40 CFR 63.11205(a)].

Compliance Demonstration Method:
Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that 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 [40 CFR 63.11205(a)].

[1] 40 CFR 60, Subpart Dc requirements do not apply to GNS combustion in EU 15.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall conduct a tune-up of the boiler biennially to demonstrate continuous compliance as specified in the following paragraphs. Each biennial tune-up must be conducted no more than 25 months after the previous tune-up while burning the type of fuel (or fuels in the case of boilers that routinely burn two types of fuels at the same time) that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up [40 CFR 63.11201(b), §63.11223(a)-(b); Table 2(4) to 40 CFR 63, Subpart JJJJJJ].

(1) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection) [40 CFR 63.11223(b)(1)].

(2) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available [40 CFR 63.11223(b)(2)].

(3) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown, not to exceed 36 months from the previous inspection). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection [40 CFR 63.11223(b)(3)].

(4) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any nitrogen oxide requirement to which the unit is subject [40 CFR 63.11223(b)(4)].

(5) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer [40 CFR 63.11223(b)(5)].

(6) If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 days of startup [40 CFR 63.11223(b)(7)].

c. If the permittee uses an oxygen trim system that maintains an optimum air-to-fuel ratio that would otherwise be subject to a biennial tune-up, the permittee must conduct a tune-up of the boiler every 5 years using the same procedures as the biennial tune-up. Each 5-year tune-up must be conducted no more than 61 months after the previous tune-up. The permittee may delay the burner inspection and inspection of the system controlling the air-to-fuel ratio until the next scheduled unit shutdown, but the permittee must inspect each burner and system controlling the air-to-fuel ratio at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every 5 years, the permittee shall set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up [40 CFR 63.11223(c)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:
Compliance with tune-up requirements shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraphs d and e and 6. Specific Reporting Requirements, paragraphs c, e, and f.

d. The permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must comply with the requirements of 40 CFR 63.11237 and Table 2 to 40 CFR 63, Subpart JJJJJJ, Item 16 [40 CFR 63.11201(b); Table 2(16) to 40 CFR 63, Subpart JJJJJJ].

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph e and 6. Specific Reporting Requirements, paragraphs e and f.

e. The permittee shall limit emissions from EU 15 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_x emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu upon a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4(2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations [401 KAR 59:015, Section 4(2)(c)].

c. The sulfur dioxide emissions shall not exceed 0.8 lb/MMBtu based on a twenty- hour average [401 KAR 59:015, Section 5(1)(c)].

Compliance Demonstration Method:
The unit is considered to be in compliance with the allowable PM, SO_2 and opacity limitations while burning natural gas and GNS [401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

3. Testing Requirements:

a. Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

~~a.~~b. Pursuant to 401 KAR 50:045, the permittee shall conduct one performance test while burning GNS if it used as a primary fuel for 30 consecutive days on the boiler in the lifetime of the permit. The emission factors generated from the testing will be based on the heat input to the boiler as defined in 401 KAR 51:001, Section 1.

~~2.~~4. Monitoring Requirements:

a. The permittee shall monitor the natural gas and GNS usage on a monthly basis [401 KAR 52:020, Section 10].

5. Specific Record Keeping Requirements:

a. The permittee shall maintain records of the amount of the natural gas combusted in the unit on a monthly basis [401 KAR 52:020, Section 10].

b. The permittee shall maintain records of the amount of GNS combusted on a monthly basis [40 CFR 60.48c(g)(2)].

c. The permittee shall record the following information for each tune-up [40 CFR 63.11223(b)(6)]:

(1) The concentrations of CO in the effluent stream in parts per million, by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler [40 CFR 63.11223(b)(6)(i)].

(2) A description of any corrective actions taken as a part of the tune-up of the boiler [40 CFR 63.11223(b)(6)(ii)].

(3) The type and amount of fuel used over the 12 months prior to the tune-up of the boiler, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit [40 CFR 63.11223(b)(6)(iii)].

d. The permittee shall maintain the following records [40 CFR 63.11225(c)]:

(1) A copy of each notification and report submitted to comply with 40 CFR 63, Subpart JJJJJJ and all documentation supporting any Initial Notification or Notification of Compliance Status [40 CFR 63.11225(c)(1)].

~~(1)~~(2) The date of each tune-up, the procedures followed for the tune-up, and the manufacturer's specifications to which the boiler was tuned [40 CFR 63.11225(c)(2)(i)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(3) A record which documents how the secondary material (GNS) meets each of the legitimacy criteria under 40 CFR 241.3(d)(1) [40 CFR 63.11225(c)(2)(ii)].

~~(2)~~(4) A copy of the energy assessment report [40 CFR 63.11225(c)(2)(iii)].

6. Specific Reporting Requirements:

a. The permittee shall maintain records required by 40 CFR 60, Subpart Dc for a period of two (2) years following the date of such record [40 CFR 60.48c(i)].

b. The reporting period required for the reports required under 40 CFR 60, Subpart Dc is each six (6)-month period. All reports shall be submitted to the Administrator and shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.48c(j)].

c. If requested by the Administrator, submit a report containing the information identified by 5. Specific Recordkeeping Requirements, paragraph d [40 CFR 63.11223(b)(6)].

d. The permittee shall submit an Initial Notification to the Administrator within 120 days after the source becomes subject to 40 CFR 63, Subpart JJJJJJ [40 CFR 63.11225(a)(2)].

e. The permittee shall submit the Notification of Compliance Status for 40 CFR 63, Subpart JJJJJJ no later than 120 days after the applicable compliance date. The Notification of Compliance Status shall contain the following information and certifications of compliance, and must be signed by a responsible official [40 CFR 63.11225(a)(4)]:

(1) The information required in 40 CFR 63.9(h)(2), except the information listed in 40 CFR 63.9(h)(2)(i)(B), (D), (E), and (F) [40 CFR 63.11225(a)(4)(i)].

(2) "This facility complies with the requirements in § 63.11214 to conduct an initial tune-up of the boiler" [40 CFR 63.11225(a)(4)(ii)].

(3) "This facility has had an energy assessment performed according to § 63.11214(c)" [40 CFR 63.11225(a)(4)(iii)].

(4) For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit" [40 CFR 63.11225(a)(4)(v)].

~~(1)~~(5) The notification must be submitted electronically using 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 Notification of Compliance Status must be submitted to the Administrator at the appropriate address listed in 40 CFR 63.13.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

f. The permittee shall prepare, by March 1 biennially, and submit to the delegated authority upon request, an annual compliance certification report for the previous biennial period containing the following information [40 CFR 63.11225(b)]:

(1) Company name and address [40 CFR 63.11225(b)(1)].

(2) Statement by a responsible official, with the official's name, title, phone number, email address, and signature, certifying the truth, accuracy and completeness of the report and a statement of whether the source has complied with all the relevant standards and other requirements of 40 CFR 63, Subpart JJJJJJ. The report must include the following certification(s) of compliance, as applicable, and signed by a responsible official [40 CFR 63.11225(b)(2)]:

i. "This facility complies with the requirements in § 63.11223 to conduct a biennial or 5-year tune-up, as applicable, of each boiler" [40 CFR 63.11225(b)(2)(i)].

ii. For units that do not qualify for a statutory exemption as provided in section 129(g)(1) of the Clean Air Act: "No secondary materials that are solid waste were combusted in any affected unit" [40 CFR 63.11225(b)(2)(ii)].

g. See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 16 (16-001) Indirect Heat Exchanger

Description:

Natural gas fired indirect heat exchanger
Fuel: Natural Gas
Controls: Low NO_X burners and Flue Gas Recirculation
Maximum continuous rating: 179.2 MMBtu/hr
Construction commenced: 2018

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

NON APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart JJJJJJ, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating limitations:

a. During a startup period or shutdown period, the permittee shall comply with the work practice standards established in 401 KAR 59:015, Section 7: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph a.

b. The permittee shall limit emissions from EU 16 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. PM emissions shall not exceed 0.10 lb/MMBtu actual heat input. [401 KAR 59:015, Section 4(1)(b)]

b. Opacity shall not exceed 20 percent except: [401 KAR 59:015, Section 4(2)]

(1) A maximum of 27 percent opacity shall be allowed for one 6-minute period in any 60 consecutive minutes; and [401 KAR 59:015, Section 4(2)(a)]

(2) For emissions caused by building a new fire, emissions during the period required to bring the boiler up to operating conditions shall be allowed, if the method used is recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015, Section 4(2)(c)]

c. SO_2 emissions shall not exceed 0.8 lb/MMBtu actual heat input. [401 KAR 59:015, Section 5(1)(b)1.]

Compliance Demonstration Method:
The unit is assumed to be in compliance with the 401 KAR 59:015 PM emissions, opacity, and SO_2 emissions standards while combusting natural gas.

d. Potential SO_2 emissions must be less than 0.32 lb/MMBtu to preclude the applicability of the SO_2 emission standard in 40 CFR 60, Subpart Db. [40 CFR 60.42b(k)(2)]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph c.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

e. As a high heat release rate unit, NO_X emissions shall not exceed 0.20 lb/MMBtu. The NO_X standard shall apply at all times, including periods of startup, shutdown, or malfunction. [40 CFR 60.44b(a), 40 CFR 60.46b(a)]

Compliance Demonstration Method:
Compliance shall be demonstrated according to 3. Testing Requirements, paragraph b and 4. Monitoring Requirements, paragraphs b through f.

f. The permittee shall limit combined VOC emissions from EU 16 and EU 30 to less than 40 tons per rolling 12-month period. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:
Compliance shall be demonstrated by calculating the monthly and 12-month rolling total VOC emissions from EU 16 and EU 30 and maintaining records of the monthly and 12-month rolling total VOC emissions from the combination of these sources. Monthly VOC emissions shall be calculated using the most recent emission factors approved by the Division.

3. Testing Requirements:

a. Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

b. The permittee shall conduct the performance test as required under 40 CFR 60.8 using the continuous system for monitoring NO_X under 40 CFR 60.48b to determine compliance with the emission limit for NO_X required under 40 CFR 60.44b. [40 CFR 60.46b(e)]

(1) For the initial compliance test, NO_X from the steam generating unit is monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO_X emission standard. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]

(2) Following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, the permittee shall upon request determine compliance with the NO_X standards in 40 CFR 60.44b through the use of a 30-day performance test. During periods when performance tests are not requested, NO_X emissions data collected pursuant to 40 CFR 60.48b(g)(1) or CFR 60.48b(g)(2) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emissions reports, but will not be used to determine compliance with the NO_X emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all the hourly NO_X emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(2)]

4. Monitoring Requirements:

a. The permittee shall monitor the amount of the natural gas combusted in the unit on a monthly basis [401 KAR 52:020, Section 10, 40 CFR 60.49b(d)(2)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NO_X and O_2 (or CO_2) emissions discharged to the atmosphere, and shall record the output of the system [40 CFR 60.48b(b)(1)].

c. The CEMS required under 40 CFR 60.48b(b) shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]

d. The 1-hour average NO_X emission rates measured by the continuous NO_X monitor required by 40 CFR 60.48b(b) and required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]

~~a.~~e. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. This includes the completion of annual Relative Accuracy Test Audits (RATAs), daily drift checks, and quarterly cylinder gas audits in accordance with 40 CFR 60, Appendix B. [40 CFR 60.48b(e), 40 CFR 60.13, 40 CFR 60, Appendix B]

f. When NO_X emission data are not obtained because of CEMS breakdown, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of 40 CFR Part 60, Method 7A of appendix A of 40 CFR Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]

g. As an alternative to meeting the CEMS requirements of this section, the permittee may elect to monitor steam generating unit operating conditions and predict NO_x emission rates as specified in a plan submitted pursuant to 40 CFR 60.49b(c). [40 CFR 60.48b(g)(2)]

5. Specific Recordkeeping Requirements:

a. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

b. The permittee shall maintain records of the amount of the natural gas combusted on a monthly basis [401 KAR 52:020, Section 10, 40 CFR 60.49b(d)(2)].

c. The permittee shall maintain fuel receipts (such as a current, valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the fuel meets the definition of natural gas as defined in §60.41b and the sulfur limit (0.32 lb/MMBtu) to preclude the applicability of the 40 CFR 60, Subpart Db SO_2 standard. [40 CFR 60.49b(r)(1)]

~~b.~~d. The permittee shall maintain records of the following information for each steam generating unit operating day: [40 CFR 60.49b(g)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(1) Calendar date;

~~(1)~~(2) The average hourly NO_X emission rates (expressed as NO2) (ng/J or lb/MMBtu heat input) measured or predicted;

(3) The 30-day average NO_X emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;

(4) Identification of the steam generating unit operating days when the calculated 30-day average NO_X emission rates are in excess of the NO_X emissions standards under 40 CFR 60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;

(5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

(6) Identification of the times when emissions data have been excluded from the calculations of average emission rates and the reasons for excluding data;

(7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;

(8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;

(9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

~~(2)~~(10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of 40 CFR Part 60.

~~c.~~e. To preclude 401 KAR 51:017, the permittee shall calculate and record combined VOC emissions from EU 16 and EU 30 on a monthly basis, and aggregate monthly emissions to rolling 12-month totals to compare to the 40 ton per rolling 12-month period limit.

6. Specific Reporting Requirements:

a. The permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include: [40 CFR 60.49b(a)]

(1) The design heat input capacity of the unit and identification of the fuels to be combusted in the unit;

(2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels; and

~~(1)~~(3) The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

a. If the permittee seeks to demonstrate compliance with the NO_X standard through the monitoring of steam generating unit operating conditions in the provisions of 40 CFR 60.48b(g)(2) shall submit to the Administrator for approval a plan that identifies the operating conditions to be monitored in 40 CFR 60.48b(g)(2) and the records to be maintained in 40 CFR 60.49b(g). [40 CFR 60.49b(c)]

b. The permittee shall submit excess emission reports for any excess emissions that occurred during the reporting period. Excess emissions are defined as any calculated 30-day rolling average NO_X emission rate, as determined under 40 CFR 60.46b(e), that exceeds the applicable emission limits in 40 CFR 60.44b. [40 CFR 60.49b(h)]

c. For each six (6)-month period of operation, the permittee shall submit reports containing the information recorded under 40 CFR 60.49b(g) as identified by Condition 5.d. These reports shall be postmarked by the thirtieth (30th) day following the end of the reporting period [40 CFR 60.49b(i) & (w)]

~~b.~~d. In each semiannual report, the permittee shall certify that only natural gas was combusted in the affected boiler during the reporting period. [40 CFR 60.49b(r)(1)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 17 & 18 (17-001 & 18-001) Gasoline Storage Tanks (Double-Walled)

Description:

Two (2) gasoline dispensing tanks
Capacity/Construction Date: EU 17 (Thunder Gas) - 1,120 gallons; constructed pre-2019
EU 18 (Farm Gas) - 250 gallons; constructed pre-2019
Each gasoline storage tank dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine.

APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart CCCCCC, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. The permittee shall comply with the requirements for the maximum recorded site-wide monthly throughput of gasoline since January 10, 2011. If monthly throughput exceeds a threshold at any time, the permittee shall comply with the applicable requirements of 63.11117 or 63.11118 within three years, as required by 63.11113(c) [40 CFR 63.11111(i)].

Compliance Demonstration Method:
See 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements (a)-(b).

b. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following [40 CFR 63.11116(a)]:

(1) Minimize gasoline spills

(2) Clean up spills as expeditiously as practicable

(3) Cover all open gasoline containers and all gasoline storage fill-pipes with a gasketed seal when not in use

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators

Compliance Demonstration Method:
The permittee shall state in the annual compliance report required by Section F(9) that each gasoline storage tank has been maintained in accordance with 1. Operating Limitations (b) and (d).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

c. The permittee shall have documentation of gasoline throughput available within 24 hours of a request by the Administrator [40 CFR 63.11116(b)].

Compliance Demonstration Method:
See 5. Specific Recordkeeping Requirements (a).

d. The permittee shall, at all times, 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. 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 [40 CFR 63.11115(a)].

Compliance Demonstration Method:
See 1. Operating Limitations – Compliance Demonstration (b).

e. The permittee shall limit emissions from EUs 17 and 18 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC emission limitation taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

a. Any required performance tests on gasoline storage tanks shall be conducted under conditions specified or approved by the Administrator [40 CFR 63.11120(c)].

4. Specific Monitoring Requirements:

a. The permittee shall monitor one of the following parameters [40 CFR 63.11116(b)]:

(1) The volume of gasoline loaded into gasoline storage tanks, or

(2) The volume of gasoline dispensed from gasoline storage tanks.

5. Specific Recordkeeping Requirements:

a. The permittee shall keep records of gasoline throughput, summarized monthly. [401 KAR 52:020, Section 10]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. Should gasoline throughput exceed 10,000 gallons in one month, the permittee shall [40 CFR 63.11124]:

(1) The permittee shall submit an Initial Notification at the time the gasoline storage tank becomes subject to the control requirements in 40 CFR 63.11117. The Initial Notification shall be submitted to the applicable EPA Regional Office and DAQ Regional Office, and shall contain the following information [40 CFR 63.11124 (a)(1)]:

i. Name and address of the permittee;

ii. Address (i.e., physical location) of the facility; and

iii. A statement that the notification is being submitted in response to 40 CFR 63 Subpart CCCCCC and identifying the requirements in 40 CFR 63.11117 that apply to the facility.

(2) The permittee shall submit a Notification of Compliance Status to the applicable EPA Regional Office and DAQ Regional Office within 60 days of the applicable compliance date. The Notification of Compliance Status shall be signed by a responsible official who shall certify its accuracy, indicate whether the source has complied with the requirements of this subpart, and indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If the facility is in compliance with the requirements of 40 CFR 63 Subpart CCCCCC at the time the Initial Notification is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains all information required for the Initial Notification [40 CFR 63.11124(a)(2)].

6. Specific Reporting Requirements:

The permittee shall submit a Notification of Performance Test prior to initiating testing required by 40 CFR 63 Subpart CCCCCC on gasoline cargo tanks or gasoline storage tanks [40 CFR 63.11124(b)(4)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 19-001 Natural Gas-fired Emergency Engine

Description:

Natural gas-fired emergency engine G001
Rated capacity: 107 bhp
Manufacturer: Generac generator with Ford engine
Manufacture date: September 2007

APPLICABLE REGULATIONS:

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (NSPS JJJJ)

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations

a. The permittee shall operate the emergency stationary ICE according to the requirements of 40 CFR 60.4243(d)(1) through (3). In order for G001 to be considered an emergency stationary ICE under NSPS JJJJ, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described below, is prohibited. To preclude the applicability of federal requirements for non-emergency engines, limit the engine's operation to the following levels [40 CFR 60.4243(d)]:

(1) There is no time limit on the use of emergency stationary ICE in emergency situations [40 CFR 60.4243(d)(1)].

(2) The permittee may operate G001 for any combination of the purposes specified in the following paragraphs for a maximum of 100 hours per calendar year. Any operation for non-emergency situations counts as part of the 100 hours per calendar year allowed by this paragraph [40 CFR 60.4243(d)(2)].

i. The permittee may operate G001 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

ii.

iii.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

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 G001 beyond 100 hours per calendar year [40 CFR 60.4243(d)(2)(i)].

~~(1)~~(3) The permittee may operate G001 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 as provided in paragraph (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 an electric grid or otherwise supply power as part of a financial arrangement with another entity [40 CFR 60.4243(d)(3)].

b. Because construction commenced after June 12, 2006, G001 is considered a new stationary RICE at an area source under RICE MACT. Therefore, the permittee meets the requirements of NESHAP ZZZZ by complying with NSPS JJJJ [40 CFR 63.6590(c)].

c. An emergency engine with a maximum engine power greater than 25 hp is subject to the requirements of this NSPS JJJJ only if it is manufactured on or after January 1, 2009. Since G001 was manufactured before January 1, 2009, no specific Subpart JJJJ requirements apply [40 CFR 60.4230(a)(4)(iv)].

Compliance Demonstration Method:
By meeting the operating limits of paragraph 1.a., the permittee demonstrates compliance with both NSPS JJJJ and NESHAP ZZZZ.

d. The permittee shall limit emissions from EU 19-001 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NOx emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. To maintain G001's classification as an emergency engine, the permittee shall use a non-resettable operating hour meter to monitor hours of operation in emergency and non-emergency service. [401 KAR 52:020, Section 10].

~~a.~~b. The permittee shall monitor the monthly amount of natural gas usage (scf/month). [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. To maintain G001's classification as an emergency engine, the permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter, including the time of operation of the engine and the reason the engine was in operation during that time. The permittee shall use these records to verify compliance with the operating limits established by paragraph 1.a. [401 KAR 52:020, Section 10].

~~a.~~b. The permittee shall maintain records of fuel combusted on a monthly basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Unit 19-002 Natural Gas-fired Emergency Engine

Description:

Natural gas-fired emergency engine G002
Rated capacity: 126 bhp
Manufacturer: Cummins generator/engine
Manufacture date: May 2006

APPLICABLE REGULATIONS:

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)[2]

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations

a. The permittee shall be in compliance with the emission limitations and operating limitations in 40 CFR 63, Subpart ZZZZ that apply at all times [40 CFR 63.6605(a)].

b. At all times, the permittee 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 the permittee 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 [40 CFR 63.6605(b)].

c. The permittee 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 a site-specific 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 [40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6, Item 9.2.i.-ii.].

[2] Because the date the engine became operational at BTD is within 30 days of the applicable engine classification date under RICE MACT, BTD has conservatively assumed that G002 (EU 19-002) is classified as an existing engine and is subject to RICE MACT requirements. Otherwise, it would be classified as a gap engine under NSPS JJJJ and would be subject to the less stringent requirements that apply to G001 (EU 19-001).

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee shall operate G002 according to the requirements of 40 CFR 63.6640(f)(1), (2), and (4). In order for the engine to be considered an emergency stationary RICE, any operation other than emergency operation, maintenance checks and readiness testing, and operation in non-emergency situations for 50 hours per year is prohibited. If you do not operate the engine according to these requirements, the engine will not be able to be considered an emergency engine and must meet all requirements for non-emergency engines. [40 CFR 63.6640(f)]

(1) There is no time limit on the use of emergency stationary RICE in emergency situations [40 CFR 63.6640(f)(1)].

(2) The permittee may operate G002 for maintenance checks and readiness testing for a maximum of 100 hours per calendar year, 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 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 [40 CFR 63.6640(f)(2)].

~~(1)~~(3) The permittee may operate G001 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 as 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 an electric grid or otherwise supply power as part of a financial arrangement with another entity [40 CFR 63.6640(f)(4)].

Compliance Demonstration Method:

Refer to 4. Specific Monitoring Requirements and 5. Specific Recordkeeping Requirements.

e. The permittee shall comply with the following requirements [40 CFR 63.6640(a), §63.6603(a), Table 2d]:

(1) Change oil and filter every 500 hours of operation or annually, whichever comes first[3] [RICE MACT, Table 2d(5)(a)];

(2) Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary [RICE MACT, Table 2d(5)(b)];

(3) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary [RICE MACT, Table 2d(5)(c)]; and

[3] Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirement in Table 2d of RICE MACT [40 CFR 63.6625(j)].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Minimize the engine's time spent at idle during startup 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 [40 CFR 63.6625(h)].

f. The permittee shall install and use a non-resettable hour meter (if one is not already installed) to monitor G002's operating time [40 CFR 63.6625(f)].

Compliance Demonstration Method:

Refer to 5. Specific Recordkeeping Requirements.

g. The permittee shall limit emissions from EU 19-002 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

None

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the monthly amount of natural gas usage (scf burned/month). [401 KAR 52:020, Section 10].

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain the following records:

(1) Hours of operation of the engine as recorded through the non-resettable hour meter. These records shall identify 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 [40 CFR 63.6655(f)].

(2) Oil and filter change dates and corresponding engine hours of operation (determined using hour meter, fuel consumption data, or other appropriate methods) [401 KAR 52:020, Section 10].

(3) Inspection and replacement dates for spark plugs, hoses, and belts [401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

(4) Records of the maintenance conducted on G002 and after-treatment control device (if any) in order to demonstrate that the stationary RICE was operated and maintained according to manufacturer's emission-related instructions or the maintenance plan [40 CFR 63.6655(e)].

b. The permittee shall maintain records of fuel combusted (scf) on a monthly basis [401 KAR 52:020, Section 10].

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emission Units 26 (26-001), 27 (27-001), 28 (28-001), & 29 (29-001) Diesel-fired Emergency Engines

Description:

EU 26-001: Caterpillar diesel-fired emergency engine/generator G003
Rated capacity: 315 bhp
Construction commenced: 2018
EU 27-001: Clark diesel-fired fire pump engine FP01
Rated capacity: 315 bhp
Construction commenced: 2016
EU 28-001: Clark diesel-fired fire pump engine FP02
Rated capacity: 315 bhp
Construction commenced: 2016
EU 29-001: Clark diesel-fired fire pump engine FP03
Rated capacity: 400 bhp
Construction commenced: 2018

APPLICABLE REGULATIONS:

401 KAR 60:005 incorporated by reference 40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (NSPS IIII)

401 KAR 63:002 incorporated by reference 40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE MACT)

NON APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of significant deterioration of air quality

1. **Operating Limitations**

   a. The permittee shall meet the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII for each engine. [40 CFR 63.6590(c)].

   b. The permittee shall use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel in each engine. [40 CFR 60.4207(b)]

   c. The permittee shall: [40 CFR 60.4211(a)]

      (1) Operate and maintain each stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; and [40 CFR 60.4211(a)(1)]

      (2) Change only those emission-related settings that are permitted by the manufacturer. [40 CFR 60.4211(a)(2)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

d. The permittee shall operate the emergency stationary engines according to the requirements in 40 CFR 60.4211(f)(1) through (3). In order for the engine to be considered an emergency stationary ICE under 40 CFR 60, Subpart IIII, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in 40 CFR 60.4211(f)(1) through (3), is prohibited. If you do not operate the engine according to the requirements in 40 CFR 60.4211(f)(1) through (3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [40 CFR 60.4211(f)]

(1) There is no time limit on the use of emergency stationary ICE in emergency situations. [40 CFR 60.4211(f)(1)]

(2) The permittee may operate each emergency stationary ICE for the purpose specified in 40 CFR 60.4211(f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 40 CFR 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by 40 CFR 60.4211(f)(2). [40 CFR 60.4211(f)(2)]

i. Emergency stationary ICE 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 permittee 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 permittee maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [40 CFR 60.4211(f)(2)(i)]

(3) Emergency stationary ICE 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 40 CFR 60.4211(f)(2) of this section. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [40 CFR 60.4211(f)(3)]

Compliance Demonstration Method:

Refer to 5. Specific Recordkeeping Requirements, paragraph c.

e. The permittee shall limit emissions from EUs 26, 27, 28, and 29 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

2. Emission Limitations:

a. The permittee shall purchase engines certified to the emission standards in 40 CFR 60.4205(b) for EU 26 (G003) and in 40 CFR 60.4205(c) for EU 27 (FP01), EU 28 (FP02), and EU 29 (FP03) for the same model year and maximum engine power. Each engine shall be installed and configured according to the manufacture's emission-related specifications, except as permitted in 40 CFR 60.4211(g). [40 CFR 60.4211(c)]

(1) If the permittee does not install, configure, operate, and maintain each engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee shall demonstrate compliance as follows: [40 CFR 60.4211(g)]

i. The permittee shall keep a maintenance plan and records of conducted maintenance to demonstrate compliance and shall, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if the permittee does not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or the permittee changes the emission-related settings in a way that is not permitted by the manufacturer, the permittee shall conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action. [40 CFR 60.4211(g)(1)]

3. Testing Requirements:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor monthly hours of operation for each engine. [401 KAR 52:030, Section 10]

b. The permittee shall install a non-resettable hour meter on each engine if one is not already installed. [40 CFR 60.4209(a)]

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain records of monthly fuel usage and annual hours of operation for each engine. [401 KAR 52:030]

b. The permittee shall keep records of the operation of each engine in emergency and nonemergency service that are recorded through the non-resettable hour meter. The permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. [40 CFR 60.4214(b)]

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

6. Specific Reporting Requirements:

None

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 20 (20-001) Indirect Heat Exchangers

Description:
Six (6) natural gas-fired indirect heat exchangers
Two (2) 2019 replacement indirect heat exchangers at 1.44 MMBtu/hr for Warehouse R&S
One (1) 2018 replacement indirect heat exchangers at 1.44 MMBtu/hr and one backup 2012 boiler at 1.86 MMBtu/hr for warehouses T&U
Two (2) 1998 indirect heat exchangers at 1.81 MMBtu/hr for old bottling area
Fuel: Natural Gas
Construction commenced: Post-1971

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Compliance Demonstration Method:

Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph b.

e. The permittee shall limit emissions from EU 20 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:

See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu on a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4(2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions from the unit shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance Demonstration Method:

These units are considered to be in compliance with the allowable PM, SO_2 and opacity limitation while burning natural gas.

3. Testing Requirement:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. See Section F

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted on a monthly basis.

b. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

6. Specific Reporting Requirements:

See Section F

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Emissions Unit 30 (30-001) Indirect Heat Exchangers on Farm

Description:
Fourteen (14) natural gas-fired indirect heat exchangers
Capacity: 5 MMBtu/hr each
Construction commenced: 2018-2022

APPLICABLE REGULATIONS:

401 KAR 59:015, New indirect heat exchangers

NON APPLICABLE REGULATIONS:

40 CFR 63 Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers at Area Sources

401 KAR 51:017, Prevention of significant deterioration of air quality

1. Operating Limitations:

a. During a startup period or shutdown period, the permittee shall comply with the following work practice standards: [401 KAR 59:015, Section 7]

(1) The permittee shall comply with 401 KAR 50:055, Section 2(5); [401 KAR 59:015, Section 7(1)(a)]

(2) The frequency and duration of startup periods or shutdown periods shall be minimized by the affected facility; [401 KAR 59:015, Section 7(1)(b)]

(3) All reasonable steps shall be taken by the permittee to minimize the impact of emissions on ambient air quality from the affected facility during startup periods and shutdown periods; [401 KAR 59:015, Section 7(1)(c)]

(4) Startups and shutdowns shall be conducted according to either: [401 KAR 59:015, Section 7(1)(e)]

i. The manufacturer's recommended procedures; or [401 KAR 59:015 Section 7(1)(e)1.]

ii. Recommended procedures for a unit of similar design, for which manufacturer's recommended procedures are available, as approved by the cabinet based on documentation provided by the permittee. [401 KAR 59:015, Section 7(1)(e)2.].

Compliance Demonstration Method:

Compliance shall be demonstrated according to 5. Specific Recordkeeping Requirements, paragraph b.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

b. The permittee shall limit emissions from EU 30 to an amount, based upon the most recent emission factors approved by the Division, which would not cause an exceedance of the voluntary VOC and NO_X emission limitations taken by the Permittee when considered in aggregate with emissions from other non-fugitive sources. [401 KAR 52:020 Section 10]

Compliance Demonstration Method:
See Section D. Source Emission Limitations and Testing Requirements, paragraph 3.

2. Emission Limitations:

a. Pursuant to 401 KAR 59:015, Section 4(1)(c), particulate emissions shall not exceed 0.1 lb/MMBtu on a three-hour average.

b. Pursuant to 401 KAR 59:015 Section 4(2), visible emissions shall not exceed twenty (20) percent opacity except:

(1) that a maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning of the fire box or blowing soot;

(2) for emissions during building a new fire for the period required to bring up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

c. Pursuant to 401 KAR 59:015, Section 5(1)(b), sulfur dioxide emissions from the unit shall not exceed 0.8 lb/MMBtu based on a twenty four-hour average.

Compliance Demonstration Method:

These units are considered to be in compliance with the allowable PM, SO_2 and opacity limitation while burning natural gas.

d. The permittee shall limit combined VOC emissions from EU 16 and EU 30 to less than 40 tons per rolling 12-month period. [To preclude 401 KAR 51:017]

Compliance Demonstration Method:
Compliance shall be demonstrated by calculating the monthly and 12-month rolling total VOC emissions from EU 16 and EU 30 and maintaining records of the monthly and 12-month rolling total VOC emissions from the combination of these sources. Monthly VOC emissions shall be calculated using the most recent emission factors approved by the Division.

3. Testing Requirement:

Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 4.

SECTION B - EMISSION POINTS, AFFECTED FACILITIES, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

4. Specific Monitoring Requirements:

a. The permittee shall monitor the natural gas usage rate (MMscf) on a monthly basis [401 KAR 52:020, Section 10].

b. See Section F

5. Specific Record Keeping Requirements:

a. Pursuant to 401 KAR 52:020, Section 10, the permittee shall maintain records of the amount of the natural gas combusted on a monthly basis.

b. The permittee shall document the actions during startup period and shutdown periods, including duration of the startup period, by signed contemporaneous logs or other relevant evidence. [401 KAR 59:015, Section 7(1)(d)]

c. To preclude 401 KAR 51:017, the permittee shall calculate and record combined VOC emissions from EU 16 and EU 30 on a monthly basis, and aggregate monthly emissions to rolling 12-month totals to compare to the 40 ton per rolling 12-month period limit.

6. Specific Reporting Requirements:

See Section F

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. Although these activities are designated as insignificant the permittee must comply with the applicable regulation. Process and emission control equipment at each insignificant activity subject to a general applicable regulation shall be inspected monthly and a qualitative visible emissions evaluation made. Results of the inspections and observations shall be recorded in a log, noting color, duration, density (heavy or light), cause, and any corrective actions taken due to abnormal visible emissions.

Description			Generally Applicable Regulation
1.	01-003	Grain Cleaner Receiver Cyclone	401 KAR 61:020
2.	01-004	Grain Bin Loading	401 KAR 59:010
3.	01-007	Meal Bin Loading	401 KAR 61:020
4.	02-002	Beer Well	NA
5.	02-0073	Two (2) Spirits Process Vessels and Storage	NA
6.	02-0084	Heads and Tails Tanks~~Vent Scrubber Condenser~~	NA
7.	02-0096	~~Column Condenser~~Receiving Cistern Tanks	NA
8.	~~02~~03-	Distiller's Dried Grain Conveying~~Spirits Tanks~~	401 KAR 61:020
9.	07~~2~~-~~008~~005	~~Heads and Tails Tanks~~Blanton Fill Line #1	NA
~~10.~~	~~02-009~~	~~Receiving Cistern Tanks~~	~~NA~~
~~11.~~	~~02-010~~	~~Beer Still Pressure Relief~~	~~NA~~
~~12.~~	~~02-10a~~	~~Mini-Still Pressure Relief~~	~~NA~~
~~13.~~	~~02-011~~	~~Doubler Still Pressure Relief~~	~~NA~~
~~14.~~	~~02-012~~	~~Column Still Pressure Relief~~	~~NA~~
~~15.~~	~~03-004~~	~~Distiller's Dried Grain Conveying~~	~~401 KAR 61:020~~
~~16.~~	~~07-002~~	~~#1 Fill Line (Processing and bottling operations)~~	~~NA~~
~~17.~~	~~07-002a~~	~~#2 Fill Line (Processing and bottling operations)~~	~~NA~~
~~18.~~	~~07-002b~~	~~#3 Fill Line (Processing and bottling operations)~~	~~NA~~
~~19.~~	~~07-002c~~	~~#4 Fill Line (Processing and bottling operations)~~	~~NA~~
~~20.~~	~~07-002d~~	~~#5 Fill Line (Processing and bottling operations)~~	~~NA~~
~~21.~~	~~07-002e~~	~~#6 Fill Line (Processing and bottling operations)~~	~~NA~~
~~22.~~	~~07-002f~~	~~#7 Fill Line (Processing and bottling operations)~~	~~NA~~
~~23.~~	~~07-002g~~	~~#8 Fill Line (Processing and bottling operations)~~	~~NA~~
~~24.~~	~~07-005~~	~~Blanton Fill Line~~	~~NA~~
10~~2~~	07-005a	Blanton Fill Line #2	NA
11~~2~~	07-005b	Blanton/Weller Fill Line	NA
~~27~~1	07-005c	#52 Fill Line	NA
13~~2~~	07-006	Labeling/Case Sealing	NA
14~~2~~	07-007	Case Printing	NA
15~~3~~	09-010	Blended Used~~Waste~~ Oil Tank	NA
16~~3~~	09-011	Caustic Tanks-NaOH	NA
17~~3~~	11-001	Unpaved Roads	401 KAR 63:010
~~33.~~		~~Mobile Sources~~	~~401 KAR 63:010~~
18~~3~~		Maintenance Equipment	NA
19~~3~~		Evaporative Chiller	401 KAR 63:010
20.		Three (3) 10,000 gallons Grain Cookers	401 KAR 63:010
21.		Two (2) Platinum Process Vessels/Storage Tanks	N/A
22~~3~~		Two (2) Bourbon Process Vessels and Storage	N/A
23.		Micro Distillation System	N/A
24.		Wastewater Treatment Plant	N/A

25.	Replacement Cooling Tower #1	401 KAR 59:010
26.	Bitters Operations	N/A
27.	Equipment Leaks Components	N/A
28.	Dryhouse #1: Two (2) Open-top Thick Stillage Storage Tanks	N/A
29.	Dryhouse #1: Four Evaporators	N/A
30.	Cistern Barrel Filling Station	N/A
31.	Regauge Barrel Dumping	N/A
32.	Thick Stillage Tanks	N/A
33.	Misc. Indoor Process/Storage Tanks (Bldg 3)	N/A
34.	Misc. Outdoor Process/Storage Tanks (Bldg 3)	N/A
35.	Misc. Process Tanks in Cistern Area	N/A
36.	Misc. Process Tanks in Regauge Area	N/A
37.	Tank Farm Storage Tanks	N/A
38.	Misc. Process/Storage Tanks (Chill Rm)	N/A
39.	Misc. Process/Storage Tanks (Bldg 33, 26, 39)	N/A
40.	Misc. Process/Storage Tanks (Bldg 33, 26)	N/A
41.	Misc. Bldg. 45 Process/Storage Tanks	N/A
42.	Misc. Bldg. 52 Process/Storage Tanks	N/A
43.	Plant Expansion: Equipment Leaks Components	N/A
44.	Two Cookers (40,000 gal ea) with Drop Tanks	N/A
45.	Bldg. 81 Process/Storage Tanks in Legends Hall	N/A
46.	DDGS Dryhouse #2: Two Open-Top Thick	N/A
47.	DDGS Dryhouse #2: Two Evaporators	N/A
48.	Cooling Tower #2	N/A
49.	Cooling Tower #3	N/A
~~37.~~	~~Pot Still Pressure Relief~~	~~NA~~

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Particulate matter, sulfur dioxide, and visible emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

3. As requested by the permittee, the permittee shall limit source-wide non-fugitive emissions of VOC and NO_X to less than 250 tons per year on a 12-month rolling total basis. [401 KAR 52:020, Section 10]

Compliance Demonstration Method:

Compliance shall be demonstrated by calculating the monthly and 12-month rolling total VOC and NO_X emissions from all non-fugitive emissions sources and maintaining records of the monthly and 12-month rolling total VOC and NO_X emissions from these sources. Monthly VOC and NO_X emissions for these sources shall be calculated using the most recent emission factors approved by the Division. 12-month rolling total emissions for each semiannual period will be reported in accordance with Section F, based upon paragraph 5.

~~3.~~4. To preclude classification as a major source of Hazardous Air Pollutants (HAP), the permittee shall limit source-wide emissions of an individual HAP to less than 10 tons per year and of total HAPs to less than 25 tons per year on a rolling 12-month basis. [401 KAR 52:020, Section 10]

Compliance Demonstration Method:

Compliance shall be demonstrated by calculating the monthly and 12-month rolling total HAP emissions from all emissions sources and maintaining records of the monthly and 12-month rolling total HAP emissions from these sources. Monthly HAP emissions shall be calculated using the most recent emission factors approved by the Division. 12-month rolling total emissions for each semiannual period will be reported in accordance with Section F, based upon paragraph 5.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five (5) years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020, Section 3(1)h, the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020, Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1, the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Title V permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications shall be mailed to the following address:

Division for Air Quality
Frankfort Regional Office
200 Fair Oaks, 3rd floor
Frankfort, KY 40601

Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St. SW
Atlanta, GA 30303-8960

10. In accordance with 401 KAR ~~52:030~~52:020, Section 22~~3(1)(d)~~, the permittee shall provide the Division with all information necessary to determine its subject emissions within 30 days of the date the Kentucky Emissions Inventory System (KYEIS) emissions survey is mailed to the permittee~~. If a KYEIS emissions survey is not mailed to the permittee, then the permittee shall comply with all other emissions reporting requirements in this permit~~.

SECTION G - GENERAL PROVISIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020, Section 3(1)(b), and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the United States Environmental Protection Agency (U. S. EPA) determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the 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;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020, Section 3(1)(c)].

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. All emission limitations and standards contained in this permit shall be enforceable as a practical matter. All emission limitations and standards contained in this permit are enforceable by the U.S. EPA and citizens except for those specifically identified in this permit as state-origin requirements. [Section 1a-15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

o. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

p. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in this permit; and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six (6) months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020, Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the State Implementation Plan (SIP) or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

   No construction authorized by this permit.

5. Testing Requirements

   Testing shall be conducted at such time as may be requested by the Cabinet in accordance with 401 KAR 59:005, Section 2 (2) and 401 KAR 50:045, Section ~~(~~4~~)~~.

6. Acid Rain Program Requirements

   If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020, Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
      (1) An emergency occurred and the permittee can identify the cause of the emergency;
      (2) The permitted facility was at the time being properly operated;
      (3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
      (4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
      (5) This requirement does not relieve the source of other local, state or federal notification requirements.

   b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

   c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

8. Ozone Depleting Substances

   a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
      (1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
      (2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
      (3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
      (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
      (5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
      (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

   b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

   b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

NA

SECTION I - COMPLIANCE SCHEDULE

NA

Mitchel T. Denham
Phone: (502) 572-2500
Fax: (502) 572-2503
Email: mdenham@dbllaw.com

August 11, 2020

Hon. Liz Natter
General Counsel
Energy and Environmental Cabinet
Kentucky Division for Air Quality
300 Sower Boulevard, 3rd Floor
Frankfort, Kentucky 40601
Liz.natter@ky.gov

Ms. Melissa Duff
Director
Kentucky Division for Air Quality
300 Sower Boulevard
Frankfort, Kentucky 40601
melissa.duff@ky.gov
Sent via email and U.S. Mail

RE: Title V Renewal Application
Significant Permit Revision Application for the Plant Expansion Project
Buffalo Trace Distillery (AI #1373, Source ID 21-073-00009)

Dear Ms. Natter and Ms. Duff:

As you know, Buffalo Trace Distillery ("BTD") previously submitted a Title V Renewal Application and a Significant Permit Revision Application for a Plant Expansion Project at its facility in Frankfort, Kentucky. That information was submitted both to satisfy the construction and modification obligations of 401 KAR 52:020, Section 3(1)(a) for new equipment at the Frankfort distillery and as corrective action for certain past construction projects that had not previously obtained a permit, as outlined in Audit Finding #6 (Operation of Air Emissions Sources without a Permit) of the June 4, 2019 Environmental Audit Letter submitted to DAQ.

During our recent call, you asked us to clarify certain aspects of these applications, namely (1) address the discrepancy between DAQ's and BTD's analyses of the significant emissions rate ("SER") for certain pollutants and (2) provide design details for BTD's barrel-aging warehouses. This letter provides that clarification and requested detail.

I. Expansion Project

You noted in our recent call that the site appeared to be a major stationary source for PSD purposes for both the fossil fuel boilers (using the 100 tpy threshold for boilers exceeding 250 mmBtu/hr) and the site as a whole (using the standard 250 tpy threshold that applies to non-listed sources). However, the plant expansion application submitted by Trinity Consultants ("Trinity") addressed DAQ's PSD concerns only for NO_x, while your analysis indicated that the potential to emit (PTE) of other pollutants (in particular, VOC and PM) also exceeded the SER. You asked us to confirm that the application included all of the projects associated with the current expansion and to set forth a path forward for permitting the site in light of the issues you had identified.

First, I would like to confirm that the application BTD submitted did, in fact, include all of the expansion projects in the PSD analysis. As noted above, that application was designed in part to correct prior errors that had been identified pursuant to an audit, which included several projects since 2017 that had been initiated without permitting. The application proposed to include all of the equipment associated with these recent changes in the site's permit, and Trinity's PSD analysis included all emissions increases associated with those past projects as part of its evaluation of the emissions increases associated with the expansion project.

Second, our review of the records indicate that Trinity's analysis differs from DAQ's in one key respect: it considers the entire site to be a minor source. Both Trinity and DAQ agree that the stationary source comprising the fossil fuel boilers alone must be assessed separately as a "nested source" using the 100 tpy major source threshold. Trinity's analysis of the project-related emissions from EU16 and EU30 indicated that the expansion project would increase NO_x emissions above the 40 tpy SER. Accordingly, Trinity proposed that the site would accept emissions limits to ensure that the NO_x emissions increase from the boilers would remain below the SER, so that no PSD review would be required. We understand that DAQ agrees with Trinity's assessment on the boilers and agrees that a permit limit would be appropriate to ensure that the emissions increase from the boilers remains below the SER.

In addition, both Trinity and DAQ agree that the site as a whole – including both boiler and non-boiler emissions – must also be assessed against the 250 tpy major source threshold. It is this part of the analysis where we believe DAQ's approach diverges from the analysis BTD had previously provided. In particular, BTD and Trinity considered the existing site to be a minor PSD source, with a PTE below 250 tpy, and so compared the project's emissions against the 250 tpy major source threshold. On the other hand, we understand that DAQ considers the existing site to be a major source, with a PTE above the 250 tpy threshold. DAQ accordingly compared the emissions increases from the project to the SER, not the major source levels. Under this analysis, the entire site would trigger PSD for VOCs, NO_x, PM, PM_{10}, and $PM_{2.5}$.

Based on our discussion, this different approach arises from some historical permitting decisions that appear to have first taken and then lifted a synthetic minor emissions limit. BTD believes that the site may appropriately be addressed as a minor source for purposes of the current expansion project despite these historic events, both because the synthetic minor permit limit was

removed only as the result of a mistake, and because site-specific data demonstrate that the PTE of the boiler in question is in fact significantly below the level calculated using default AP-42 emission factors and the nameplate capacity reflected in the current permit. Our explanation follows, and supporting documents are attached.

A. Permitting history

While the permitting history of the site is not entirely clear, it appears that the site was aware of its PSD obligations and attempted to address them appropriately. From what we have been able to determine, in 1998, the site obtained a new permit (V-98-032) that accepted PSD avoidance limits, including both fuel composition limits for the boilers and rolling 12-month average 249 tpy emissions limits for PM, SO_2, and NOx in order to ensure that the site would operate as a synthetic minor for PSD. Subsequent permits in 2002-03 and 2007-08 modified the manner in which the synthetic minor limits were addressed, but retained the 12-month rolling average limit below 250 tpy.

Over this same period, actual emissions decreased. In 2005, the site ceased firing coal, but did not seek any credit for the associated emissions decreases, because it was not a major source; in 2007, the site removed EU 09, the coal-fired boiler.

In approximately 2012-2013, however, the site-wide synthetic minor emissions limits were removed from the site's renewal application (V-12-056). We do not know why this limit was removed; indeed, the site's renewal application requested that it be retained. However, we note that in early 2013, the site asked DAQ to remove the site's ability to use fuel oil as the secondary fuel for the site's boilers, and this request stated that by doing so, the site would no longer need to be classified as a synthetic minor.[1] While it appears that the site was referring to the language in the unit-specific permit provisions setting forth calculation methodologies for the use of various fuels at each boiler, we assume that DAQ may have removed the site-wide synthetic minor permit limit as a result of this submission, believing that it was no longer necessary. And in fact, the emissions factor used by DAQ at the time indicated that the site's PTE was approximately 155 tpy NO_x, as shown in the previous Pollutants of Concern (POC) table printed as Attachment B.[2] During this period, DAQ's calculated PTE included emissions from EU 10, which had been inactive/inoperable for more than ten years.

While the 2012 renewal permit no longer contained the site-wide annual synthetic minor limit for NOx emissions, the facility continued to operate and to report its emissions as if that limit remained in place; indeed, its periodic submissions to DAQ continued to report the site as subject to a source-wide 245 tpy limit. See Attachment C, which provides representative excerpts from 2018, 2017, and 2013. The site's reported actual emissions also remained well below 250 tpy, as shown in Attachment D.

[1] See Attachment A that includes EC Group's request.
[2] POC Table is from DAQ's files received in response to an Open Records request by BTD.

B. Reanalysis of Potential to Emit

More recently, as part of BTD's recent audit and corrective efforts, the site's new consultant, Trinity, updated its emissions calculations. This review revealed that the emissions factor used in 2012-2013 to calculate the site's PTE from boiler EU 08 was incorrect, and that using the standard AP-42 emissions factor for EU 08 resulted in a site PTE of approximately 265 tpy NO_x,[3] not 155 tpy. In order to both correct this factual error and ensure that the site remained the minor source BTD and DAQ had always believed it to be, the site requested that DAQ reinstate site-wide NO_x emissions limit.

At the same time, it was also apparent that the AP-42 emissions factors significantly overstated emissions from EU 08, which is BTD's oldest natural gas-fired boiler and has not been able to operate at its nameplate capacity of 176 MMBtu/hr for at least a couple of decades. Accordingly, the site undertook voluntary testing to confirm the "true" PTE from that boiler in its current condition, including the inherent constraints on operation that have developed as a result of its age. That testing demonstrated that the maximum emissions rate from the boilers was in fact closer to the figure used by DAQ and the site in the 2012-2013 permitting, providing a site-wide PTE of approximately 155 tpy NO_x.[4]

BTD therefore believes that DAQ may appropriately treat the site as an existing minor source in its PSD analysis. First, both DAQ and BTD have consistently treated the site as a minor source and permitted it as such based on the information available at the time regarding the boilers' emissions. While the synthetic minor limit was removed several years ago, that was done only because both DAQ and BTD believed the site to be a *true* minor source. Indeed, BTD personnel apparently did not even realize that the synthetic minor limit had been removed, as it continued to report its compliance with the site-wide limit even after those were removed from the permit. Finally, calculations using the higher pre-NSPS AP-42 emissions factor for EU 08 indicate that the site's actual NO_x emissions were always below the 250 tpy major source threshold limit.[5] Given that both DAQ and BTD believed the site was a minor source and operated consistently with those constraints even after 2013, it is appropriate to permit the site now consistent with that belief.

Second, the new testing data demonstrates that the site has in fact remained a true minor source at all times, even after the synthetic minor limits were removed. The only calculations that have ever suggested the site was a major source were those performed by Trinity when it re-assessed the PTE of boiler EU-08 using AP-42 emissions factors; but those factors, as discussed above, significantly overstated that unit's true PTE. Source-specific emissions data has long been viewed as the most accurate method of estimating emissions; AP-42 emissions factors, on the other hand, are of varying reliability and are typically used only when no better source of data is available. As a result, the "mistaken" removal of the synthetic minor limit was in fact not

[3] See Title V renewal application submitted on January 30, 2020.
[4] See Attachment E for further detail.
[5] See Attachment C.

mistaken because the site was at the time a true minor source, and it has remained a true minor source ever since.

In order to address the concerns you have raised, we have revised both the permit applications and the site's PSD analysis to incorporate the true PTE of EU 08 based on its current maximum capacity, as illustrated by the most recent stack tests.

In summary, the "nested source" or separate source consisting of the existing fossil fuel boilers remains an existing major stationary source because the total short-term heat input capacity for fossil fuel boilers and their potential NO_X emissions exceed 250 MMBtu/hr and 100 tpy, respectively. BTD has therefore requested a 40 tpy NO_x limit on the boiler emissions to ensure that the expansion project may be permitted as a minor modification.

In addition, the revised permit applications submitted on August 11, 2020, confirm that the entire facility is not an existing major stationary source (*i.e.*, PTE below 250 tpy), and that the plant expansion project by itself does not constitute the installation of a new major stationary source.[6] As a result, the project may also be permitted as a minor modification for the plant as a whole.

While the site therefore requires only one synthetic minor limit (the 40 tpy NO_x limit on boiler emissions associated with the expansion), BTD is nevertheless willing to accept voluntary emissions limits to ensure that DAQ may be confident that the site's operations will remain consistent with the representations and explanation set forth in this letter. Specifically, the attached permit application proposes the following limits:

- Source-wide emissions limits for the entire plant of less than 250 tpy of VOC and NO_x;
- An operational restriction on the quantity of beverages bottled by bottling lines A, B, C, and D (proposed EU 07) of less than 50,000,000 proof gallons per year, which restricts the VOC PTE for EU 07 to no more than 27.5 tpy;
- Install and operate a thermal oxidation system to control VOC emissions associated with the expansion project's two (2) steam dryers in the new dry house; and
- Establish a 16 tpy VOC emissions limit covering the controlled emissions from the new steam dryers plus up to 500 hours of by-passing the thermal oxidation system for maintenance activities, startup, shutdown, and malfunction events.

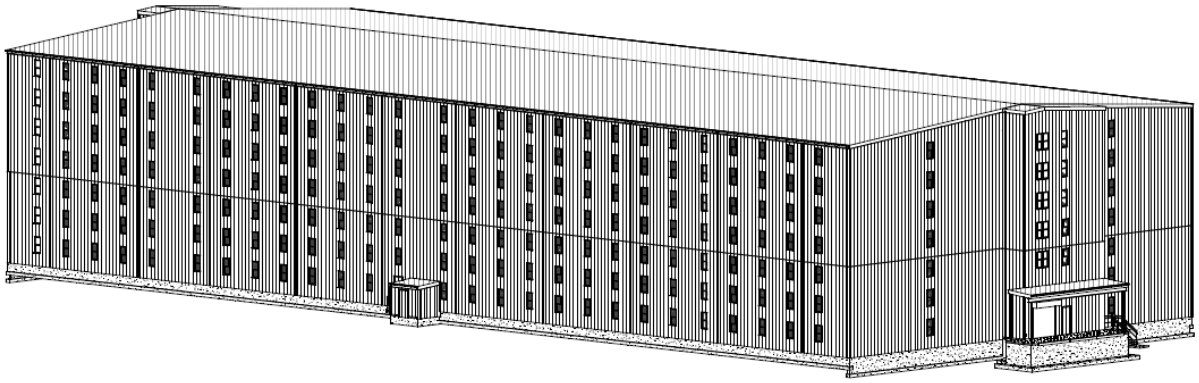
The revised plant expansion application also addresses the following updates to the Significant Permit Revision application previously submitted to DAQ on January 30, 2020:

- Updated emissions factors and maximum heat input capacity for EU 08;
- Updated construction timelines for expansion equipment;
- Included by-products from proposed RTO as a separate process ID (EU 32-05); and
- Updated/refined exhaust parameters as part of the Air Toxics analysis in support of 401 KAR 63:020.

[6] See Attachment F.

II. BTD Barrel-Aging Warehouse Design

Buzick Construction, the preeminent barrel-aging warehouse builder in Kentucky, has designed and constructed BTD's barrel-aging warehouses on The Farm using its typical, "cookie-cutter" design. Each rickhouse has 444 windows for ambient air flow. The rickhouses contain no stacks, no chimneys, no vents, no forced air, and no HVAC systems.



The picture above is a simple rendering of the warehouses. BTD's warehouses include stones on the corners and base for aesthetic reasons. While the exteriors of some rickhouses used to be constructed of wood, they are now built with more durable materials such as stone, brick, concrete, or metal, all of which require less maintenance. This evolution in exterior construction materials for barrel-aging warehouses is consistent with the construction industry's overall move away from wood to more durable exterior materials. The exteriors of the warehouses on The Farm are metal clad siding.

Air flow in and out of each warehouse occurs naturally through the 444 windows. To ensure consistent product quality, BTD takes certain measures to avoid extreme warehouse temperature changes. The walls and ceilings of the warehouses are covered with spray-on insulation to modulate temperature changes. Furthermore, two-to-three box fans are located on the ricks of the roofs to help maintain a more consistent temperature throughout the warehouses. In general, when temperatures begin to rise in the spring, BTD opens the warehouse windows and then closes the windows around Thanksgiving once temperatures begin to dip. The warehouses are also equipped with a basic, radiant heat system that is buried in the concrete floors; heat is provided by small indirect heat exchanger hot water units (5 MMBtu/hr) to maintain a temperature of approximately 50-55 degrees Fahrenheit during the coldest winter months to maintain product consistency, ensure that fire protection pipes do not freeze and burst, and provide comfort heating for warehouse employees.

As you know, emissions generated by barrel aging have historically been considered to be fugitive. Under Kentucky law, fugitive emissions are defined as those that "could not reasonably

pass through a stack, chimney, vent, or other functionally equivalent opening." 401 KAR 51:001, Section 1 (80). The proposed rickhouses here function in precisely the same manner as other rickhouses, with only a few design improvements that do not affect the kind or quantity of emissions from the aging activities (*e.g.*, more durable construction materials; insulation to modulate temperature swings due to changes in the weather). Given the size of the warehouses, the natural draft ventilation, and the number of windows, the barrel-aging emissions cannot reasonably pass through a stack, chimney, vent, or other functionally equivalent opening, and, as such, are fugitive.

***

We appreciate your assistance in resolving these questions and ensuring the expansion project is appropriately permitted. As always, if you have questions, please feel free to contact me on my direct line at (502) 630-1307.

Very Truly Yours,

DRESSMAN BENZINGER LAVELLE PSC

Mitchel T. Denham

cc: John Lyons, KDEP
Mary Tortorice, Sazerac Company
Heather Davis, Heather Davis Law, PLLC
Laura McAfee, Beveridge & Diamond
Mike Zimmer, Trinity Consultants
Maren Seibold, Trinity Consultants
All via email only

Attachment A – EC Group's request

The EC Group

Environmental Consulting
Hydrogeologic Services

January 15, 2013

Mr. James Morse
Supervisor, Permit Support Section
Division for Air Quality
200 Fair Oaks Lane, 1st Floor
Frankfort, KY 40601

RE: Response to Second Notice of Deficiency
Buffalo Trace Distillery, Inc.
AI No. 1373

Dear Mr. Morse:

Our client, Buffalo Trace Distillery, Inc. (Buffalo Trace), received an initial Notice of Deficiency (NOD) letter from Mr. Ben Markin, Combustion Section Supervisor, dated November 29, 2012. The EC Group of Kentucky, LLC responded to that letter on December 18, 2012. Mr. Markin issued a second NOD letter dated January 4, 2013. At the direction of our client, this letter constitutes the response to the second NOD letter.

1. Our client requests that the permit include a federally-enforceable limitation on the use of fuel oil. Buffalo Trace agrees to limit the usage of fuel oil to no more than forty eight (48) hours in any calendar year. Fuel oil usage will be limited to periods of gas curtailment, gas supply emergencies, or periodic testing of liquid fuel. This limitation will preclude the applicability of 40 CFR 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*.

2. Our client requests that fuel oil be deleted as the secondary fuel for the source boilers. The current permit limits the usage of distillate oil to preclude the applicability of 405 KAR 51:017, *Prevention of Significant Deterioration of Air Quality*. With the deletion of fuel oil as the secondary fuel for the boilers, Buffalo Trace will become a true Title V source without the additional classification of a synthetic minor source.

3. Our client requests that off spec alcohol become the secondary fuel for the boilers. Use of the off spec alcohol is merely a way of economically eliminating off spec alcohol generated in the distilling process. It is never the sole fuel of the boilers. It is atomized into the burner while the boiler is burning natural gas and the products of combustion are considered similar to natural gas.

Attachment B – POC Table

Facility Name:	Buffalo Trace Distillery,		Date for POC:		2/15/2013	
KY Facility Identification #: 021-073-00009					2085	
AI # 1373	APE20120002					
Name of Unit:	EU-01		Installation Date:			1969, 1974
Description:	Grain and distiller Dried Grian Handeling		Based on 8760 hr/yr			
SCC Code:	3-02-010-01 (for 1, 2, and 3)					
SCC Code:	3-02-010-02 (for 4)					
SCC Units (for 1, 2, 3, and 4):	tons					
Emission Factor Source:		Emission Factor lb/SCC Unit	Maximum hourly Capacity for each boiler	Pollutant	PTE (tons/yr)	
Source						
Grain Unloading (1)						
EIS		0.50	56.0000	PM-10	122.6400	
EIS		0.009	56.0000	PM-2.5	2.2075	
EIS		0.900	56.0000	PT	220.7520	
Grain Conveying/Elevator (2)						
EIS		0.50	56.0000	PM-10	12.2640	
EIS		0.10	56.0000	PM-2.5	2.4528	
EIS		10.00	56.0000	PT	245.2800	
Grain Conveying/Elevator (3)						
EIS		1.20	25.2000	PM-10	13.2451	
EIS		0.02	25.2000	PM-2.5	0.2649	
EIS		2.40	25.2000	PT	26.4902	
Dist. Dried grain loading(4)						
EIS		0.01	33.0000	PM-10	1.4454	
EIS		0.01	33.0000	PM-2.5	1.4454	
EIS		0.31	33.0000	PT	44.8074	

Name of Unit:	EU-02		Installation Date:		1969
Description:	Hammer Mill and Receiver Process Cyclone		Based on 8760 hr/yr		
SCC Code:	30201001				
SCC Units:	Tons				
Emission Factor Source:		Emission Factor lb/SCC Unit	Maximum hourly Capacity SCC unit/hr	Pollutant	PTE (tons/yr)
Source					
EIS		0.06	25.2000	PM-10	6.6226
EIS		0.0012	25.2000	PM-2.5	0.1325
EIS		0.12	25.2000	PT	13.2451

Name of Unit:	EU-03		Installation Date:		1969
Description:	Fermentation Process		Based on 8760 hr/yr		
SCC Code:	30201004				
SCC Units:	1000 Bushels				
Emission Factor Source:		Emission Factor lb/SCC Unit	Maximum hourly Capacity SCC unit/hr	Pollutant	PTE (tons/yr)
Source					
EIS		14.20	11.1900	VOC	695.9732

Name of Unit:	EU-04		Installation Date:		1976
Description:	One Rotary Dryer		Based on 8760 hr/yr		
SCC Code:	30201002				
SCC Units:	Tons				
		Emission Factor lb/SCC Unit	Maximum hourly Capacity SCC unit/hr	Pollutant	PTE (tons/yr)
Emission Factor Source:					
Source					
EIS		1.50	23.6000	PM-10	54.2682
		0.6900	23.6000	PM-2.5	24.9634
		3.00	23.6000	PT	108.5364

Name of Unit:	EU-05		Installation Date:		1969, 1973
Description:	Four Rotary Dryer		Based on 8760 hr/yr		
SCC Code:	30201002				
SCC Units:	Tons				
		Emission Factor lb/SCC Unit	Maximum hourly Capacity SCC unit/hr	Pollutant	PTE (tons/yr)
Emission Factor Source:					
Source					
EIS		1.50	12.6000	PM-10	28.9737
		0.6900	12.6000	PM-2.5	13.3279
		3.00	12.6000	PT	57.9474

Name of Unit:	EU-06		Installation Date:		1969
Description:	Barrel filling, Aging, and Dumping		Based on 8760 hr/yr		
SCC Code:	30201003				
SCC Units:	Barrels (50 gallons)				
		Emission Factor lb/SCC Unit	Maximum hourly Capacity SCC unit/hr	Pollutant	PTE (tons/yr)
Emission Factor Source:					
Source					
EIS		6.90	52.3740	VOC	1582.8470

Name of Unit:	EU-08		Installation Date:		1972
Description:	1 NG boilers, 176 MMBtu/hr		Based on 8760 hr/yr		
SCC Code:	1-03-006-02				
SCC Units:	MMscf				
		Emission Factor lb/SCC Unit	Maximum hourly Capacity for each boiler SCC unit/hr	Pollutant	PTE (tons/yr)
Emission Factor Source:					
Source					
AP-42, Table 1.4-2		7.60	0.1760	PM	5.8587
AP-42, Table 1.4-2		7.60	0.1760	PM-10	5.8587
AP-42, Table 1.4-2		7.60	0.1760	PM-2.5	5.8587
AP-42, Table 1.4-2		0.60	0.1760	SO2	0.4625
AP-42, Table 1.4-1		100.00	0.1760	NOx	77.0880
AP-42, Table 1.4-1		84.00	0.1760	CO	64.7539
AP-42, Table 1.4-2		5.50	0.1760	VOC	4.2398
AP-42, Table 1.4-3		0.08	0.1760	formaldehyde	0.0578
AP-42, Table 1.4-2		0.00050	0.1760	lead	0.0004
AP-42, Table 1.4-2		120000.00	0.1760	C02	92505.6000
AP-42, Table 1.4-2		2.20	0.1760	nitrous	1.6959
AP-42, Table 1.4-2		2.30	0.1760	methane	1.7730
Total Haps					0.2000

Name of Unit:	EU-10		Installation Date:		1972
Description:	1 NG boilers, 63 MMBtu/hr		Based on 8760 hr/yr		
SCC Code:	1-03-006-02				
SCC Units:	MMscf				
Emission Factor Source:		Emission Factor lb/SCC Unit	Maximum hourly Capacity for each boiler SCC unit/hr	Pollutant	PTE (tons/yr)
Source					
AP-42, Table 1.4-2		7.60	0.0630	PT	2.0971
AP-42, Table 1.4-2		7.60	0.0630	PM-10	2.0971
AP-42, Table 1.4-2		7.60	0.0630	PM-2.5	2.0971
AP-42, Table 1.4-2		0.60	0.0630	SO2	0.1656
AP-42, Table 1.4-1		100.00	0.0630	NOx	27.5940
AP-42, Table 1.4-1		84.00	0.0630	CO	23.1790
AP-42, Table 1.4-2		5.50	0.0630	VOC	1.5177
AP-42, Table 1.4-3		0.08	0.0630	formaldehyde	0.0207
AP-42, Table 1.4-2		0.00050	0.0630	lead	0.0001
AP-42, Table 1.4-2		120000.00	0.0630	C02	33112.8000
AP-42, Table 1.4-2		2.20	0.0630	nitrous	0.6071
AP-42, Table 1.4-2		2.30	0.0630	methane	0.6347
Total Haps					0.2000

Name of Unit:	EU-14		Installation Date:		2002
Description:	1 NG boilers, 58 MMBtu/hr		Based on 8760 hr/yr		
SCC Code:	1-03-006-02				
SCC Units:	MMscf				
Emission Factor Source:		Emission Factor lb/SCC Unit	Maximum hourly Capacity for each boiler SCC unit/hr	Pollutant	PTE (tons/yr)
Source					
AP-42, Table 1.4-2		7.60	0.0580	PT	1.9307
AP-42, Table 1.4-2		7.60	0.0580	PM-10	1.9307
AP-42, Table 1.4-2		7.60	0.0580	PM-2.5	1.9307
AP-42, Table 1.4-2		0.60	0.0580	SO2	0.1524
AP-42, Table 1.4-1		100.00	0.0580	NOx	25.4040
AP-42, Table 1.4-1		84.00	0.0580	CO	21.3394
AP-42, Table 1.4-2		5.50	0.0580	VOC	1.3972
AP-42, Table 1.4-3		0.08	0.0580	formaldehyde	0.0191
AP-42, Table 1.4-2		0.00050	0.0580	lead	0.0001
AP-42, Table 1.4-2		120000.00	0.0580	C02	30484.8000
AP-42, Table 1.4-2		2.20	0.0580	nitrous	0.5589
AP-42, Table 1.4-2		2.30	0.0580	methane	0.5843
Total Haps					0.2000

Name of Unit:	EU-15		Installation Date:		2002
Description:	1 NG boilers, 58 MMBtu/hr		Based on 8760 hr/yr		
SCC Code:	1-03-006-02				
SCC Units:	MMscf				
		Emission Factor lb/SCC Unit	Maximum hourly Capacity for each boiler SCC unit/hr	Pollutant	PTE (tons/yr)
Emission Factor Source:					
Source					
AP-42, Table 1.4-2		7.60	0.0580	PT	1.9307
AP-42, Table 1.4-2		7.60	0.0580	PM-10	1.9307
AP-42, Table 1.4-2		7.60	0.0580	PM-2.5	1.9307
AP-42, Table 1.4-2		0.60	0.0580	SO2	0.1524
AP-42, Table 1.4-1		100.00	0.0580	NOx	25.4040
AP-42, Table 1.4-1		84.00	0.0580	CO	21.3394
AP-42, Table 1.4-2		5.50	0.0580	VOC	1.3972
AP-42, Table 1.4-3		0.08	0.0580	formaldehyde	0.0191
AP-42, Table 1.4-2		0.00050	0.0580	lead	0.0001
AP-42, Table 1.4-2		120000.00	0.0580	C02	30484.8000
AP-42, Table 1.4-2		2.20	0.0580	nitrous	0.5589
AP-42, Table 1.4-2		2.30	0.0580	methane	0.5843
Total Haps					0.2000

POLLUTANT	TOTAL SOURCE-WIDE
Carbon Dioxide	186588
Formaldehyde	0.12
CO	130.61
SO2	0.95
VOC	2287.6
Lead	0.00077
Methane	3.67
NO2	3.42
Nitrous Oxide	155.49
PT	729.18
PM10	251.60
PM2.5	56.93

Attachment C – Excerpts from Semiannual and ACC Reports

Excerpt from CY2018 ACC, where reported NO_X emissions of 125.1 tpy. PM, SO_2, & NO_X were less than 250 tpy. SAMR had the same information. However, KyEIS reported NOx emissions of 80.2 tpy for NO_X.

DEP7007CC continued

ID #

8) IDENTIFICATION OF EMISSIONS UNITS

8a)(1) Emission Units in Compliance. The following emission units are in compliance with applicable requirements such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below and will continue to comply.
If additional space is needed, attach and label as exhibit DEP700CC 8a)(1)

Emission Point ID#	Emission Unit ID#	Permit Condition or Applicable Regulation	Emission Unit Description	Permit Limit	Actual Emissions	Method used for Determining Compliance
12	(13-001)	401 KAR 63:010	Cooling Tower	N/A	n/a	Taking the 'reasonable precautions' listed in 401 KAR 63:010, Section 3(1)(a) through (f), where applicable (intermittent) Periodic visual inspections to evaluate compliance with opacity standards (intermittent).
14; 15	(14-001) (14-002)	401 KAR 59:015; 401 KAR 60:005	Two Indirect Heat Exchangers	Maximum of 3,627,000 gal of secondary fuel consumption per consecutive 12 month period; 0.10 lb/mmBtu PM per 3-hour average for any fuel used; 0.8 lb lb/mmBtu SO2 per 24-hour average for any fuel used; Less than 20% Opacity based on a 6-minute average; Less than 27% Opacity for one 6-minute period per hour	NG: 0.007 lb/mmBtu PM; 0.0006 lb/mmBtu SO2 for each EU 14 & 15.	Periodic visual inspections to evaluate compliance with opacity standards (intermittent). If fuel oil or waste oil is combusted, Method 9 reading is performed annually (intermittent). Monitoring and maintaining records on the amount of each type of fuel combusted in each unit on a monthly basis (intermittent). Monitoring and maintaining records of the heating value and sulfir content of each type of fuel and waste oil combusted (intermittent). Performing calculations and maintaining records of the actual emissions of particulate, sulfur dioxide, and nitrigen oxide on a monthly basis and on a twelve-month rolling sum (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide PM	The total source-wide particulate matter (PM) shall not exceed 245 tons in any consecutive twelve month period	50.88 tons/consecutive 12 month period	Calculating source-wide particulate matter(PM) emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide SO2	The total source-wide sulfur dioxide emissions shall not exceed 245 tons in any consecutive twelve month period.	0.27 tons/consecutive 12 month period	Calculating source-wide sulfur dioxide emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide Nox	The total source-wide nitrogen oxides emissions shall not exceed 245 tons in any consecutive twelve month period.	125.05 tons/consecutive 12 month period	Calculating source-wide nitrogen oxide emissions for consecutive twelve month periods (intermittent).

Excerpt from 2nd Semiannual Monitoring Report of 2018:

Title V Regulation Data Summary

Month	Emission # 01-005, 006 Grain Processed Tons/hr/mo.	Emision # 03-001 Rotary Dryer Tons/hr/mo.	Emision # 03-002 Other Dryers Tons/hr/mo.	Emision # 03-003 Cyclone Tons/hr/mo.		Emision # 02-001, 5 Ferm Distill pg	Emision # 03-005 Feed Shipped lbs.	Emision # 05-001 Barrel Fill/Age barrel/2018	Emision # 7 Bottling Process pg/2018	Emision # 09, 14, & 15 Monthly (3) Gas Boilers Heat Value mmBtu/10^3 gal	Sulfur lb/mmBtu	Alcohol Gallons	N. Gas MCF
Jan-18	13.99	1.22	2.43	3.65		1,874,603	4,229,870	690,515	11,145,773	-	-	3,410	94,145
Feb-18	13.04	1.22	2.44	3.66		1,565,856	3,997,060	690,515	11,145,773	-	-	0	84,350
Mar-18	12.23	1.13	2.25	3.38		1,534,305	3,753,780	690,515	11,145,773	-	-	1,300	86,729
Apr-18	12.36	1.03	2.06	3.09		1,319,792	3,659,040	690,515	11,145,773	-	-	6,400	83,205
May-18	11.34	1.01	2.01	3.02		1,845,727	3,592,140	690,515	11,145,773	-	-	6,000	86,890
Jun-18	10.66	0.96	1.92	2.88		1,281,453	3,529,510	690,515	11,145,773	-	-	5,250	64,561
Jul-18	0.00	0.00	0.00	0.00		322,316	0	690,515	11,145,773	-	-	0	4,717
Aug-18	11.86	1.08	2.16	3.24		1,671,035	2,756,340	690,515	11,145,773	-	-	8,700	63,830
Sep-18	11.57	1.11	2.22	3.33		1,440,724	3,420,760	690,515	11,145,773	-	-	6,750	71,619
Oct-18	12.24	1.27	2.54	3.81		1,758,525	4,399,040	690,515	11,145,773	-	-	3,850	84,198
Nov-18	12.21	1.27	2.54	3.81		1,504,700	3,708,780	690,515	11,145,773	-	-	100	83,711
Dec-18	12.28	1.14	2.28	3.42		1,512,692	3,571,740	690,515	11,145,773	-	-	4,000	87,180
						17,431,698	20,304 tons					45,860	889,135

NOTES: 1. No waste oil, #4 fuel oil or coal was burned in the boilers. Waste Alcohol burner was used to mix approx 45,860 gallons of alcohol with NG at minimal fire.
2. EP 10 (09-003) & EP 9 (09-002) was not used at any time during this reporting period

OPACITY DATA

Month	Emission # 01-005, 006 Grain Processed Opacity %	Emision # 03-001 Rotary Dryer Opacity %	Emision # 03-002 Other Dryers Opacity %	Emision # 03-003 Cyclone Opacity %	Emision # 09-001 #9 Boiler Opacity %	Emision # 14-001 #10 Boiler Opacity %	Emision # 15-001 #11 Boiler Opacity %
Jan-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Feb-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Mar-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Apr-18	<5%	<5%	<5%	<5%	<20%	0%	0%
May-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Jun-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Jul-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Aug-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Sep-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Oct-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Nov-18	<5%	<5%	<5%	<5%	<20%	0%	0%
Dec-18	<5%	<5%	<5%	<5%	<20%	0%	0%

NOTES:

BY _____ DATE 1-23-19
Authorized Signature

Marlen Wheatley
Typed or Printed Name

Master Distiller
Title of Signatory

Section D

To ensure **non-applicability** of Regulation 401 KAR 51:017 the following were met:

A.

Emission Units	P.M. Limit (tons/yr)	P.M. Cumulative 12 month (tons/yr)
all	245	50.88

B.

Emission Units	SO2 Limit (tons/yr)	SO2 Cumulative 12 month (tons/yr)
all	245	0.27

C.

Emission Units	NOx Limit (tons/yr)	Nox Cumulative 12 month (tons/yr)
all	245	125.1

Excerpt from CY2017 ACC, where reported NO_X emissions of 104.5 tpy. PM, SO_2, & NO_X were less than 250 tpy. SAMR had the same information. However, KyEIS reported NOx emissions of 80.2 tpy for NO_X.

DEP7007CC continued

ID #

8) IDENTIFICATION OF EMISSIONS UNITS

8a)(1) Emission Units in Compliance. The following emission units are in compliance with applicable requirements such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below and will continue to comply.

If additional space is needed, attach and label as exhibit DEP700CC 8a)(1)

Emission Point ID#	Emission Unit ID#	Permit Condition or Applicable Regulation	Emission Unit Description	Permit Limit	Actual Emissions	Method used for Determining Compliance
12	(13-001)	401 KAR 63:010	Cooling Tower	N/A	n/a	Taking the 'reasonable precautions' listed in 401 KAR 63:010, Section 3(1)(a) through (f), where applicable (intermittent) Periodic visual inspections to evaluate compliance with opacity standards (intermittent).
14; 15	(14-001) (14-002)	401 KAR 59:015; 401 KAR 60:005	Two Indirect Heat Exchangers	Maximum of 3,627,000 gal of secondary fuel consumption per consecutive 12 month period; 0.10 lb/mmBtu PM per 3-hour average for any fuel used; 0.8 lb lb/mmBtu SO2 per 24-hour average for any fuel used; Less than 20% Opacity based on a 6-minute average; Less than 27% Opacity for one 6-minute period per hour	NG: 0.007 lb/mmBtu PM; 0.0006 lb/mmBtu SO2 for each EU 14 & 15.	Periodic visual inspections to evaluate compliance with opacity standards (intermittent). If fuel oil or waste oil is combusted, Method 9 reading is performed annually (intermittent). Monitoring and maintaining records on the amount of each type of fuel combusted in each unit on a monthly basis (intermittent). Monitoring and maintaining records of the heating value and sulfir content of each type of fuel and waste oil combusted (intermittent). Performing calculations and maintaining records of the actual emissions of particulate, sulfur dioxide, and nitrigen oxide on a monthly basis and on a twelve-month rolling sum (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide PM	The total source-wide particulate matter (PM) shall not exceed 245 tons in any consecutive twelve month period	44.08 tons/consecutive 12 month period	Calculating source-wide particulate matter(PM) emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide SO2	The total source-wide sulfur dioxide emissions shall not exceed 245 tons in any consecutive twelve month period.	0.22 tons/consecutive 12 month period	Calculating source-wide sulfur dioxide emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide Nox	The total source-wide nitrogen oxides emissions shall not exceed 245 tons in any consecutive twelve month period.	104.5 tons/consecutive 12 month period	Calculating source-wide nitrogen oxide emissions for consecutive twelve month periods (intermittent).

Excerpt from 2nd Semiannual Monitoring Report of 2017:

Title V Regulation Data Summary

Month	Emision # 01-005, 006 Grain Processed Tons/hr/mo.	Emision # 03-001 Rotary Dryer Tons/hr/mo.	Emision # 03-002 Other Dryers Tons/hr/mo.	Emision # 03-003 Cyclone Tons/hr/mo.		Emision # 02-001, 5 Ferm Distill pg	Emision # 03-005 Feed Shipped lbs.	Emision # 05-001 Barrel Fill/Age bamil/2017	Emision # 7 Bottling Process pg/2017	Emision # 09, 14, & 15 Monthly (3) Gas Boilers Heat Value mmBtu/10^3 ga	Sulfur lb/mmBtu	Alcohol Gallons	N. Gas MCF
Jul-17	12.20	0.98	1.96	2.94		407,215	0	564,982	11,811,254	-	-	0	14,765
Aug-17	11.26	1.06	2.12	3.18		1,425,259	3,439,200	564,982	11,811,254	-	-	9,150	72,413
Sep-17	11.93	1.24	2.48	3.72		1,201,032	3,035,500	564,982	11,811,254	-	-	3,810	62,157
Oct-17	12.30	1.11	2.22	3.33		1,322,817	3,512,660	564,982	11,811,254	-	-	600	68,039
Nov-17	12.57	1.16	2.32	3.48		1,317,445	3,223,300	564,982	11,811,254	-	-	1,900	70,488
Dec-17	12.23	1.22	2.44	3.66		1,282,343	3,354,340	564,982	11,811,254	-	-	3,950	73,105
						6,956,112	8,283 tons					19,410	

NOTES: 1. No waste oil, #4 fuel oil or coal was burned in the boilers. Waste Alcohol burner was used to mix approx 19,410 gallons of alcohol with NG at minimal fire.
2. EP 10 (09-003) & EP 9 (09-002) was not used at any time during this reporting period

OPACITY DATA

Month	Emission # 01-005, 006 Grain Processed Opacity %	Emision # 03-001 Rotary Dryer Opacity %	Emision # 03-002 Other Dryers Opacity %	Emision # 03-003 Cyclone Opacity %	Emision # 09-001 #9 Boiler Opacity %	Emision # 14-001 #10 Boiler Opacity %	Emision # 15-001 #11 Boiler Opacity %
Jan-17	<5%	<5%	<5%	<5%	<20%	0%	0%
Feb-17	<5%	<5%	<5%	<5%	<20%	0%	0%
Mar-17	<5%	<5%	<5%	<5%	<20%	0%	0%
Apr-17	<5%	<5%	<5%	<5%	<20%	0%	0%
May-17	<5%	<5%	<5%	<5%	<20%	0%	0%
Jun-17	<5%	<5%	<5%	<5%	<20%	0%	0%

NOTES:

BY _____ DATE 1-26-18
Authorized Signature

Harlen Wheatley
Typed or Printed Name

Master Distiller
Title of Signatory

Section D

To ensure **non-applicability** of Regulation 401 KAR 51:017 the following were met:

A.

Emission Units	P.M. Limit (tons/yr)	P.M. Cumulative 12 month (tons/yr)
all	245	44.08

B.

Emission Units	SO2 Limit (tons/yr)	SO2 Cumulative 12 month (tons/yr)
all	245	0.22

C.

Emission Units	NOx Limit (tons/yr)	Nox Cumulative 12 month (tons/yr)
all	245	104.5

Excerpt from CY2013 ACC, where reported NO_X emissions of 69.5 tpy. PM, SO_2, & NO_X were less than 250 tpy. SAMR had the same information. However, KyEIS reported NOx emissions of 80.2 tpy for NO_X.

DEP7007CC continued

ID #

8) IDENTIFICATION OF EMISSIONS UNITS

8a)(1) Emission Units in Compliance. The following emission units are in compliance with applicable requirements such as emission standards, emission control requirements, emission testing, court requirements, work practices, or enhanced monitoring, based on the compliance methods specified below and will continue to comply.

If additional space is needed, attach and label as exhibit DEP700CC 8a)(1)

Emission Point ID#	Emission Unit ID#	Permit Condition or Applicable Regulation	Emission Unit Description	Permit Limit	Actual Emissions	Method used for Determining Compliance
11	(12-001)	N/A	Wastewater Treatment Process	N/A	n/a	N/A
12	(13-001)	401 KAR 63:010	Cooling Tower	N/A	n/a	Taking the 'reasonable precautions' listed in 401 KAR 63:010, Section 3(1)(a) through (f), where applicable (intermittent) Periodic visual inspections to evaluate compliance with opacity standards (intermittent).
14; 15	(14-001) (14-002)	401 KAR 59:015; 401 KAR 60:005	Two Indirect Heat Exchangers	Maximum of 3,627,000 gal of secondary fuel consumption per consecutive 12 month period; 0.10 lb/mmBtu PM per 3-hour average for any fuel used; 0.8 lb lb/mmBtu SO2 per 24-hour average for any fuel used; Less than 20% Opacity based on a 6-minute average; Less than 27% Opacity for one 6-minute period per hour	NG: 0.007 lb/mmBtu PM; 0.0006 lb/mmBtu SO2 for each EU 14 & 15.	Periodic visual inspections to evaluate compliance with opacity standards (intermittent). If fuel oil or waste oil is combusted, Method 9 reading is performed annually (intermittent). Monitoring and maintaining records on the amount of each type of fuel combusted in each unit on a monthly basis (intermittent). Monitoring and maintaining records of the heating value and sulfr content of each type of fuel and waste oil combusted (intermittent). Performing calculations and maintaining records of the actual emissions of particulate, sulfur dioxide, and nitrogen oxide on a monthly basis and on a twelve-month rolling sum (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide PM	The total source-wide particulate matter (PM) shall not exceed 245 tons in any consecutive twelve month period	25.18 tons/consecutive 12 month period	Calculating source-wide particulate matter(PM) emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide SO2	The total source-wide sulfur dioxide emissions shall not exceed 245 tons in any consecutive twelve month period.	0.15 tons/consecutive 12 month period	Calculating source-wide sulfur dioxide emissions for consecutive twelve month periods (intermittent).
N/A	N/A	401 KAR 51:017	Source-Wide Nox	The total source-wide nitrogen oxides emissions shall not exceed 245 tons in any consecutive twelve month period.	69.47 tons/consecutive 12 month period	Calculating source-wide nitrogen oxide emissions for consecutive twelve month periods (intermittent).

Excerpt from 2nd Semiannual Monitoring Report of 2013:

Title V Regulation Data Summary

Month	Emission # 01-005, 006 Grain Processed Tons/hr/mo.	Emision # 03-001 Rotary Dryer Tons/hr/mo.	Emision # 03-002 Other Dryers Tons/hr/mo.	Emision # 03-003 Cyclone Tons/hr/mo.	Emision # 02-001, 5 Ferm Distill pg	Emision # 03-005 Feed Shipped lbs.	Emision # 05-001 Barrel Fill/Age barrel/2013	Emision # 7 Bottling Process pg/2013	Emision # 09, 14, & 15 Monthly (3) Gas Boilers Heat Value mmBtu/1000 gal	Sulfur lb/mmBtu	Alcohol Gallons	N. Gas MCF
Jan-13	11.72	1.07	2.15	3.22	656,788	1,652,920	316,953	13,163,842	-	-	0	45,147
Feb-13	11.68	0.94	1.88	2.82	612,253	1,632,726	316,953	13,163,842	-	-	1,250	49,499
Mar-13	12.09	0.95	1.89	2.84	576,249	1,484,400	316,953	13,163,842	-	-	1,250	45,573
Apr-13	11.53	1.08	2.16	3.24	599,531	1,658,020	316,953	13,163,842	-	-	0	40,306
May-13	11.31	1.11	2.22	3.33	625,803	1,651,300	316,953	13,163,842	-	-	0	39,339
Jun-13	10.62	1.23	2.45	3.68	547,897	2,014,760	316,953	13,163,842	-	-	0	32,520
Jul-13	11.3	1.04	2.07	3.11	316,835	577,100	316,953	13,163,842	-	-	100	20,729
Aug-13	11.2	0.99	1.98	2.97	669,012	1,670,900	316,953	13,163,842	-	-	120	38,405
Sep-13	11.5	1.15	2.29	3.44	633,222	1,569,480	316,953	13,163,842	-	-	70	34,357
Oct-13	11.7	1.18	2.36	3.54	734,517	2,022,780	316,953	13,163,842	-	-	0	42,091
Nov-13	11.5	1.01	2.03	3.04	591,135	1,583,820	316,953	13,163,842	-	-	0	44,210
Dec-13	11.6	1.07	2.13	3.20	986,873	2,512,780	316,953	13,163,842	-	-	2,500	66,712

NOTES: 1. No waste oil, #4 fuel oil or coal was burned in the boilers. Waste Alcohol burner was used to mix approx 5,290 gallons of alcohol with NG at minimal fire.
2. EP 10 (09-003) & EP 9 (09-002) was not used at any time during this reporting period

OPACITY DATA

Month	Emission # 01-005, 006 Grain Processed Opacity %	Emision # 03-001 Rotary Dryer Opacity %	Emision # 03-002 Other Dryers Opacity %	Emision # 03-003 Cyclone Opacity %	Emision # 09-001 #9 Boiler Opacity %	Emision # 14-001 #10 Boiler Opacity %	Emision # 15-001 #11 Boiler Opacity %
Jan-13	<5%	<5%	<5%	<5%	<20%	0%	0%
Feb-13	<5%	<5%	<5%	<5%	<20%	0%	0%
Mar-13	<5%	<5%	<5%	<5%	<20%	0%	0%
Apr-13	<5%	<5%	<5%	<5%	<20%	0%	0%
May-13	<5%	<5%	<5%	<5%	<20%	0%	0%
Jun-13	<5%	<5%	<5%	<5%	<20%	0%	0%

NOTES:

BY _____ DATE 1-22-14
Authorized Signature

Harlen Wheatley
Typed or Printed Name

Master Distiller
Title of Signatory

Section D

To ensure **non-applicability** of Regulation 401 KAR 51:017 the following were m

A.

Emission Units	P.M. Limit (tons/yr)	P.M. Cumulative 12 month (tons/yr)
all	245	25.18

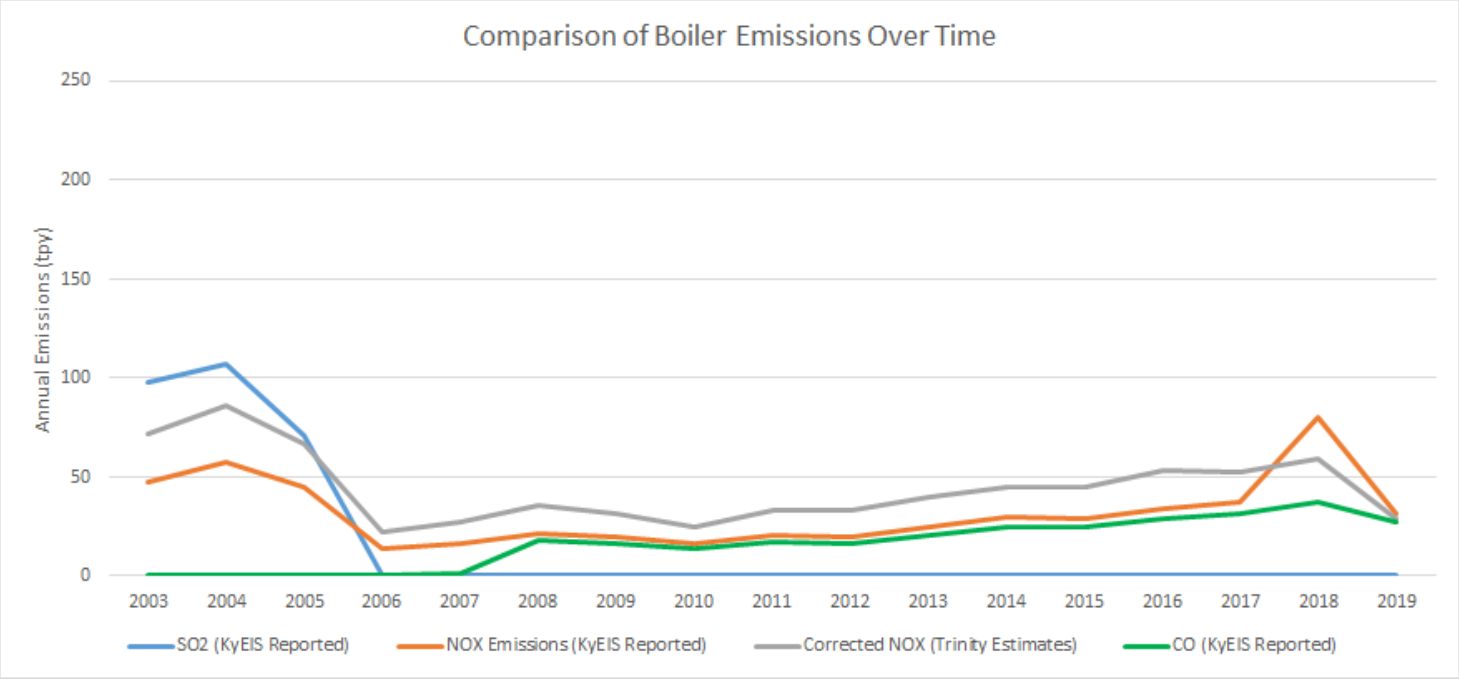
B.

Emission Units	SO2 Limit (tons/yr)	SO2 Cumulative 12 month (tons/yr)
all	245	0.15

C.

Emission Units	NOx Limit (tons/yr)	Nox Cumulative 12 month (tons/yr)
all	245	69.5
		4GCV.09

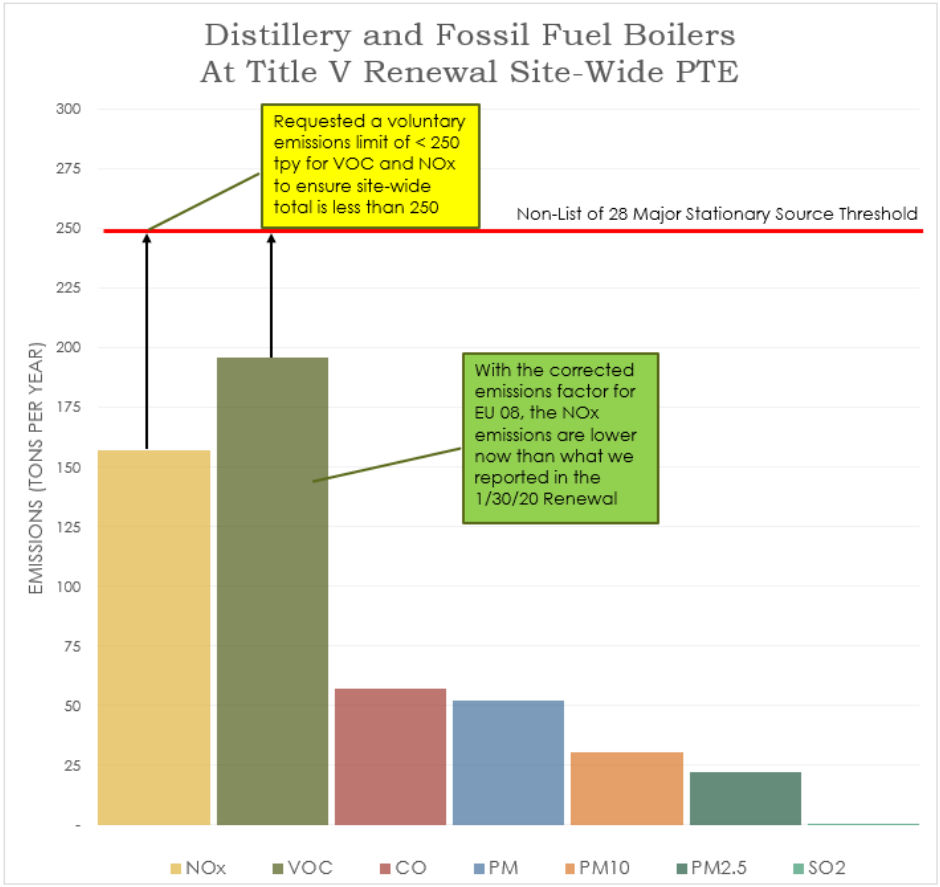
Attachment D – KyEIS Emissions Over Time

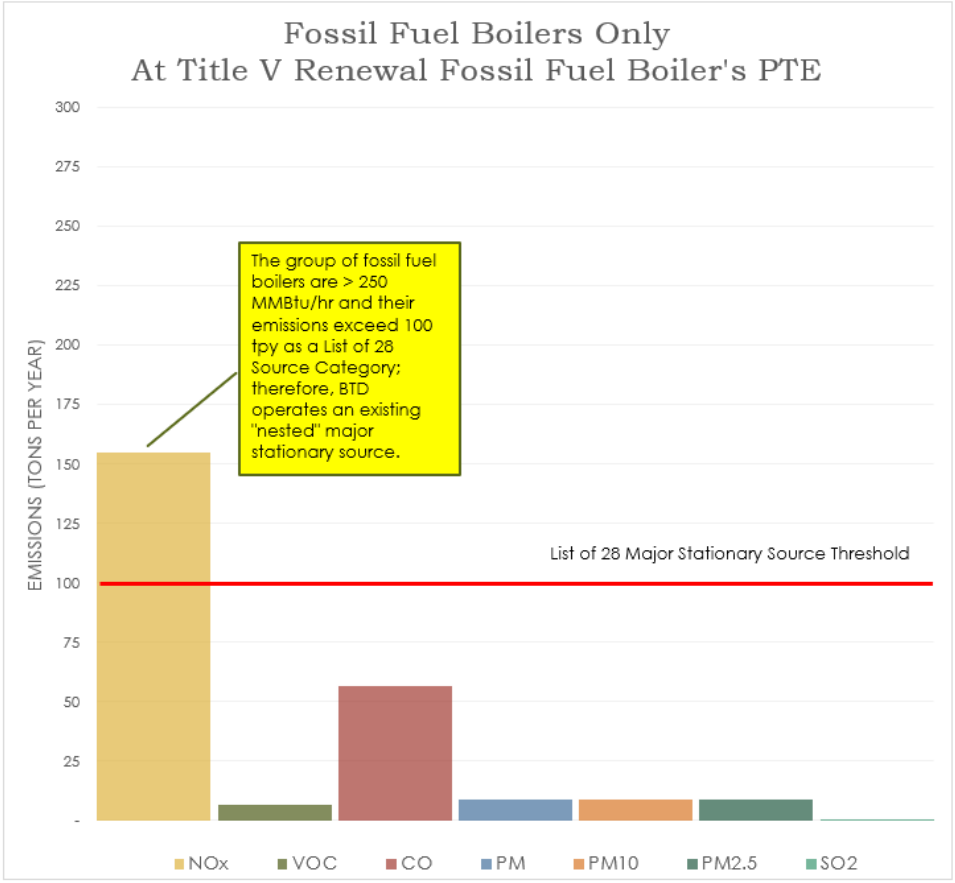


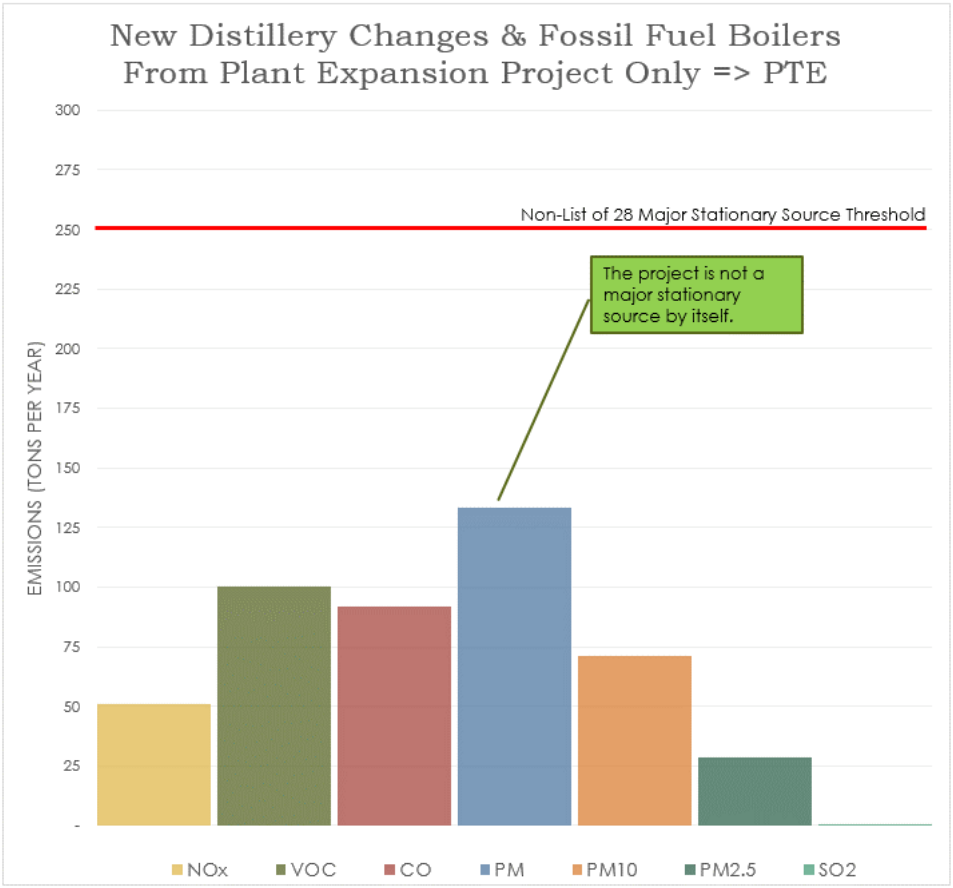
Attachment E – Calculations of Pre-Project NO_X PTE

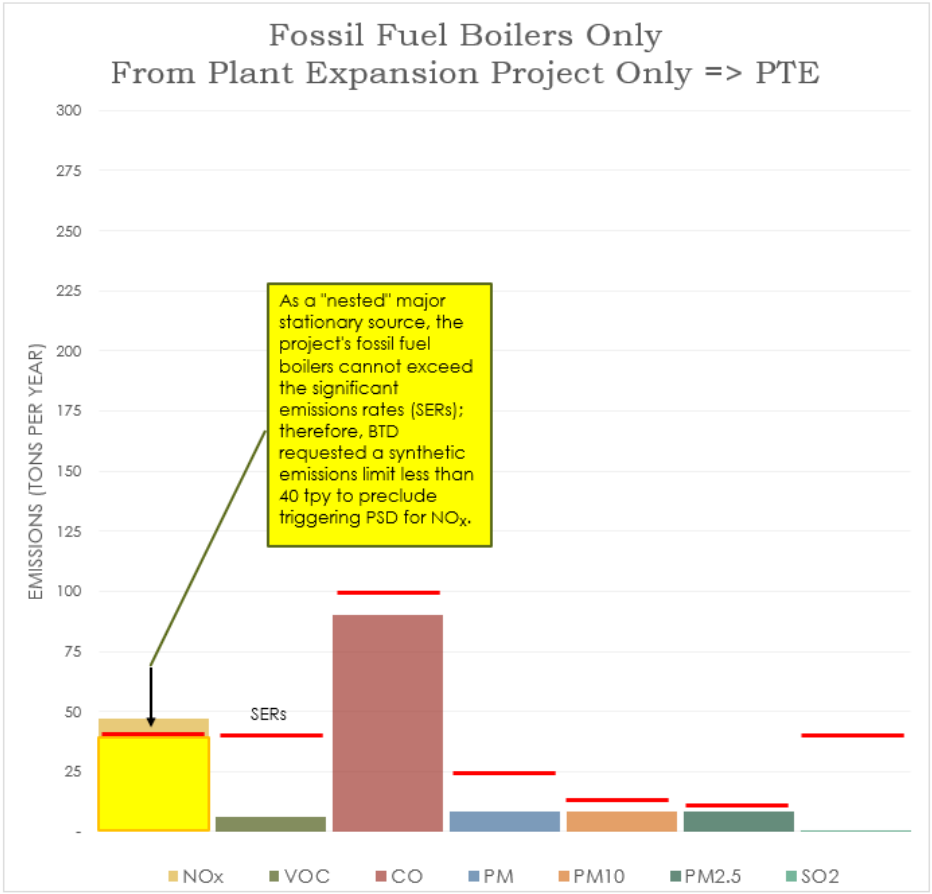
EU 08 = 80% * 176 MMBtu/hr / 1020 Btu/scf * 185 lbs NOx/MMscf * 8760/2000 = 112 tpy
EU 10 = 0 tpy because it was removed from service
EU 14 = 60.5 MMBtu/hr / 1020 Btu/scf * 100 lbs NOx/MMscf * 8760/2000 = 26 tpy
EU 15 NG = 60.5 MMBtu/hr / 1020 Btu/scf * 50 lbs NOx/MMscf * 8760/2000 = 13 tpy {Included Low NOx Burner in 2008}
EU 20 = 9.8 MMBtu/hr / 1020 Btu/scf * 100 lbs NOx/MMscf * 8760/2000 = 4.2 tpy {Unreported units}
Sum = 154.7 tpy

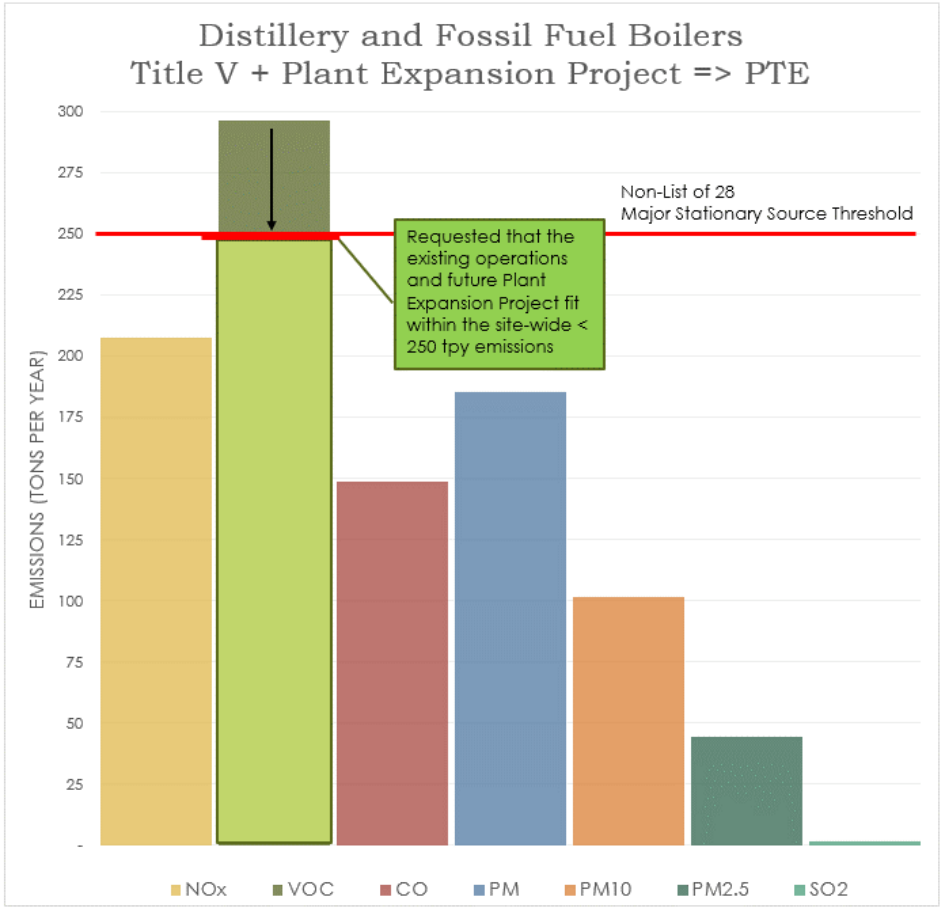
Attachment F – Graphical Representation of Emissions Compared to Thresholds

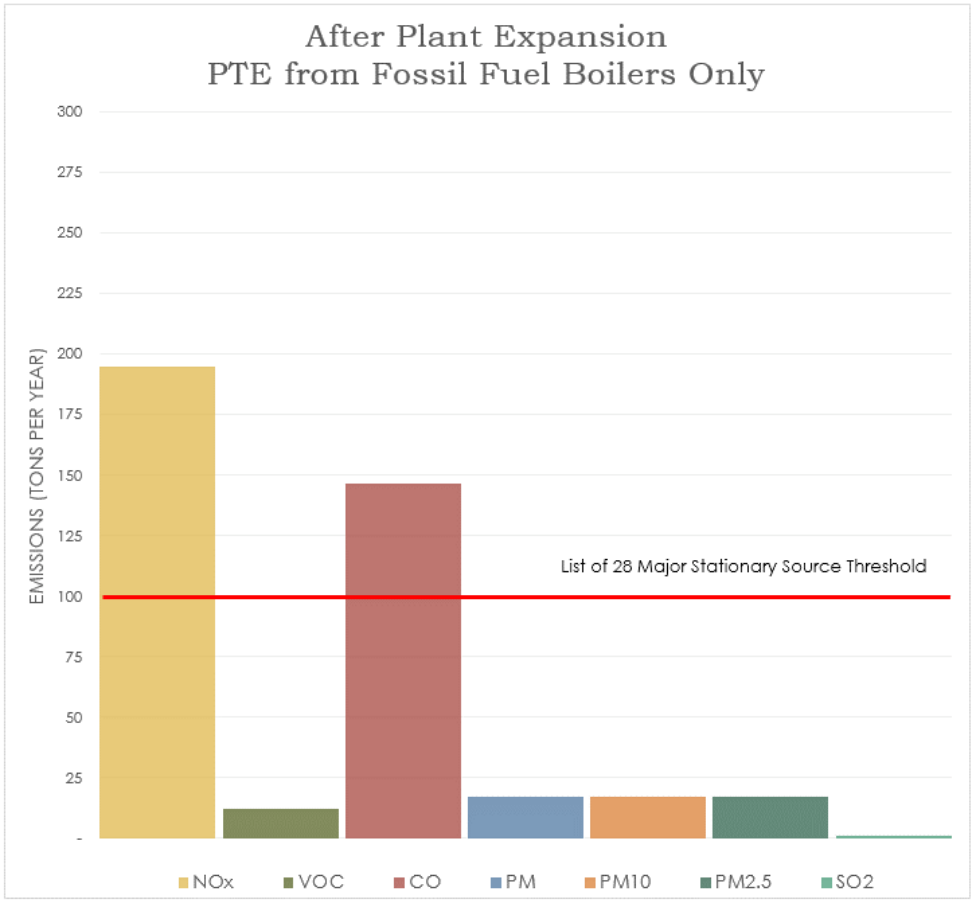

Distillery and Fossil Fuel Boilers
At Title V Renewal Site-Wide PTE
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
Requested a voluntary emissions limit of < 250 tpy for VOC and NOx to ensure site-wide total is less than 250
Non-List of 28 Major Stationary Source Threshold
With the corrected emissions factor for EU 08, the NOx emissions are lower now than what we reported in the 1/30/20 Renewal
NOx
VOC
CO
PM
PM10
PM2.5
SO2


Fossil Fuel Boilers Only
At Title V Renewal Fossil Fuel Boiler's PTE
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
The group of fossil fuel boilers are > 250 MMBtu/hr and their emissions exceed 100 tpy as a List of 28 Source Category; therefore, BTD operates an existing "nested" major stationary source.
List of 28 Major Stationary Source Threshold
NOx
VOC
CO
PM
PM10
PM2.5
SO2


New Distillery Changes & Fossil Fuel Boilers
From Plant Expansion Project Only => PTE
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
Non-List of 28 Major Stationary Source Threshold
The project is not a major stationary source by itself.
NOx
VOC
CO
PM
PM10
PM2.5
SO2


Fossil Fuel Boilers Only
From Plant Expansion Project Only => PTE
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
As a "nested" major stationary source, the project's fossil fuel boilers cannot exceed the significant emissions rates (SERs); therefore, BTD requested a synthetic emissions limit less than 40 tpy to preclude triggering PSD for NOx.
SERs
NOx
VOC
CO
PM
PM10
PM2.5
SO2


Distillery and Fossil Fuel Boilers
Title V + Plant Expansion Project => PTE
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
Non-List of 28
Major Stationary Source Threshold
Requested that the existing operations and future Plant Expansion Project fit within the site-wide < 250 tpy emissions
NOx
VOC
CO
PM
PM10
PM2.5
SO2


After Plant Expansion
PTE from Fossil Fuel Boilers Only
EMISSIONS (TONS PER YEAR)
300
275
250
225
200
175
150
125
100
75
50
25
-
List of 28 Major Stationary Source Threshold
NOx
VOC
CO
PM
PM10
PM2.5
SO2

AIR DISPERSION MODELING ANALYSIS AND RISK ASSESSMENT

Buffalo Trace Distillery – Frankfort, KY

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July 16, 2020

Trinity Consultants

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1. MODELING ANALYSIS AND RISK ASSESSMENT

1.1 Introduction

Buffalo Trace Distillery, Inc. (referred to herein as "BTD") currently owns and operates a distillery in Frankfort, Kentucky (Frankfort distillery). BTD submitted a significant permit revision application for the Frankfort distillery expansion project on January 30, 2020. In response to this application, BTD received a request from the Kentucky Division for Air Quality (the Division) on June 8, 2020 to provide additional air dispersion modeling inputs because the Division was evaluating potential impacts from acetaldehyde emissions. BTD wanted to ensure that the Division's modeling demonstration was well characterized with the most up-to-date and representative information available. As such, BTD elected to perform an independent air dispersion modeling analysis and risk assessment for acetaldehyde air emissions from the Frankfort distillery. This modeling report presents the results of such dispersion modeling and documents the methodologies and data sources used in the air dispersion modeling analysis. The results of this modeling analysis demonstrate that potential emissions of acetaldehyde from the Frankfort distillery will not result in impacts that would adversely affect human health and welfare, thereby demonstrating compliance with 401 KAR 63:020.

1.2 Kentucky Air Toxics Regulation Applicability

The Kentucky Division for Air Quality (Division) regulates potentially hazardous matter or toxic substances (commonly referred to as toxic air pollutants or "TAP") through 401 KAR 63:020. This regulation applies to each affected facility that emits or may emit TAPs. The Division can require that dispersion modeling or other analyses be completed by facilities when constructing or modifying equipment when increases in TAP emissions, as defined in 401 KAR 63:020 Section 2 (2), are deemed to be significant. This is done so that there is a documented basis for affirming that a facility does not cause an adverse impact. Pursuant to 401 KAR 63:020, Section 1, the requirements of this rule are applicable only to the extent that such emissions are not elsewhere subject to the provisions of the Kentucky Administrative Regulations.

Acetaldehyde from the BTD Frankfort operations are regulated under 401 KAR 63:020. Thus, under the generally applicable requirements of 401 KAR 63:020, BTD must ensure that acetaldehyde is not emitted in such quantities or duration as to be harmful to the health and welfare of the public and environment.

The specific requirements of 401 KAR 63:020 that are imposed for a given permit action are generally determined on a case-by-case basis by the Division. These requirements are based on several factors, such as TAP emission rates, emissions source characteristics, and the proximity of major emission points to sensitive receptors. BTD has chosen to conduct a refined air dispersion modeling analysis and risk assessment for acetaldehyde emissions to demonstrate that ambient concentrations due to emissions from the facility are acceptable.

1.3 Air Toxics Human Health Risk Assessment

Conceptually, a human health risk assessment compares dose-response values for adverse health effects with the results of an air dispersion model that estimates inhalation exposures of human populations from predicted ambient concentrations of potentially hazardous air contaminants. Chronic (i.e., long-term) exposures to a specific pollutant have the potential to lead to both carcinogenic and noncarcinogenic effects, depending on the constituent chemical.

There are no federal National Ambient Air Quality Standards (NAAQS) or Kentucky Ambient Air Quality Standards (KYAAQS) for TAPs. For 401 KAR 63:020, KDAQ has historically deferred to using the chemical-specific data found in the EPA Regional Screening Level (RSL) Summary Table, if available, as the benchmarks for what constitutes acceptable thresholds at residential receptors for modeling analyses conducted to demonstrate compliance with 401 KAR 63:020.[1] Generic regional screening level tables are readily available on EPA's website for the mediums of potential exposure (i.e. air, soil, and water) for each TAP regulated under 401 KAR 63:020. To characterize possible chronic risks from a single compound using dispersion modeling results, the ratio of the maximum modeled 5-year annual average concentration to the RSL threshold is quantified. This ratio may be referred to as the carcinogenic risk ratio or as the "hazard quotient" (HQ) in the case of noncarcinogenic risks. If an individual pollutant's carcinogenic risk is less than one in a million persons and the HQ is less than 1.0, adverse health effects are considered unlikely, even over a lifetime of exposure. The RSL thresholds used for this air toxics assessment are discussed in the following section.

1.4 Chronic Risk Assessment Methodology

The chronic risk assessment methodology takes human exposure frequency into account when determining risk thresholds. Modeled concentrations were compared against two risk thresholds, namely – the chronic risk threshold for carcinogenic impacts and the chronic risk threshold for noncarcinogenic impacts.

1.4.1 Chronic Risk Thresholds for Carcinogenic Impacts

The chronic carcinogenic risk must be less than 1.0 in a million to demonstrate that no adverse health effects will result from chronic exposure to a TAP. The chronic carcinogenic target risk for each TAP can be calculated using the following equation:

$$CR = EC/SL_{res-air-c}$$

Where:
- CR = Chronic carcinogenic risk
- EC = 5-year average modeled exposure concentration ($\mu g/m^3$)
- $SL_{res\text{-}air\text{-}c}$ = Carcinogenic screening level ($\mu g/m^3$)(based on a risk of 1 in a million but expressed as 1.0 in the RELs where the basis of one million is built into the acceptable levels)

The carcinogenic screening level is derived from an inhalation unit risk (IUR) value. In the RSL table, the inhalation unit risk (IUR) values for each pollutant are adjusted using the following equation to reflect the proper exposure concentration to which an individual at a residence can be subject without suffering from adverse health effects.

$$SL_{res-air-c} = \frac{TCR * AT * LT}{EF * ED * ET * IUR}$$

Where:
- $SL_{res-air-c}$ = Screening Level ($\mu g/m^3$)
- TCR = Target Carcinogenic Risk (1.0×10^{-6} for 1 in a million risk)
- AT = Averaging Time (days/year)
- LT = Lifetime (years)
- EF = Exposure Frequency (days/year)

[1] EPA, Regional Screening Levels, Resident Air Ambient Air Table, May 2020, available at https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

ED = Exposure Duration (years)
ET = Exposure Time (hours/24 hours)
IUR = Inhalation Unit Risk (1/µg/m^3)

Substituting the variables recommended by EPA for an individual in residential air, the carcinogenic screening level is adjusted to reflect the appropriate inhalation unit risk concentration threshold using the following equation:[2]

$$SL_{res-air-c}(\mu g/m^3) = \frac{TCR * \frac{365\ days}{year} * 70\ years}{\frac{350\ days}{year} * 26\ years * \frac{24\ hours}{days} * \frac{1\ day}{24\ hours} * IUR\left(\frac{\mu g}{m^3}\right)^{-1}}$$

In the equation above, the acceptable TCR is set equal to 1.0×10^{-6} to represent the target cancer risk of one in a million and the remaining parameters represent a resident who has the ability to be present at their home for up to 24 hours per day and 350 days out of the year for 26 years.

1.4.2 Chronic Risk Thresholds for Noncarcinogenic Impacts

The chronic noncarcinogenic risk must be less than a value of 1.0 in order to demonstrate that no adverse health effects will result from chronic exposure to the TAPs. The chronic noncarcinogenic hazard quotient for each TAP can be calculated using the following equation:

$$HQ = EC/SL_{res-air-nc}$$

Where:
HQ = Chronic noncarcinogenic hazard quotient
EC = 5-year average modeled exposure concentration
SL$_{res-air-nc}$ = Noncarcinogenic screening level

In the RSL table, the baseline reference concentration (RfC) values for each pollutant are adjusted to reflect the proper exposure concentration that an individual at a residence can be subject to without suffering from adverse health effects. The RfC values are adjusted from their original baseline using the following equation:

$$SL_{res-air-nc} = \frac{THQ * AT * ED * \frac{1{,}000\ \mu g}{mg}}{EF * ED * ET * \frac{1}{RfC\ \frac{mg}{m^3}}}$$

Where:
$SL_{res-air-nc}$ = Screening Level (µg/m^3)
THQ = Target Hazard Quotient (1.0)
AT = Averaging Time (days/year)
EF = Exposure Frequency (days/year)
ED = Exposure Duration (years)
ET = Exposure Time (hours/24 hours)
RfC = Reference Concentration (µg/m^3)

[2] Equation from Section 4.9.2 Carcinogenic Resident Air of the Regional Screening Table User's Guide (May 2020), https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide

Substituting the variables recommended by EPA for an individual in residential air, the noncarcinogenic screening level is adjusted to reflect the appropriate inhalation unit risk concentration threshold using the following equation:[3]

$$SL_{res-air-nc}(\mu g/m^3) = \frac{THQ * \frac{365\ days}{year} * 26\ years * \frac{1{,}000\ \mu g}{mg}}{\frac{350\ days}{year} * 26\ years * \frac{24\ hours}{days} * \frac{1\ day}{24\ hours} * \frac{1}{RfC\ \left(\frac{mg}{m^3}\right)}}$$

In the equation above, the acceptable THQ is set equal to "one" to represent the maximum HQ that can occur with no adverse health effects and the remaining parameters represent a resident who has the ability to be present at their home for up to 24 hours per day and 350 days out of the year for 26 years.

[3] Equation from Section 4.9.1 Noncarcinogenic Resident Air of the Regional Screening Table User's Guide (May 2020), https://www.epa.gov/risk/regional-screening-levels-rsls-users-guide

2. MODELING EMISSIONS INVENTORY AND SOURCE CHARACTERIZATION

2.1 Facility Location and Surrounding Area

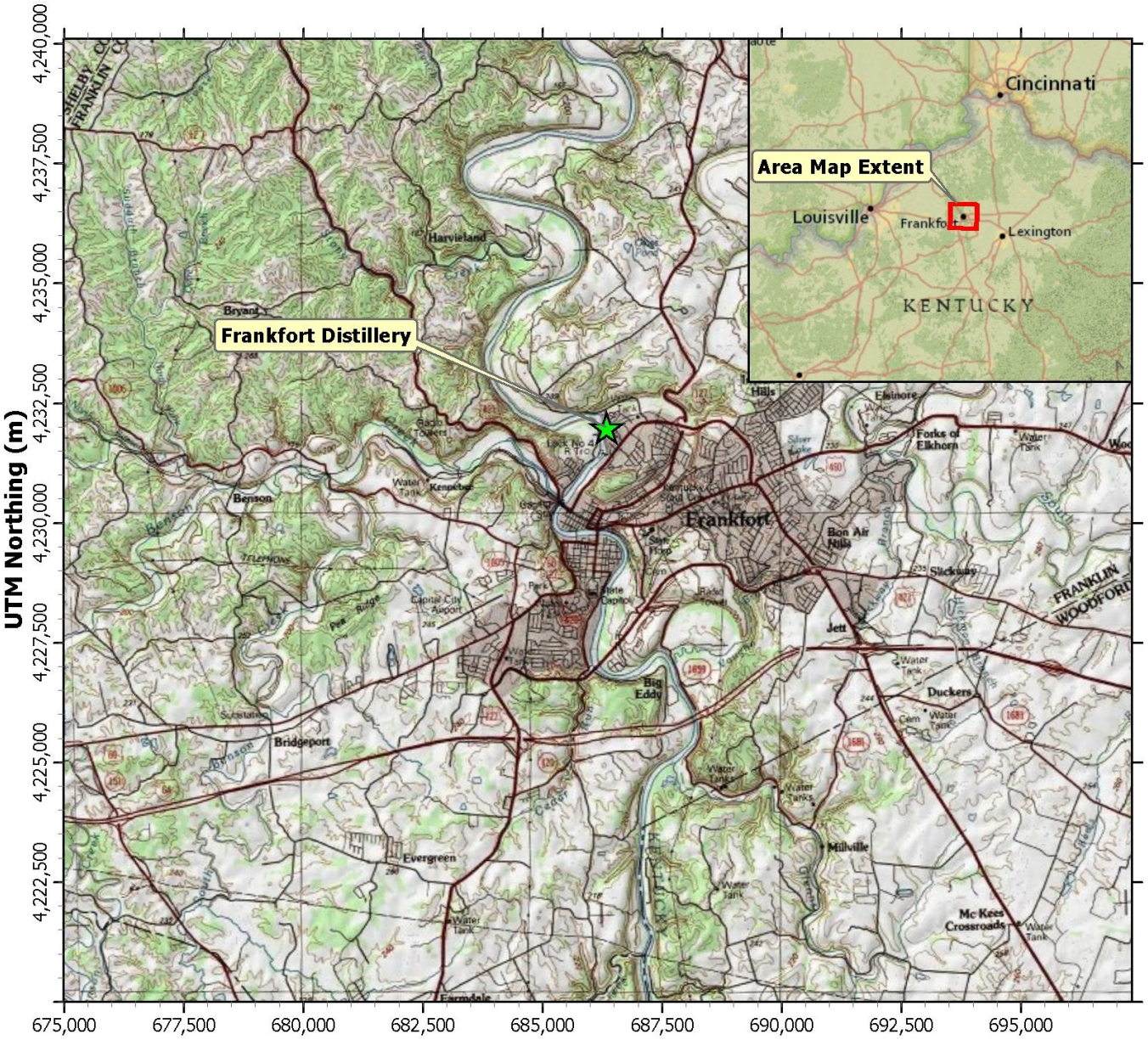
BTD's Frankfort distillery is located adjacent to the Kentucky River about one mile north of the city center of Frankfort, KY. An area map and aerial photograph depicting the facility and surrounding area are provided in Figures 2-1 and 2-2, respectively. These maps show the facility relative to predominant geographical features such as railways, roads, and rivers, as well as significant landmarks.

Adjacent land to the north of the facility is rural land consisting of mostly wooded areas and some cropland. Immediately south of the facility is mixed commercial residential areas. The distilling operations conducted at the BTD facility occurs on a 106-acre contiguous plot of land. An additional 242-acre parcel of land owned and controlled by BTD is located north of the main facility, which is generally referred to as "The Farm". The entire property area is outlined in green in Figure 2-2. Figure 2-3 shows the locations of the acetaldehyde sources considered in the dispersion modeling analysis.

2.2 UTM Coordinate System

The location of emission sources, structures, and receptors used in the modeling analysis are represented in the Universal Transverse Mercator (UTM) coordinate system. The UTM grid divides the world into coordinates that are measured in north meters (measured from the equator) and east meters (measured from the central meridian of a particular zone, which is set at 500 kilometers [km]). The datum is based on North American Datum 1983 (NAD83). UTM coordinates for this analysis are located in UTM Zone 16. The central location of the Frankfort distillery is approximately 686,380 meters East and 4,232,000 meters North in Zone 16.

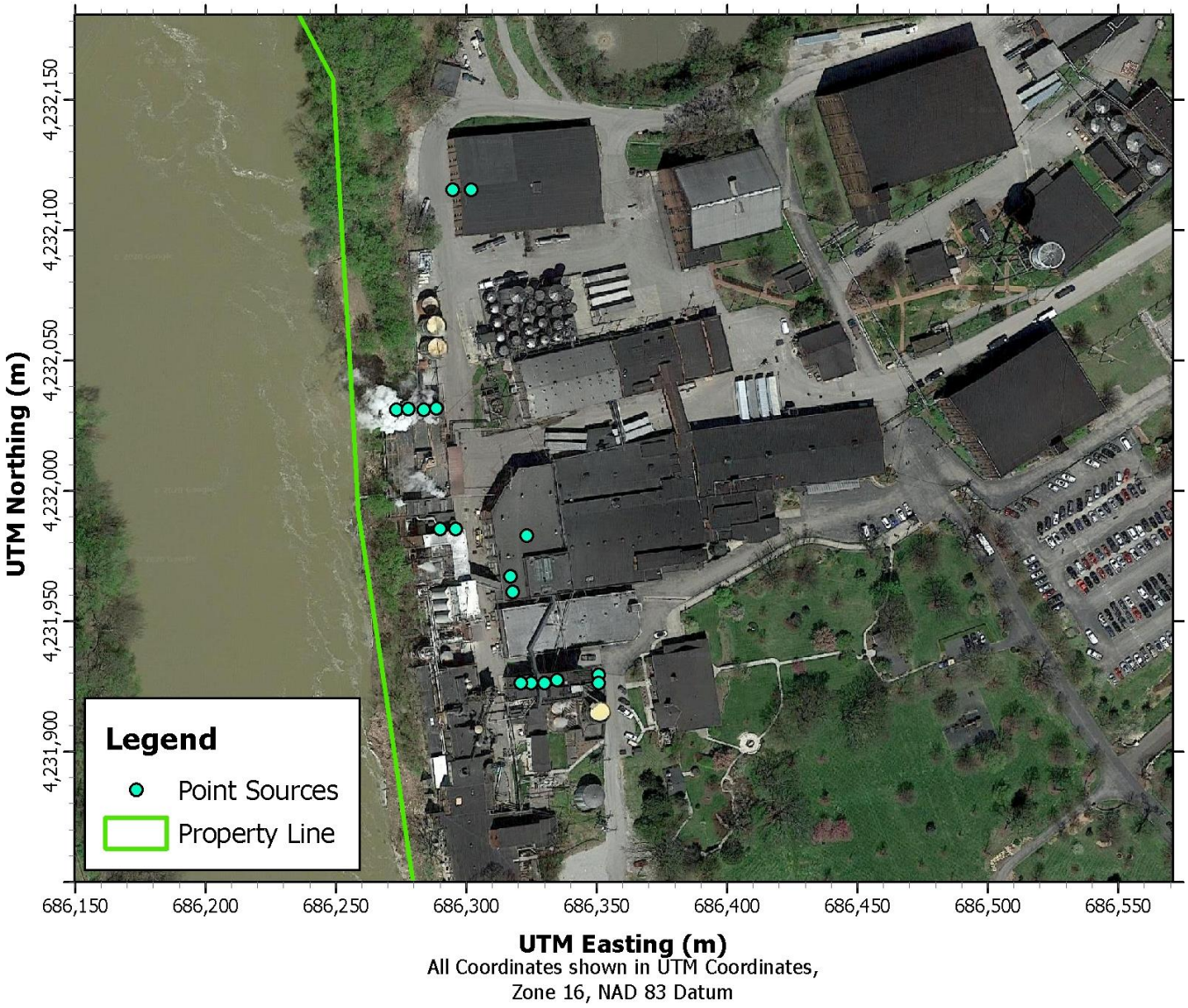
Figure 2-1. Area Map Showing Location of the Frankfort Distillery



All Coordinates shown in UTM Coordinates, Zone 16, NAD 83 Datum

Figure 2-2. Aerial Depiction of Frankfort Distillery and Surrounding Area

Figure 2-3. Identification of Emission Sources Included in BTD Modeling Analysis



2.3 Modeled Emission Rates

Acetaldehyde is emitted from the BTD Frankfort distillery from various operations including the fermentation process, dryhouse operations, and distillation systems. Because each of these processes are captured and released through a stack, each was modeled as a point source to best characterize the emissions release. Table 2-1 provides the point source parameters used in the modeling analysis.

Table 2-1. Point Source Coordinates and Release Parameters

Stack ID	Description	UTM East (m)	UTM North (m)	Elevation[1] (m)	Stack Height (m)	Stack Temperature (K)	Exit Velocity (m/s)	Diameter (m)	Vertical or Capped?[2]
003_1	Fermentation Process	686,323.4	4,231,982.4	154.40	14.02	Ambient	15.24	0.23	V
003_2	Fermentation Process	686,317.0	4,231,967.0	154.45	14.02	Ambient	15.24	0.23	V
003_3	Fermentation Process	686,318.0	4,231,961.0	154.51	14.02	Ambient	15.24	0.23	V
004_1	DDGS Dryhouse #1: Rotary Dryer and Cyclone Separator	686,296.0	4,231,985.0	153.75	12.19	304.82	7.01	2.99	V
004_2	DDGS Dryhouse #1: Rotary Dryer and Cyclone Separator	686,273.3	4,232,030.8	154.00	15.49	422.04	15.24	0.76	C
005_1	Dryhouse #1: Rotary Dryers And Cyclone Separator	686,290.0	4,231,985.0	153.55	12.19	304.82	7.01	2.99	V
005_2	Dryhouse #1: Rotary Dryers And Cyclone Separator	686,278.0	4,232,031.1	154.00	14.38	422.04	15.24	1.20	C
005_3	Dryhouse #1: Rotary Dryers And Cyclone Separator	686,284.0	4,232,030.7	154.00	14.33	422.04	15.24	1.20	C
005_4	Dryhouse #1: Rotary Dryers And Cyclone Separator	686,288.7	4,232,031.2	154.00	14.43	422.04	15.24	1.20	C
032_1	DDGS Dryhouse #2	686,296.0	4,231,985.0	153.75	12.19	304.82	15.24	0.30	V
032_2	DDGS Dryhouse #2	686,302.0	4,232,115.0	152.88	12.19	366.48	15.24	0.59	V
032_3	DDGS Dryhouse #2	686,295.0	4,232,115.0	152.66	12.19	366.48	15.24	0.59	V
032_4	DDGS Dryhouse #2	686,290.0	4,231,985.0	153.55	12.19	304.82	15.24	0.61	V
021_1	No. 1 Bourbon Distillation System	686,330.0	4,231,926.0	154.96	9.14	366.48	7.62	0.15	V
021_2	No. 1 Bourbon Distillation System	686,335.0	4,231,927.0	155.06	9.14	366.48	7.62	0.15	V
022_1	Vodka Distillation System	686,325.0	4,231,926.0	154.86	15.24	366.48	7.62	0.15	V
023_1	Platinum Distillation System	686,321.0	4,231,926.0	154.77	15.24	366.48	7.62	0.15	V
031_1	No. 2 Bourbon Distillation System	686,351.0	4,231,929.0	155.29	15.24	366.48	7.62	0.15	V
031_2	No. 2 Bourbon Distillation System	686,351.0	4,231,926.0	155.35	15.24	366.48	7.62	0.15	V

[1] There is a significant elevation change between the Kentucky River and the base elevation of the Frankfort distillery. As such, AERMAP (v18081) determined much lower elevations for sources located near the river's edge. This was not reflective of the actual base elevations for the sources in this area. Although a specific facility grade level is not available, other source elevations were generally within 153-155 meters of elevation. Therefore, 154 meters of elevation were assumed for sources near the river's edge.

[2] In this column "V" indicates a vertical unobstructed release, while "C" indicates a source with a rain cap or other obstruction to the release of the plume.

3. MODELING METHODOLOGY AND MODEL OPTIONS

This section of the modeling report describes the procedures and data resources used in the acetaldehyde modeling analysis. The air dispersion modeling analysis was conducted in accordance with applicable EPA guidance documents, including the following:

- EPA's *Guideline on Air Quality Models,* 40 CFR Part 51, Appendix W (Published, January 17, 2017), which Kentucky cites by reference in Section 10 of 401 KAR 51:017.[4]
- EPA 's *AERMOD Implementation Guide* (August 2019)[5]
- EPA's *User's Guide for the AMS/EPA Regulatory Model – AERMOD* (August 2019)[6]

Where relevant, recent clarification memoranda issued by the EPA regarding AERMOD updates and guidance offered by the EPA at the regional/state/local modelers meetings are accounted for in the analyses.[7,8] The methods are also consistent with procedures used and accepted in past modeling studies conducted to demonstrate compliance with 401 KAR 63:020 as part of Kentucky air permit applications.

3.1 Dispersion Model Selection

Dispersion models predict pollutant concentrations downwind of a source by simulating the evolution of the pollutant plume over time and space given data inputs that include the quantity of emissions and the initial exhaust release conditions. Following precedent from prior air quality modeling analyses approved by the Division as well as the guidance documents listed above, the most current version of EPA's-recommended AERMOD Model (v19191) was selected for this air dispersion modeling analysis. AERMOD is a refined, steady-state (both emissions and meteorology over a one hour time step), multiple source, dispersion model that was promulgated by EPA in December 2005 as the preferred model to use for industrial sources in this type of air quality analysis.[9] Consistent with procedures outlined in the *Guideline on Air Quality Models*, the AERMOD modeling was performed using the regulatory default options.

3.2 Elevated Terrain

Due to the gently rolling nature of the terrain surrounding the Frankfort distillery and following the general guidance of the *Guideline on Air Quality Models*, terrain elevations were considered in the modeling analysis. The elevations of receptors and sources were included to refine the modeled impacts between the sources at one elevation and receptor locations at other elevations. This was accomplished through the use of the AERMOD terrain preprocessor AERMAP (version 18081), which can be used to extract elevations above mean sea level for each source, building, and receptor. Of note, there is a relatively significant elevation change (between 5-15 meters) between the Kentucky River and the base elevation of the Frankfort

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[4] 40 CFR 51, Appendix W, Guideline on Air Quality Models

[5] EPA, *AERMOD Implementation Guide*, August 2019, available at https://www3.epa.gov/ttn/scram/models/aermod/aermod_implementation_guide.pdf

[6] *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*, EPA-454/B-19-027, EPA, OAQPS, Research Triangle Park, NC, August 2019.

[7] https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[8] https://www.epa.gov/scram/air-modeling-conferences-and-workshops

[9] 40 CFR 51, Appendix W–*Guideline on Air Quality Models*, Appendix A.1– AMS/EPA Regulatory Model (AERMOD).

distillery. As such, AERMAP (v18081) determined much lower elevations (148-153 meters) for sources located near the river's edge. This was not reflective of the actual base elevations for these sources. Although a specific facility grade level is not available, other source elevations were generally within 153-155 meters of elevation. Therefore, 154 meters of elevation were assumed for sources near the river's edge. For all receptors, AERMAP was used to calculate the base elevation and an effective hill height scale that determines the magnitude of each source plume-elevated terrain feature interaction. AERMOD used both the receptor elevation and the hill height scale to calculate the effect of terrain on each source plume for each time step in the model. Terrain elevations for receptors input to the model were interpolated from 1 arc second resolution (approximately 30-meter spacing between data points) National Elevation Dataset (NED) data obtained from the U.S. Geological Survey (USGS).

3.3 Rural/Urban Option Selection in AERMOD

For any dispersion modeling exercise, the "urban" or "rural" determination of the area surrounding the subject source is important in determining the applicable atmospheric boundary layer characteristics that affect a model's calculation of ambient concentrations. Thus, a determination was made of whether the area around the Frankfort distillery was urban or rural.

The first method discussed in Section 5.1 of the *AERMOD Implementation Guide* (also referring therein to Section 7.2.3c of the Guideline on Air Quality Models, Appendix W) is called the "land use" technique because it examines the various land use within 3 km of a source and quantifies the percentage of area in various land use categories. The 3 km area around the Frankfort distillery was reviewed via Google Earth aerial imagery. It is clearly evident that the area is predominately rural with nearly all of the land north of facility categorized as forest or farmland and the vast majority of the area south of facility categorized as low-density residential. Therefore, the urban option in AERMOD was not used for this analysis, whereby the AERMOD Model defaults to the rural option.

3.4 Meteorological Data

To perform the transport and dispersion modeling analysis in AERMOD, the procurement and pre-processing of meteorological data is required. The AERMET program is the companion program to AERMOD that generates both a surface file and vertical profile file of meteorological observations and turbulence parameters pertinent to the use of AERMOD. AERMET meteorological data are refined for a particular analysis based on the choice of micrometeorological parameters that are linked to the land use and land cover (LULC) around the particular meteorological site. By incorporating measured surface and upper air station National Weather Service (NWS) observation data to AERMET, a complete set of model-ready meteorological data is created. A general discussion of the meteorological data used in this dispersion modeling analysis is provided in this section.

3.4.1 Meteorological Data Site Selection Process

Site-specific dispersion models require a sequential hourly record of meteorology representative of the region within which the source is located. For regulatory air quality modeling using AERMOD, the *Guideline on Air Quality Models* requires five years of reliable, quality-assured, and representative NWS meteorological data or at least one year of site-specific meteorological data. The representativeness of a particular observation site is evaluated with respect to four factors:

1. The proximity of the meteorological monitoring site to the area under consideration;
2. The complexity of the terrain;

3. The exposure of the meteorological monitoring site; and
4. The period of time during which data are collected.

Surface observation stations form a relatively dense network across the U.S. and these stations are almost always found at airports and are typically operated by the NWS. There are fewer upper air stations taking vertical soundings of the atmosphere than surface observation locations. The NWS operates virtually all available upper air measurement stations in the U.S.

Although the Division does not have written guidance on the selection of meteorological data, it does provide a suggested meteorological data set for each county in Kentucky.[10] For sources located in Franklin County, the Division suggests the use of the Frankfort Capital City Airport (KFFT) for surface meteorological data in combination with the upper air data station in Wilmington, OH (KILN). Additionally, KDAQ provides pre-processed meteorological data for KFFT/KILN for the years 2014-2018. Given these files do not contain the latest meteorological data available (2015-2019) and a new meteorological data pre-processer (AERSURFACE v20060) has been released since KDAQ's pre-processed data was prepared, BTD elected to process their own meteorological data for the modeling analysis.

3.4.2 Meteorological Data Processing - Surface Data

Unprocessed hourly surface meteorological field data was obtained from the U.S. National Climatic Data Center (NCDC) for the Capital City Airport (KFFT, WBAN No. 53841) for January 1, 2015 through December 31, 2019 in the standard ISHD (integrated surface hourly data) format. This data was supplemented with TD-6405 (so-called "1-minute") wind data for the KFFT station and processed using the latest version of the AERMINUTE pre-processing tool (version 15272). A threshold wind speed of 0.5 m/s was used in AERMET as per U.S. EPA guidance. The "Ice-Free Winds Group" AERMINUTE option was selected due to the fact that a sonic anemometer has been installed at KFFT on October 20, 2005 (not subject to icing conditions).

3.4.3 Meteorological Data Processing - Upper Air Data

In addition to surface meteorological data, AERMET requires the use of data from an upper air sounding to estimate mixing heights. Upper air data from the nearest representative U.S. National Weather Service (NWS) radiosonde equipped station was utilized in the modeling analysis. In this case, upper air data from the Wilmington Air Park Airport (KILN, WBAN No. 13841), which is about 160 km from the Frankfort distillery, was obtained from the National Oceanic and Atmospheric Administration (NOAA) in FSL (Forecast Systems Laboratory) format for the same period of record, namely, January 1, 2015 through December 31, 2019.

3.4.4 Meteorological Data Processing - Land Use Analysis

Parameters derived from analysis of land use data (surface roughness parameter, Bowen ratio, and albedo) are also required by AERMET. In accordance with U.S. EPA guidance, these values were determined using the latest version of the AERSURFACE tool (version 20060). AERSURFACE reads gridded land use, land cover data as provided by the United States Geological Survey (USGS) and associates such data with representative values of the three parameters listed above. Typically, the land use analysis would be based on moisture conditions at the location of the meteorological data, that is, the Capital City Airport (KFFT) which would be the best representation of the data in terms of wet, dry, or average conditions in

[10] KDEP, Air, Modeling and Meteorology webpage, https://eec.ky.gov/Environmental-Protection/Air/Pages/Modeling%20and%20Meteorology.aspx

comparison to the 30-yr averages for the most recent complete calendar years (in this case, 1987 through 2016). The Capital City Airport, however, did not have precipitation data reported in the typical local climatological format and thus, another more complete, nearby set of precipitation data was used, namely that of the Blue Grass Airport (KLEX) located about 30 km to the southeast of Capital City Airport. To make the moisture conditions determination, climatological records of the annual precipitation in each modeled year (2015 through 2019) were compared to the 1990-2019 climatological record.

Rainfall values were compared to the actual rainfall in each season for each year of the 2015-2019 modeling period which determined the average, wet, or dry precipitation option in AERSURFACE. Other specific AERSURFACE settings were used that represent the location of the Capital City Airport meteorological station. These settings include location coordinates, monthly versus seasonal differentiation, aridity, snow cover, and, of course, the surface moisture determination which was just discussed. This determination is used in AERSURFACE to adjust the Bowen ratio estimated by AERSURFACE, which in turn affects the calculation of the daytime mixing heights calculated in AERMET and used in AERMOD.

3.4.5 AERMET Meteorological Data Processing

Meteorological input files for this modeling analysis were developed by using the most current version of the AERMET program (Version 19191) following the procedures described below.

Surface and upper air data QA/QC and processing were completed in Stage 1 with the result that these surface and upper air datasets for 2015-2019 had data availability greater than the minimum required 90 percent completeness over each parameter and calendar quarter in accordance with EPA guidance. The hourly average wind data processed using AERMINUTE were used in Stage 2 of AERMET as the primary source of data with the hourly NWS observations only being used if the AERMINUTE averages were not available. Stage 2 of AERMET was then run to combine the hourly surface data, AERMINUTE processed surface wind data, and twice daily upper air data into a single merged file.

This merged file was then combined with land use-specific surface characteristics (albedo, Bowen ratio, and surface roughness generated using the AERSURFACE program) to create the AERMOD-ready dataset. These surface characteristics were generated as seasonal averages over 12 horizontal 30-degree sectors starting with north and rotating in a clockwise direction. The Stage 3 processor combined the observational data with the surface characteristics to calculate the micrometeorological input parameters required by the AERMOD model. These parameters were output in the .sfc (surface data) and .pfl (upper air) files that compose an AERMOD-ready dataset.

3.5 Receptor Grids

Ground-level concentrations were calculated from the nearest residential locations out to 3 km for the risk assessment modeling analysis as shown in Figure 3-1. Because the EPA Regional Screening Levels apply only to residences, the BTD property parcels and immediately adjacent areas with no residential locations were not modeled as shown in Figure 3-1. The following grid was used to determine the extent of the acetaldehyde impacts: A high resolution grid containing 100-meter spaced receptors extending approximately 3 km from the center of the property with additional "residential" discrete receptor locations for residences near the facility. The selected grid was sufficiently large to ensure that all potential impacts of all TAPs were captured and that the maximum off-site impacts associated with the Frankfort distillery were resolved to the appropriate grid spacing.

Figure 3-1. Nearfield Receptor Grid Utilized In Modeling Anlaysis (3-km Extent)

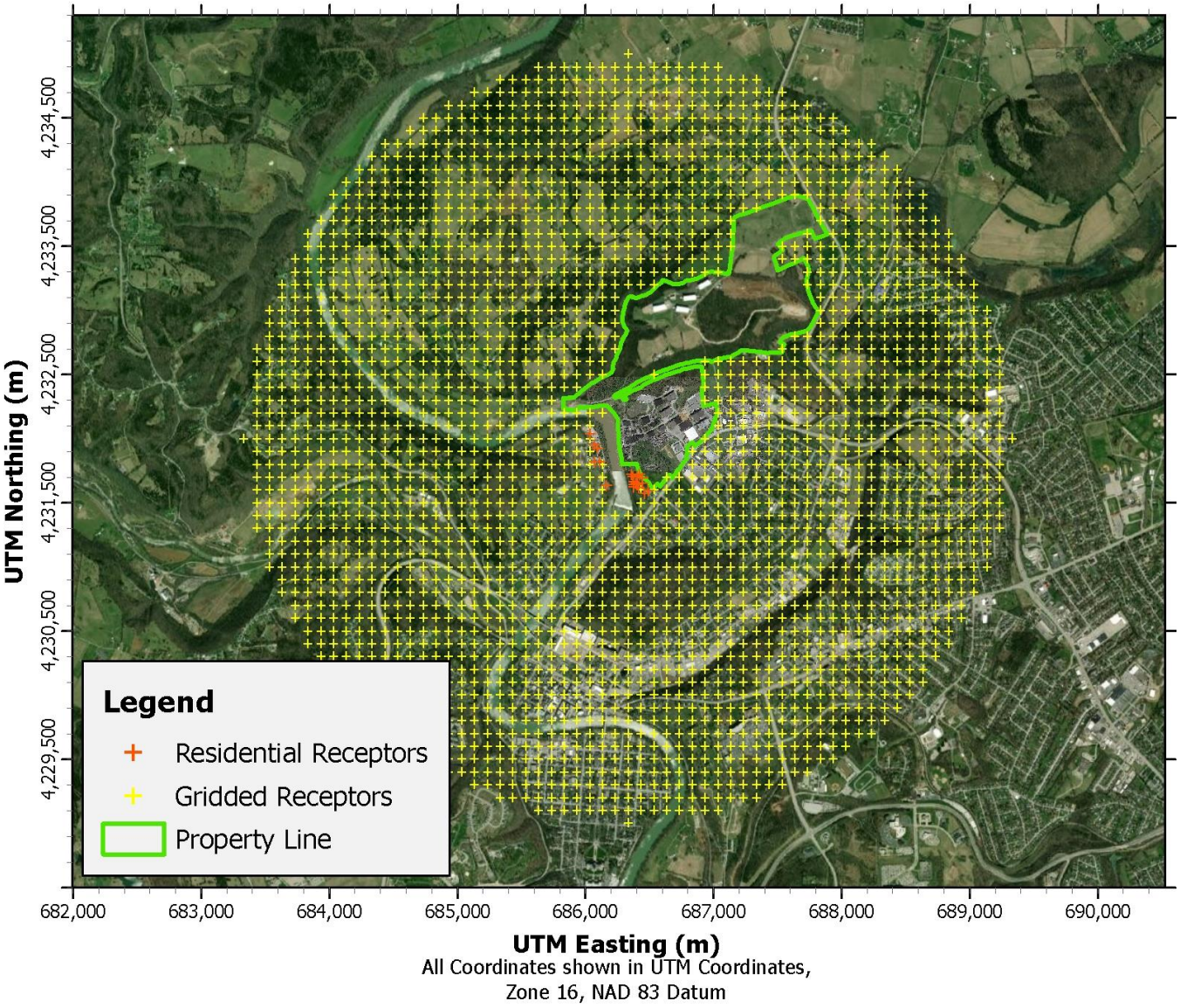


Table 4-1. Maximum Modeled Off-Site Risk

Pollutant	Maximum Off-site Impact[1] (µg/m^3)	Maximum Impact Location	Location	Risk Type	Regional Screening Level[2] (µg/m3)	Under Regional Screening Level?
Acetaldehyde	1.07	686,407.6 m E; 4,231,711.3 m N	South of Facility	Carcinogenic	1.30	Yes
				Noncarcinogenic	9.40	Yes

[1] Acetaldehyde maximum impacts are based on the five year average of modeled impacts for calendar years 2015-2019.
[2] Risk screening levels were obtained from EPA Residential Air Summary Tables (May 2020). (https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables)

As indicated in Table 4-1, the calculated maximum 5-year annual average concentration for acetaldehyde was 1.07 µg/m^3, which occurred at a receptor location south of the Frankfort distillery. Figure 4-1 shows the plot file results output from AERMOD for the acetaldehyde modeling to illustrate the spatial distribution of the modeling results. As shown in the figure, the highest modeled concentrations occurred at the residential locations south of the facility with median concentrations located west of the facility, and much lower concentrations in other directions.

4. ACETALDEHYDE RISK ANALYSIS

This section presents the acetaldehyde exposure predictions and evaluates the potential carcinogenic and noncarcinogenic chronic health risks. Modeled acetaldehyde concentrations were compared against EPA established carcinogenic and noncarcinogenic screening levels[11].

4.1 Exposure Assessment

The primary purpose of the acetaldehyde modeling analysis was to determine whether significant carcinogenic or noncarcinogenic health risks occur at residences or places where people congregate. In other words, this analysis evaluated locations at which the public could be exposed to acetaldehyde at such a duration that chronic deleterious health effects could potentially ensue. In most areas, other than those classified as residential, the public would not be expected to be present at such a duration that would pose significant risk. For example, in industrial areas persons will typically spend only 40 hours per week on average. Industrial areas are also more closely regulated by the Occupational Safety and Health Administration (OSHA), which ensures no significant health risks are present at a workplace. Consistent with normal Division protocols for analyses conducted for 401 KAR 63:020, to assess the potential for adverse impacts relative to both the carcinogenic risk and noncarcinogenic screening levels, only receptors located outside of parcels owned by BTD or outside of the nearfield industrial area shown in Figure 3-1 were considered as residential areas.

4.2 Determination of Carcinogenic and Noncarcinogenic Risk

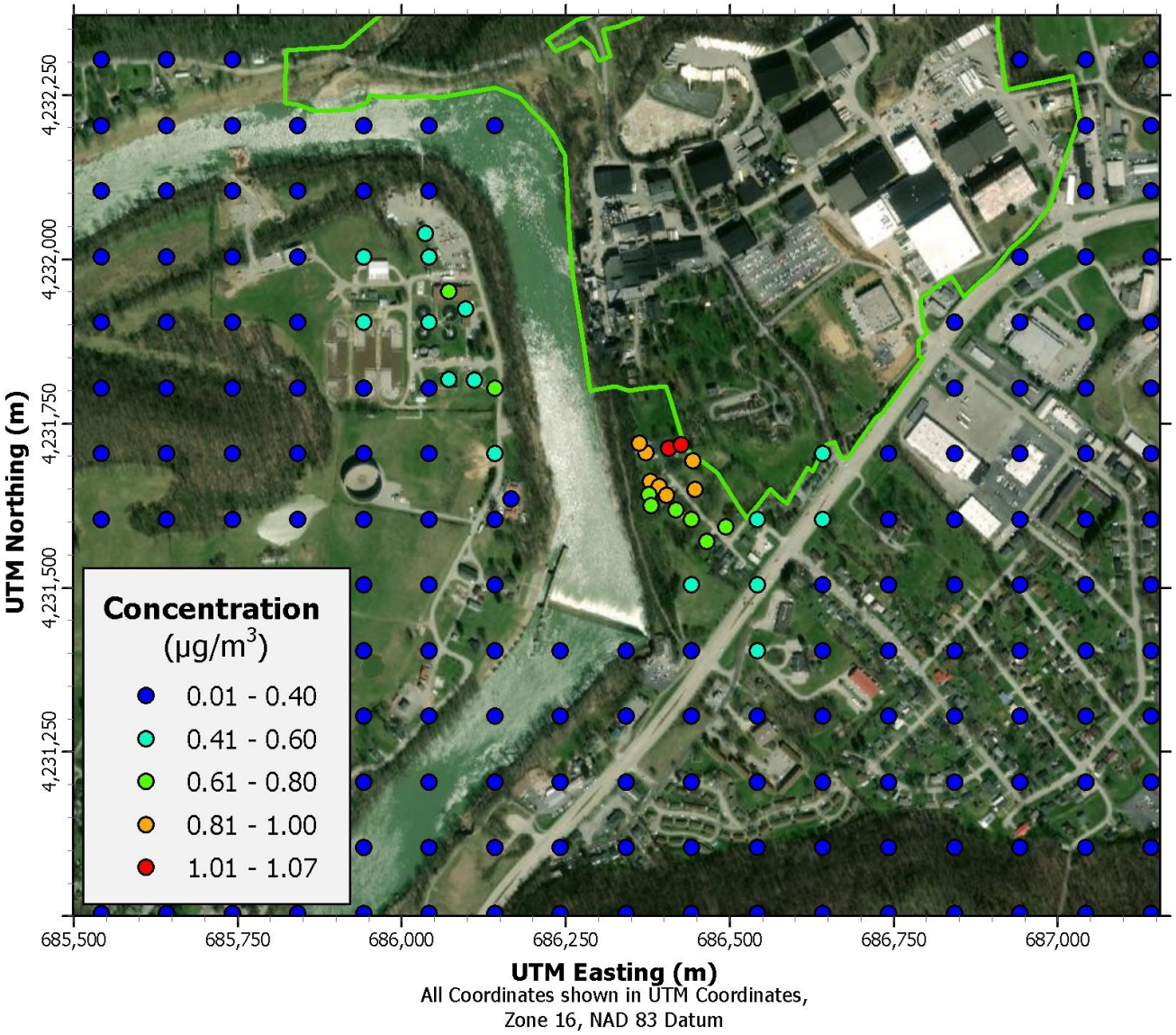
To evaluate whether the predicted acetaldehyde impacts are considered acceptable (i.e., do not cause or contribute to adverse risk), the maximum impacts were evaluated against the carcinogenic and noncarcinogenic risk screening levels. For this modeling analysis, only acetaldehyde was evaluated for the Frankfort distillery. Therefore, it was unnecessary to evaluate total carcinogenic and noncarcinogenic risk for comparison against cumulative risk standards (i.e. a hazard index, the sum of all individual TAP HQ).[12] The more stringent carcinogenic risk screening level represents the regional air concentration of acetaldehyde that could potentially cause an individual to develop cancer in their lifetime as a result of the exposure.

In concert with the 70-year lifetime exposure for long-term risk, the 5-year annual average acetaldehyde concentrations at all receptors outside the Frankfort distillery land parcels were determined by the AERMOD model using a single 5-year meteorological data file. The modeled concentrations were then compared against the relevant regional screening level (refer to Table 4-1 below). As shown in Table 4-1, the maximum 5-year average modeled acetaldehyde concentration was well below the carcinogenic and non-carcinogenic screening levels.

[11] https://www.epa.gov/risk/regional-screening-levels-rsls-generic-tables

[12] U.S. EPA *Air Toxics Risk Assessment Library Volume 2 – Facility-specific Assessment*, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, April 2004, EPA-453-K-04-001B.

Figure 4-1. Spatial Display of Modeled 5-Year Annual Average Acetaldehyde Concentrations



APPENDIX A. AIR DISPERSION MODELING DATA FILES

The air dispersion modeling files, including all input and output data files used to generate the results from the acetaldehyde modeling analysis, will be submitted to the Division via an emailed download link to the Program Planning Evaluation Section Supervisor Mr. Ben Cordes with a courtesy copy provided to Mr. Gregory Dane Ison of the Permit Review Branch. The following section provides a description of the contents of each folder of files included.

AERMOD

- Folder containing the AERMOD input (.ami), output (.aml), and plot (.plt) files for the chronic risk assessment using the meteorological dataset with the KFFT surface characteristics processed by Trinity Consultants.

AERMAP

- Folder containing the input, output, and summary files from the AERMAP terrain analysis. This analysis includes all modeled sources and receptors.

BPIP

- Contains the input, output, and summary files from the building downwash analysis. This analysis includes all modeled sources and buildings at the Frankfort distillery.

MET

- Raw Data – contains the raw data files from the Capital City Airport (KFFT) Surface and Wilmington, OH (KILN) Upper Air stations that were used to create the model-ready meteorological files used in this analysis.

- AERMET - contains the AERMET input and output files that were used to create the model-ready meteorological files based on KFFT surface and KILN upper air characteristics.

- Model-Ready - Contains the surface (.sfc) and profile (.pfl) meteorological data files based on KFFT surface characteristics and KILN upper air characteristics that were utilized in this modeling analysis.

- AERSURFACE - Contains the land cover, impervious surface, and tree canopy (2016 release) data (.tiff) and AERSURFACE input (.inp) and output (.dat) files for KFFT based on average (AVG), wet (WET), and dry (DRY) moisture conditions.

Maren Seibold

From: Maren Seibold
Sent: Wednesday, September 9, 2020 4:44 PM
To: melissa.duff@ky.gov
Cc: Fitzpatrick, Christopher R (EEC); Lyons, John (EEC); 'rick.shewekah@ky.gov'; michael.kennedy@ky.gov; 'Bittner, Zachary (EEC)'; Patil, Durga D (EEC); Natter, Liz (EEC); Lee, Mary A (EEC); Gregory.Ison@ky.gov; 'Heather Davis'; Laura K. McAfee; Denham, Mitchel, T; Mike Zimmer; Mary Tortorice
Subject: BTD's Response to KDAQ's Info Request (AI 1373)
Attachments: DEP7007N-Form Updates.pdf; BTD Warehouse_Heaters Info.pdf; DEP7007GG-Form Updates.pdf; DEP7007V-Form Updates.pdf

Good afternoon Melissa,

The following email provides Buffalo Trace Distillery's (BTD's) response to the information requested by the Kentucky Division for Air Quality (KDAQ) during the 9/3/2020 conference call between KDAQ and representatives of BTD. These responses are intended to supplement the Title V permit renewal and expansion project applications, which were originally submitted to KDAQ on 1/30/2020 and updated on 8/11/2020.

1. **Boiler #9 Emissions and Capacity Information**
    a. Provide updated NOx/CO emissions calculations at the maximum heat input rate of Boiler #9, which is 140.8 MMBtu/hr.
        i. See attached updated DEP7007N forms.
    b. Provide additional justification as to why the maximum heat input rate of Boiler #9 is 140.8 MMBtu/hr rather than 176 MMBtu/hr.
        i. Interviews with boiler operators indicated that Boiler #9 was not able to exceed approximately 80% of its nameplate capacity (140.8 MMBtu/hr) for several decades. The facility initiated stack testing on 5/28/2020 to identify the maximum physical capacity of Boiler #9 in its current state, as well as the appropriate NOx/CO emission factors at that capacity. Based on this testing, the maximum physical rating of the boiler is well below the nameplate capacity of 176 MMBtu/hr. During the first run of the stack testing, Boiler #9 began shaking when first taken to an operating level of 70% of the nameplate capacity on the control panel. To ensure safe operation, the operating rate was reduced for runs 1 and 2 to around 60-65% of its nameplate capacity. Facility personnel tried again to maximize the operating rate of the boiler for runs 3 and 4. During those runs, the site was able to achieve approximately 80% of the nameplate capacity based on operator's experience with the boiler for runs 3 and 4. BTD has therefore concluded that 80% of nameplate capacity fairly portrays the unit's current maximum physical capacity. The site could not safely operate above that rate for any significant period of time without first conducting extensive rebuilding efforts that would themselves trigger permitting requirements.
    c. Describe the strategy for demonstrating ongoing compliance with the de-rated capacity.
        i. BTD tracks daily natural gas firing of Boiler #9 using a dedicated fuel flow meter. The maximum hourly fuel flow rate is recorded daily. BTD will compare the maximum hourly natural gas usage rate value for each operating day against a flow rate of 140.8 MMBtu/hr / 1057 btu/cf = 0.1332 MMscf/hr to demonstrate ongoing compliance with the de-rated Boiler #9 capacity. To ensure accurate data collection, BTD is in the process of replacing/calibrating dedicated flow meters in the boiler room.
        ii. Based on the most recent stack testing performed for Boiler #9 on 5/28/2020, the maximum firing rate was measured at 0.10734 MMscf/hr of natural gas or 113.45 MMBtu/hr. Based on the standard requirement to limit operations to 110% of the operating rate associated with the

performance test, BTD must not run Boiler #9 above 124.8 MMBtu/hr or 0.118 MMscf/hr. BTD has implemented process controls to ensure the boiler does not exceed this value, and will ensure compliance using the same approach described above for the de-rated boiler capacity. BTD understands that any effort obtain authorization to operate at a higher rate would require another performance test at the higher operating rate, and that if rebuilding the boiler is necessary to achieve the higher operating rate, permitting would also be required following KDAQ's procedures.

2. **Aging Warehouse and Warehouse Heater Information**
   a. Attached is a table of the BTD aging warehouses and associated heaters with the information requested by KDAQ. Please note that the initial permit application identified these warehouses as serving the expansion and/or the existing distillery, based on the site's initial belief that the expansion would come online before the site ran out of space to house product from existing distillery operations. Given the increase in current demand and the delayed expansion schedule, the site now anticipates running out of storage space for existing production this winter, well before the expansion comes online in approximately 2023. As a result, the site will now need all fourteen (14) farm aging warehouses (Warehouses AA-NN) to store product from the existing distillery. The site has not yet determined how it will address its storage needs for the future expansion, as there will be no further room at the site after the construction of these fourteen aging warehouses.

3. **DEP7007GG Form for RTO/Scrubber**
   a. Attached is the DEP7007GG Form for the RTO and scrubber that will be used to control emissions from the new dryhouse. This form represents the best information currently available for each control device.

4. **Dryer PM Emissions**
   a. In addition to PM emissions from the cyclone separators, PM is emitted from each dryer stack itself as represented in the attached DEP7007N forms for the existing and new dryhouses.
   b. Therefore, the opacity and particulate matter requirements of 401 KAR 59:010 apply to the dryer stacks. The attached DEP7007V forms identify these requirements.

A copy of this email and its attachments was also submitted today to KDAQ's Permit Review Branch through EEC eForms. Please do not hesitate to contact me if you have any questions about this response or require additional information.

Best regards,

Maren Seibold
Managing Consultant
Greater Cincinnati/Northern Kentucky Office

P 859.341.8100 ext. 104 M 206.605.4578
1717 Dixie Hwy, Suite 900, Covington, Kentucky 41011
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Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007N

Source Emissions Profile

__ Section N.1: Emission Summary

__ Section N.2: Stack Information

__ Section N.3: Fugitive Information

__ Section N.4: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*

KY EIS (AFS) #: *21-073-00009*

Permit #: *V-12-056*

Agency Interest (AI) ID: *1373*

Date: *Tuesday, September 8, 2020*

N.1: Emission Summary

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	1	Cyclone Separators from No. 1 Rotary Dryer (03-001)	NA	NA	S-004-1	2.5	PM10	1.50	Prior KyEIS	100.00%	65.00%	3.75	1.31	16.4	5.75
							2.5	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	1.73	0.604	7.56	2.64
							2.5	PT	3.00	Prior KyEIS	100.00%	65.00%	7.50	2.63	32.9	11.5
							2.5	VOC	0.494	See Note 3	100.00%	-	1.23	-	5.40	-
							2.5	Acetaldehyde	0.020	See Note 4	100.00%	-	0.050	-	0.221	-
							2.5	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							2.5	Formaldehyde	0.015	See Note 4	100.00%	-	0.038	-	0.166	-
							2.5	HAPs	0.035	Sum	100.00%	-	0.088	-	0.387	-

Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
004	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	2	No. 1 Rotary Steam Tube Dryer (03-001)	NA	NA	S-004-2	2.5	VOC	3.56	See Note 6	100.00%	-	8.90	-	39.0	-
							2.5	PM10	0.219	See Note 16	100.00%	-	0.547	-	2.40	-
							2.5	PM2.5	0.219	See Note 16	100.00%	-	0.547	-	2.40	-
							2.5	PT	0.219	See Note 16	100.00%	-	0.547	-	2.40	-
							2.5	Acetaldehyde	0.220	See Note 7	100.00%	-	0.550	-	2.41	-
							2.5	Acrolein	0.013	See Note 7	100.00%	-	0.033	-	0.144	-
							2.5	Methanol	0.044	See Note 7	100.00%	-	0.110	-	0.483	-
							2.5	Formaldehyde	0.001	See Note 7	100.00%	-	0.004	-	0.016	-
							2.5	HAPs	0.279	Sum	100.00%	-	0.697	-	3.05	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	1	Pneumatic conveying cyclone separator from Rotary Dryers Nos. 2-4	NA	NA	S-005-1	4.00	PM10	1.50	Prior KyEIS	100.00%	65.00%	6.00	2.10	26.3	9.20
							4.00	PM2.5	0.690	Prior KyEIS	100.00%	65.00%	2.76	0.966	12.1	4.23
							4.00	PT	3.00	Prior KyEIS	100.00%	65.00%	12.0	4.20	52.6	18.4
							4.00	VOC	0.494	See Note 3	100.00%	-	1.97	-	8.65	-
							4.00	Acetaldehyde	0.020	See Note 4	100.00%	-	0.081	-	0.353	-
							4.00	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							4.00	Formaldehyde	0.015	See Note 4	100.00%	-	0.061	-	0.266	-
							4.00	HAPs	0.035	Sum	100.00%	-	0.141	-	0.619	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 3-5 for details. Maximum throughput updated to more accurately reflect capacity of system.																
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	2	Nos. 2 - 4 Rotary Steam Tube Dryers (03-002 and 03-003)	NA	NA	S-005-2	4.00	VOC	3.56	See Note 6	100.00%	-	14.2	-	62.4	-
							4.00	PM10	0.181	See Note 16	100.00%	-	0.723	-	3.17	-
							4.00	PM2.5	0.181	See Note 16	100.00%	-	0.723	-	3.17	-
							4.00	PT	0.181	See Note 16	100.00%	-	0.723	-	3.17	-
							4.00	Acetaldehyde	0.220	See Note 7	100.00%	-	0.880	-	3.85	-
							4.00	Acrolein	0.013	See Note 7	100.00%	-	0.053	-	0.231	-
							4.00	Methanol	0.044	See Note 7	100.00%	-	0.177	-	0.773	-
							4.00	Formaldehyde	0.001	See Note 7	100.00%	-	0.006	-	0.025	-
							4.00	HAPs	0.279	Sum	100.00%	-	1.11	-	4.88	-
Per audit disclosure, added emissions of VOCs and HAPs from this process ID. See Notes 5-7 for details. Maximum throughput updated to more accurately reflect capacity of system.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
005	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	3	Centrifuge	NA	NA	S-005-3	18,000	VOC	4.62E-05	See Note 8	100.00%	-	0.832	-	3.64	-
							18,000	Acetaldehyde	4.90E-07	See Note 8B	100.00%	-	0.009	-	0.039	-
							18,000	Acrolein	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Methanol	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Formaldehyde	-	See Note 8B	100.00%	-	-	-	-	-
							18,000	HAPs	4.60E-06	Sum	100.00%	-	0.083	-	0.362	-
Per audit disclosure, added emissions of VOCs and HAPs from this new process ID.																
032	DDGS Dryhouse #2	1	Two Centrifuges	NA	NA	S-032-1	18,000	VOC	4.62E-05	See Note 8	100.00%	-	0.832	-	3.64	-
							18,000	Acetaldehyde	4.90E-07	See Note 8B	100.00%	-	0.009	-	0.039	-
							18,000	Acrolein	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Methanol	2.05E-06	See Note 8C	100.00%	-	0.037	-	0.162	-
							18,000	Formaldehyde	-	See Note 8B	100.00%	-	-	-	-	-
							18,000	HAPs	4.60E-06	Sum	100.00%	-	0.083	-	0.362	-
032	DDGS Dryhouse #2	2	Two Steam Dryers	DDGS-SCB	RTO	S-032-2	6.50	VOC	3.56	See Note 6	100.00%	90.0%	23.1	2.31	101	10.1
				DDGS-SCB	SCRUB	S-032-2	6.50	PM10	6.92	See Note 17	100.00%	95.00%	45.0	2.25	197	9.86
				DDGS-SCB	SCRUB	S-032-2	6.50	PM2.5	6.92	See Note 17	100.00%	95.00%	45.0	2.25	197	9.86
				DDGS-SCB	SCRUB	S-032-2	6.50	PT	6.92	See Note 17	100.00%	95.00%	45.0	2.25	197	9.86
				DDGS-RTO	RTO	S-032-2	6.50	Acetaldehyde	0.220	See Note 7	100.00%	90.0%	1.43	0.143	6.26	0.626
				DDGS-RTO	RTO	S-032-2	6.50	Acrolein	0.013	See Note 7	100.00%	90.0%	0.086	0.009	0.375	0.037
				DDGS-RTO	RTO	S-032-2	6.50	Methanol	0.044	See Note 7	100.00%	90.0%	0.287	0.029	1.26	0.126
				DDGS-RTO	RTO	S-032-2	6.50	Formaldehyde	0.001	See Note 7	100.00%	90.0%	0.009	9.25E-04	0.041	0.004
				DDGS-RTO	RTO	S-032-2	6.50	HAPs	0.279	Sum	100.00%	90.0%	1.81	0.181	7.93	0.793
Per audit disclosure and expansion project, BTD will voluntarily install and operate an RTO to control emissions from the dryers.																

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity (SCC Units/hour)	Pollutant	Uncontrolled Emission Factor (lb/SCC Units)	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency (%)	Control Efficiency (%)	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential (lb/hr)	Controlled Potential (lb/hr)	Uncontrolled Potential (tons/yr)	Controlled Potential (tons/yr)
032	DDGS Dryhouse #2	3	Two Steam Dryers - By-pass	NA	NA	S-032-2	6.50	VOC	3.56	See Note 6	100.00%	-	23.1	-	5.78	-
							6.50	Acetaldehyde	0.220	See Note 7	100.00%	-	1.43	-	0.357	-
							6.50	Acrolein	0.013	See Note 7	100.00%	-	0.086	-	0.021	-
							6.50	Methanol	0.044	See Note 7	100.00%	-	0.287	-	0.072	-
							6.50	Formaldehyde	0.001	See Note 7	100.00%	-	0.009	-	0.002	-
							6.50	HAPs	0.279	Sum	100.00%	-	1.81	-	0.453	-
Per audit disclosure and expansion project, the #2 Dryhouse requires a by-pass for maintenance, startup, shut-down, and malfunction periods. Please include an operational restriction of no more than 500 hours per year.																
032	DDGS Dryhouse #2	4	Pneumatic conveying cyclone separator from Rotary Dryers	NA	NA	S-032-3	6.50	PM10	1.50	Prior KyEIS	100.00%	-	9.75	-	42.7	-
							6.50	PM2.5	0.690	Prior KyEIS	100.00%	-	4.49	-	19.6	-
							6.50	PT	3.00	Prior KyEIS	100.00%	-	19.5	-	85.4	-
							6.50	VOC	0.494	See Note 3	100.00%	-	3.21	-	14.1	-
							6.50	Acetaldehyde	0.020	See Note 4	100.00%	-	0.131	-	0.574	-
							6.50	Acrolein	-	See Note 5	100.00%	-	-	-	-	-
							6.50	Methanol	-	See Note 5	100.00%	-	-	-	-	-
							6.50	Formaldehyde	0.015	See Note 4	100.00%	-	0.099	-	0.432	-
							6.50	HAPs	0.035	Sum	100.00%	-	0.230	-	1.01	-
032	DDGS Dryhouse #2	5	Natural Gas and Process Gas Combustion at RTO	NA	NA	S-032-2	0.004	CO2	119,317	†	100.00%	-	433	-	1,898	-
							0.004	CO	84.0	*	100.00%	-	0.305	-	1.34	-
							0.004	0.00	119,440	††	100.00%	-	434	-	1,900	-
							0.004	HAPs	1.89	‡	100.00%	-	0.007	-	0.030	-
							0.004	Hexane	1.80	‡	100.00%	-	0.007	-	0.029	-
							0.004	Formaldehyde	0.075	‡	100.00%	-	2.72E-04	-	0.001	-
							0.004	CH4	2.25	†††	100.00%	-	0.008	-	0.036	-
							0.004	N2O	0.225	†††	100.00%	-	8.17E-04	-	0.004	-
							0.004	NOX	100.0	AP-42 Table 1.4-1, small uncontrolled boiler	100.00%	-	0.363	-	1.59	-
							0.004	PM10	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	PM2.5	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	PT	7.60	**	100.00%	-	0.028	-	0.121	-
							0.004	SO2	0.600	**	100.00%	-	0.002	-	0.010	-
							0.004	VOC	5.50	**	100.00%	-	0.020	-	0.087	-

Emission Unit #	Emission Unit Name	Process ID	Process Name	Control Device Name	Control Device ID	Stack ID	Maximum Design Capacity *(SCC Units/hour)*	Pollutant	Uncontrolled Emission Factor *(lb/SCC Units)*	Emission Factor Source (e.g. AP-42, Stack Test, Mass Balance)	Capture Efficiency *(%)*	Control Efficiency *(%)*	Hourly Emissions		Annual Emissions	
													Uncontrolled Potential *(lb/hr)*	Controlled Potential *(lb/hr)*	Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*
008	Indirect Heat Exchanger, Boiler #9 (09-001) Nameplate 176 MMBtu/hr (de-rated to 80% of nameplate, 140.8 MMBtu/hr)	1	Natural Gas Combustion	NA	NA	S-008	0.138	CO2	119,317	† EPA's GHG Reporting Rule (40 CFR 98), Table C-1	100.00%	-	16,470	-	72,140	-
							0.138	CO	31.9	June 2020 Source Test	100.00%	-	4.40	-	19.3	-
							0.138	CO2e	119,440	†† Scaled GHG by GWP	100.00%	-	16,487	-	72,215	-
							0.138	HAPs	1.89	‡ Sum of HAPs, AP-42 Section 1.4 Table 1.4-3 (7/98)	100.00%	-	0.261	-	1.14	-
							0.138	Hexane	1.80	‡	100.00%	-	0.248	-	1.09	-
							0.138	Formaldehyde	0.075	‡	100.00%	-	0.010	-	0.045	-
							0.138	CH4	2.25	††† EPA's GHG Reporting Rule (40 CFR 98), Table C-2	100.00%	-	0.311	-	1.36	-
							0.138	N2O	0.225	†††	100.00%	-	0.031	-	0.136	-
							0.138	NOX	229.4	June 2020 Source Test	100.00%	-	31.7	-	138.7	-
							0.138	PM10	7.60	** AP-42 Section 1.4 Table 1.4-2 (7/98)	100.00%	-	1.05	-	4.60	-
							0.138	PM2.5	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	PT	7.60	**	100.00%	-	1.05	-	4.60	-
							0.138	SO2	0.600	**	100.00%	-	0.083	-	0.363	-
							0.138	VOC	5.50	**	100.00%	-	0.759	-	3.33	-

See Note 18

N.1: PSD Emission Summary for Expansion Project Only

Emission Units	Pollutant	Annual Emissions		Comparison to PSD Major Source Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Primary SIC Distillery Expansion Project + Support SIC Boilers Associated with Expansion Project	VOC	3,031	2,940	NA	
	Non-Fugitive VOCs	191	100	N < 250 tpy	
	NOX	50.7	50.7	N < 250 tpy	
	CO	91.7	91.7	N < 250 tpy	
	PT	331	143	NA	
	Non-Fugitive PT	331	143	N < 250 tpy	
	PM10	268	80.7	NA	
	Non-Fugitive PM10	268	80.7	N < 250 tpy	
	PM2.5	225	38.2	NA	
	Non-Fugitive PM2.5	225	38.2	N < 250 tpy	
	SO2	0.655	0.655	N < 250 tpy	

Emission Units	Pollutant	Annual Emissions		Major, Could Project Exceed SER?	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Support SIC Boilers Associated with Expansion Project: Boiler 12 (EU 16) + Fourteen Indirect Heat Exchanger at 5 MMBtu/hr ea (EU 30)	VOC	5.89	5.89	N < 40 tpy	
	NOX	47.2	47.2	Y > 40 tpy	Yes
	CO	89.9	89.9	N < 100 tpy	
	PT	8.13	8.13	N < 25 tpy	
	PM10	8.13	8.13	N < 15 tpy	
	PM2.5	8.13	8.13	N < 10 tpy	
	SO2	0.642	0.642	N < 40 tpy	

* Only the fossil fuel boilers used to support the distilling operations are classified as a major stationary source.

N.1: Title V Emission Summary (Existing and Expansion Project)

Emission Units	Pollutant	Annual Emissions		Comparison to Title V / HAP Major Threshold	Synthetic Emissions Limit
		Uncontrolled Potential *(tons/yr)*	Controlled Potential *(tons/yr)*		
Facility-Wide: Primary SIC Distillery + All Heat Exchangers	VOC	5,327	5,236	NA	
	Non-Fugitive VOCs	387	296	Y > 100 tpy	See Title V app
	NOX	242	242	Y > 100 tpy	See Title V app
	CO	160	160	Y > 100 tpy	No
	PT	3,428	739	NA	
	Non-Fugitive PT	445	202	Y > 100 tpy	No
	PM10	712	268	NA	
	Non-Fugitive PM10	333	118	Y > 100 tpy	No
	PM2.5	292	67.3	NA	
	Non-Fugitive PM2.5	261	60.9	N < 100 tpy	
	SO2	2.17	2.17	N < 100 tpy	
	CO2e	271,115	271,115	NA	
	HAPs	24.3	17.1	N < 25 tpy	Yes
	Acetaldehyde	14.9	9.27	Y > 10 tpy	Yes
	Formaldehyde	1.17	1.14	N < 10 tpy	
	Hexane	3.98	3.98	N < 10 tpy	
	Lead	2.53E-07	2.53E-07	N < 10 tpy	
	Methanol	2.94	1.81	N < 10 tpy	
	Propionaldehyde	0.040	0.040	N < 10 tpy	

Section N.4: Notes, Comments, and Explanations

Note 1: HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 9 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that acetaldehyde, propionaldehyde, formaldehyde, and methanol were 0.402%, 0.0267%, 0.0133%, and 0.0133% of VOC, respectively.
Note 2: Assume one mole of both ethanol and CO2 is generated during fermentation, thus EF for CO2 = 14.2 lbs EtOH/MBU * 44 lbs/lb-mol CO2 / 46 lbs/lb-mol EtOH * 1 mol CO2 / 1 mol of EtOH.
Note 3. Engineering Judgement. For cooling cyclone, 0.494 lbs/ton is 90% LPL from measured stack testing at LINCOLNWAY ENERGY, LLC - NEVADA, IA for S70, which is cooling cyclone for DDGS. For the mass balance around the cooling cyclone, this translates into a 69.0% VOC loss rate.
Note 4. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 69% VOC loss rate divided by the process weight in tons.
Note 5. Engineering Judgement based on raw material sampling that did not contain this HAP.
Note 6. Engineering Judgement. For dryer, the 3.56 lbs/ton is the average of three one-hour test runs measured at MGPI on August 25, 2016 on the inlet of a new dryer system running at 6.49 tons of DDGS per hour.
Note 7. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 11 of 28, TSD App A which references testing performed at similar facilities https://permits.air.idem.in.gov/40029f.pdf. This document shows that acetaldehyde, acrolein, methanol, and formaldehyde were 6.18%, 0.37%, 1.24%, and 0.04% of VOC, respectively.
Note 8. Engineering Judgement. For screens/presses, 0.046 lbs/Mgal is from measured average stack testing at POET - Mitchell stack testing results from April 18, 2017 with a 1.3 safety factor. For the mass balance around the screens/presses, this translates into a 1.24% VOC loss rate.
Note 8B. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, multiplied the wt% of the measured HAP by the mass flow rate and the 1.24% VOC loss rate divided by the process weight in tons.
Note 8C. Engineering Judgement. Using raw material sampling data from a similar location in the DGGS process, scaled the measured EtOH concentration to the excepted ratio of a specific HAP to EtOH concentration as represented from the "TO" emissions unit shown in Daniel Brady & Gregory C. Pratt (2007) Volatile Organic Compound Emissions from Dry Mill Fuel Ethanol Production, Journal of the Air & Waste Management Association, 57:9, 1091-1102, DOI: 10.3155/1047-3289.57.9.1091
Note 9. Engineering Judgement. VOCs and Acetaldehyde were derived from Oregon DEQ Permit 05-0006-ST-01 for Columbia Pacific Bio-Refinery, see page 67of 75. Assumed process vent scrubber could achieve 98% CE for VOC and 65% CE for acetaldehyde (and other OHAPs) based on same source. Process scrubber returns material back to still so this is not treated as a control device. https://www.oregon.gov/deq/Programs/Documents/CPBREthanolAQPermitRtC.pdf
Note 10. Engineering Judgement. HAPs were derived from Source: IDEM Title V Permit for MGPI of Indiana dated 12/3/2018, Page 8 of 28, TSD App A which references testing performed by POET https://permits.air.idem.in.gov/37437d.pdf. This document shows that propionaldehyde, formaldehyde, and methanol were 0.22%, 0.22%, and 0.22% of VOC, respectively.
Note 11. The base height and UTM coordinates represent the approximate centerpoint of the Buffalo Trace distillery. G001 is located in the process chiller area; G002 is located near the control room for the distillery.
Note 12. Manufacturer's information is used for the G001 stack height. G002 is assumed to have a similar stack. Engineering estimates are used for other stack parameters.
Note 13. The stack location information presented in Section N.2 represents the approximate centerpoint of the facility.

Note 14. The stack parameters for the dryhouses were refined as part of the acetaldehyde modeling evaluation submitted to KDAQ on July 16, 2020. The Section N.2 form reflects these refinements.
Note 15. EU 32-05 was added to the N.1 form to represent emissions from the combustion of natural gas and process gas at the proposed RTO associated with the new dryhouses.
Note 16. Existing dryer stacks are natural draft (no fan). New information shows that PM emissions are possible for the existing stacks. The flow rate is intermittent and based on the thermal flux from the dryers themselves. ThermalTech estimated that the flow rates from Dryer #1 was 6,382 acfm, Assuming a particulate loading of 0.01 grains per scf, the hourly emissions for Dryer #1: PM EF = 0.22 lbs/ton = (0.01 gr/ft^3 * 6,382 acfm * 1 lb/7000 gr * 60 min/hr) / 2.5 tph Dryers #2, 3, & 4 have an estimated flow rate of 2,811 acfm ea. PM EF = 0.18 lbs/ton = (0.01 gr/ft^3 * 2,811 acfm/dryer * 3 dryers * 1 lb/7000 gr * 60 min/hr) / 4.0 tph
Note 17. The two new dryers are fan-forced systems that have the potential to carry a much more fines out of the system than the existing ones. ThermalTech estimates that with this type of configuration that 1% of the material will be entrained in the exhaust stream. However, a product recovery cyclone will lose up to 5 percent. Therefore, if the mass flow through both dryers is 90,000 lbs/hr, which includes thick stillage, syrup, and recycled DDGS, the uncontrolled PM fines will be 45 lbs/hr = 90,000 lbs/hr * 1% * 5%. The current design is for wet scrubber after the product recovery step with a PM control of 95%.
Note 18. EU 08, Boiler #9's emissions factor for NO_X and CO at 140.8 MMBtu/hr was calculated based on the stack testing performed on May 28, 2020 by Kenvirons using linear interpolation.

Aging Warehouse (EU06) and Natural Gas-Fired Heater (EU20/30) Information						
Name or Unique Identifier	Construction date[1]	Barrel Capacity	VOC Emission Factor[2] (lb/bbl)	VOC PTE (tpy)	Heater Capacity[3] (MMBtu/hr)	Heater Information
C	1885 (renovated in 1934)	24,000	6.9	82.8	--	Steam-heated
D	1907 (renovated in 2006)	19,000		65.6	--	Steam-heated
H	1935	15,000		51.8	--	Steam-heated
I	1935	49,140		169.5	--	Steam-heated
K	1935	49,140		169.5	--	Steam-heated
L	1936	40,000		138.0	--	Steam-heated
M	1936	40,000		138.0	--	Steam-heated
N	1937	50,000		172.5	--	Steam-heated
O	1937	50,000		172.5	--	Steam-heated
P	1941	52,170		180.0	--	Steam-heated
Q	1942	40,000		138.0	--	Steam-heated
R	1950 (renovated in 2016)	50,000		172.5	1.44	Lochinvar Model No. CHN1442
S	1951 (renovated in 2016)	50,000		172.5	1.44	Lochinvar Model No. CHN1442
T	1951 (renovated in 2015)	50,000		172.5	1.44	Lochinvar Model No. CHN1442
U	1950 (renovated in 2015)	50,000		172.5	1.86	Cyclonetic Model No. JB1G-05-RM7896C
X	2013	150		0.5	--	Steam-heated
V	1952	1		0.003	--	Steam-heated
AA	2018	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
BB	2018	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
CC	2018	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
DD	2019	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
EE	2019	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
FF	2019	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
GG	2020	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
HH	2020	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
II	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
JJ	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
KK	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
LL	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
MM	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000
NN	--	58,800		202.9	5.0	Armstrong Flo-Direct Model AFD-5000

1. This is the warehouse occupancy date.

2. Emission factor for evaporative losses associated with aging from AP-42 Table 9.12.3-1.

3. Warehouses R & S share a primary and backup heater. The primary heater is listed for Warehouse R and the backup is listed for Warehouse S. The same approach is used the Warehouses T & U shared heaters.

4. Two additional gas-fired heaters are installed in the old bottling area and included with EU20. Each of these is rated at 1.81 MMBtu/hr.

Division for Air Quality

300 Sower Boulevard

Frankfort, KY 40601

(502) 564-3999

DEP7007GG

Control Equipment

Additional Documentation

___ Complete Sections GG.1 through GG.12, as applicable

___ Attach manufacturer's specifications for each control device

___ Complete DEP7007AI

Source Name: Buffalo Trace Distillery, Inc.

KY EIS (AFS) #: 21-073-00009

Permit #: V-12-056

Agency Interest (AI) ID: 1373

Date: Tuesday, September 8, 2020

Section GG.1: General Information - Control Equipment

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For All Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For All Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68°F)	Average Particle Diameter (μm)	Particle Density (lb/ft^3) or Specific Gravity	Gas Density (lb/ft^3)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range (in. H_2O)	Pollutants Collected/Controlled	Pollutant Removal (%)
RTO	DDGS-RTO	TBD	TBD	TBD	05-2022	200	15000	< 10	31	0.0496	33.3	N_2, H_2O, VOC, PM	VFD		VOC, OHAP	> 90%
SCRUB	DDGS-SCRB	TBD	TBD	TBD	05-2022	~200	15000	< 10	31	0.0496	33.3	N_2, H_2O, VOC, PM	VFD	~10	PM	> 95%

Control Device ID #	Control Device Name	Cost	Manufacturer	Model Name/ Serial #	Date Installed	Inlet Gas Stream Data For All Control Devices					Inlet Gas Stream Data For Condensers, Adsorbers, Afterburners, Incinerators, Oxidizers Only			Equipment Operational Data For All Control Devices		
						Temperature (°F)	Flowrate (scfm @ 68°F)	Average Particle Diameter (μm)	Particle Density (lb/ft^3) or Specific Gravity	Gas Density (lb/ft^3)	Gas Moisture Content (%)	Gas Composition	Fan Type	Pressure Drop Range ($in.\ H_2O$)	Pollutants Collected/Controlled	Pollutant Removal (%)

Section GG.5: Scrubber

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Scrubber	Identify Type of Scrubber: Venturi, Packed Bed, Spray Tower, or Other (specify)	For Venturi Scrubbers: Identify Throat Type: Fixed or Adjustable	For Packed Bed Scrubbers: Identify Packing Type	For Packed Bed Scrubbers: Packing Height (in)	For Spray Towers: Number of Nozzles	For Spray Towers: Nozzle Pressure (psig)	Identify Type of Flow: Concurrent, Countercurrent, or Crossflow	Length in Direction of Gas Flow (ft)	Cross-Sectional Area (ft^2)	Venturi Throat Velocity (ft/s)	Mist Eliminator: Identify Type: Mesh or Vane	Mist Eliminator: Cross-Sectional Area (ft^2)	Mist Eliminator: Pressure Drop (in. H_2O)	Scrubbing Liquid: Chemical Composition	Scrubbing Liquid: Flowrate (gal/min)	Scrubbing Liquid: Fresh Liquid Makeup Rate (gal/min)	Scrubbing Liquid: Describe Disposal Method of Scrubber Effluent
SCRUB	032-02	Other	TBD	TBD	TBD													

Section GG.7: Afterburner/Incinerator/Oxidizer

Control Device ID #	Identify all Emission Units and Control Devices that Feed to Afterburner/Incinerator/Oxidizer	Identify Type: Afterburner, Incinerator, Oxidizer, or Other (specify)	Number of Burners	Burner Rating *(BTU/hr)*	Dimensions of Combustion Chamber *(specify units)*	Residence Time *(sec)*	Combustion Chamber Temperature *(° F)*	Type of Catalyst (if applicable)	Type of Heat Exchanger (if applicable)	Auxiliary Fuel							Composition and Quantities of Combusted Waste
										Identify Fuel Type	Higher Heating Value *(MMBtu/scf)*	Hourly Fuel Usage *(scf/hr)*	% Sulfur (Maximum)	% Sulfur (Average)	% Ash (Maximum)	% Ash (Average)	
RTO	032-02	Oxidizer	1	2,708,000	35' x 7' x 12'	0.9	1550-1650	NA	NA	NG	1057	2561.97	neg.		neg.		See Form N

Section GG.12: Notes, Comments, and Explanations

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007V

Applicable Requirements and Compliance Activities

___ Section V.1: Emission and Operating Limitation(s)
___ Section V.2: Monitoring Requirements
___ Section V.3: Recordkeeping Requireme
___ Section V.4: Reporting Requirements
___ Section V.5: Testing Requirements
___ Section V.6: Notes, Comments, and Explanations

Additional Documentation

___ Complete DEP7007AI

Source Name: *Buffalo Trace Distillery, Inc.*
KY EIS (AFS) #: *21-073-00009*
Permit #: *V-12-056*
Agency Interest (AI) ID: *1373*
Date: *Tuesday, September 8, 2020*

Section V.1: Emission and Operating Limitation(s)

Emission Unit #	Emission Unit Description	Applicable Regulation or Requirement	Pollutant	Emission Limit (if applicable)	Voluntary Emission Limit or Exemption (if applicable)	Operating Requirement or Limitation (if applicable)	Method of Determining Compliance with the Emission and Operating Requirement(s)
004-2	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	22.4	na	The dryer shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the dryer is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.
005-2	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	401 KAR 61:020, Section 3(2)(a)	PM	40.2	na	The dryer shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the dryer is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 61:020, Section 3(1)(a)	Opacity	40%	na	NA	Visual observations and maintaining a log of the observations.
032-2	DDGS Dryhouse #2	401 KAR 59:010, Section 3(2); 401 KAR 50:055	PM	32.4	na	The dryer shall be operated to maintain compliance with permitted emission limitations, consistent with manufacturer's specifications and good operating practices.	The emission unit shall be deemed in compliance when the dryer is operated, consistent with manufacture's specification and standard operating procedures.
		401 KAR 59:010, Section 3(1)(a)	Opacity	20%	na	NA	Visual observations and maintaining a log of the observations.

Section V.2: Monitoring Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Monitored	Description of Monitoring
004-2	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator	PM	401 KAR 52:020, Section 10	Production Rate	Track monthly DDGS produced in tons and monthly operating hours.
005-2	Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	Opacity	401 KAR 52:020, Section 10	Visible emissions	Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.
032-2	DDGS Dryhouse #2	PM	401 KAR 52:020, Section 10	Production Rate	Track monthly DDGS produced in tons
		Opacity	401 KAR 52:020, Section 10	Visible emissions	Compliance with the opacity standard shall be determined by conducting a qualitative visual observation of the opacity emissions at each stack during daylight hours no less than weekly and maintaining a log of the observations. If visible emissions from the stack(s) are seen (not including condensed water in the plume), then an inspection of process/control equipment shall be initiated and corrective action taken. If visible emissions are present after the corrective action, the permittee shall determine the opacity using Reference Method 9.

Section V.3: Recordkeeping Requirements

Emission Unit #	Emission Unit Description	Pollutant	Applicable Regulation or Requirement	Parameter Recorded	Description of Recordkeeping
004-2 005-2	DDGS Dryhouse #1: No. 1 Rotary Dryer and Cyclone Separator Dryhouse #1: Three Rotary Dryers (03-002 and 03-003) And Cyclone Separator	PM Opacity	401 KAR 52:020, Section 10, 401 KAR 52:020, Section 10,	Production Rate Visible emissions	Record monthly DDGS produced in tons and monthly operating hours. A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.
032-4	DDGS Dryhouse #2	PM Opacity	401 KAR 52:020, Section 10, 401 KAR 52:020, Section 10,	Production Rate Visible emissions	Record monthly DDGS produced in tons and monthly operating hours. A log shall be kept of all emissions observations. Notations in the weekly log shall be made of the following: 1. Weekly observations of visible emissions during operation of associated equipment. 2. A log of the dates and times of each qualitative visible emission observation and each Method 9 test and either the results of the test, or reasons for not performing a Method 9 test.