YAKIMA REGIONAL CLEAN AIR AGENCY

186 Iron Horse Court, Suite 101. Yakima, WA. 98901
Phone: (509) 834-2050 Fax: (509) 834-2060
Website: http://www.yakimacleanair.org

Filing Fee: $400.00*

***Pursuant to WAC 173-400-111(1) (e)-an application is not complete until the permit application filling fee required by YRCAA has been paid.**

OFFICAL USE ONLY

YRCAA NSR No: NSRP-03-BBBC-25 Date Fee Paid: 04/03/2025

Received by: EGR - hand delivered Filing Fee: **$400.00**

☐ YRCAA is the lead agency for the SEPA process. Processing Fee $400.00

Review of the application will not begin, until the application filling fee is paid. A surcharge fee for the time required for preparing and processing the application for approval will be invoiced after the permit to operate is issued.

New Source Review (NSR) Application General

Stationary/Permanent Source

INSTALLATION OR ESTABLISHMENT OF NEW AIR CONTAMINANT SOURCES

NSR Application is Required for Construction, Installation or Establishment of an Air Pollution Source
Or
Replacement or Substantial Alteration of Emission Control Technology on an Air Pollution Source or Equipment

I. General Information:

BUSINESS NAME Bale Breaker Brewing Company

NATURE OF BUSINESS Brewery / Beer Production

MAILING ADDRESS 1801 Birchfield Road, Yakima WA 98901

FACILITY ADDRESS (if different): 1801 Birchfield Road, Moxee WA 98936

PHONE and FAX NUMBERS ( ) 509-731-5731 Email: kquinn@balebreaker.com

TYPE OF PROCESS, EQUIPMENT, OR APPARATUS See attached.

LIST OF AIR CONTAMINANT(S) WHICH WILL BE PRODUCED AND/OR CONTROLLED

See attached.

ESTIMATED STARTING DATE: Completed

ESTIMATED COMPLETION DATE: Completed

Compliance with SEPA (State Environmental Policy Act) - Check One of the Options Below:

- ☐ A DNS or EIS has been Issued by Another Agency for this Project and a Copy is Attached.
- ☐ If no DNS or EIS Exists for this Project, a Completed Checklist for this Project and the SEPA Processing Fee are Attached. *YRCAA SEPA checklist is available by phone, or by our website.*
- ☐ The city/county has established an exemption for this project.
- ☒ I certify that the SEPA has been satisfied or this project is exempt:

~~9/10/2015~~ 4-6-26 *Date* by City of Moxee *Government Agency*

Previous NSR/Air Permits Number issued by YRCAA for the Facility, if any NSRP-08-BBBC-12

Describe Input to Output Process (Attach drawings, schematics, prints, or block diagrams)
See attached.

ESTIMATED COSTS: OF BASIC SOURCE EQUIPMENT $ 170,000

OF CONTAMINANT CONTROL APPARATUS $ 30,000

Process: Production Output per Year (tons, pounds, etc) 744,000 gallons

Maximum Output per Hour (tons, pounds, etc)

Percentage of Production (%)

Dec - Feb 15% Mar - May 20%

Jun - Aug 35% Sep - Nov 30%

Operating Schedule: Hrs/Day 12 hours Days/Wk 5 days Wks/Yr 50 weeks

II. Emissions Estimations and Calculations:

1. Criteria Pollutants (gr/dscf, tons/yr, lbs/hr., ppm, etc.)

Particulate (PM_{10},$PM_{2.5}$) See attached.

Volatile Organic Compounds

Nitrogen Oxides

Sulfur Oxides

Carbon Monoxide

Lead

2. Toxic Air Pollutants (Name)	Quantity (in gr/dscf, tons/yr, lbs/hr. ppm, etc.)

3. Fugitive Pollutants (Source)	Quantity (in gr/dscf, tons/yr, lbs/hr. ppm, etc.)

4. Air Pollution Modeling

Results _____

Computer Printout Attached? ☐Yes ☐No

III. Emission Data:

1. Stack

Height (Feet)_____ Inside Diameter (feet)_____

Gas Exit Temp (degrees F)_____ Gas Exit Velocity (ft/min)_____

Flow Rate (cfm)_____

Shared Stack? If a shared stack, identify process (es) or point(s) which share the stack.

Distance from Stack to Property Line _____

2. Discharge Point or points (if no stack or other than stack)

Height (feet)_____ Inside Diameter (feet)_____

Gas Exit Temp (degrees F)_____ Gas Exit Velocity (ft/min)_____

Flow Rate (cfm) _____

Shared discharge point? If a shared discharge point, identify process (es) or point(s) which share the discharge point. _____

_____

Distance from discharge point to Property Line _____

3. Fuel

Type Natural Gas % Sulfur_____

% Ash_____ Unit of Measure (gal./cu.ft./etc.)_____

BTU per Unit of Measure 100,000/Therm Consumption Units per Year 53,480 Therms

Maximum Consumption Units per Hour _____

4. Building Dimensions

Height (feet) 39' Length (feet) 240' Width (feet) 100'

IV. Air Pollution Control Equipment:

Baghouse

Type: Dust Filter
Model #, Serial #: Serial: 1 100210940-010-1 Model: 3 9RTC 3
Efficiency: 90%+
$PM_{2.5}$:
and PM_{10}:
Bag Height (feet): 42"
Bag Diameter (feet): 6"
Filter Area (feet squared):
Blower Flow Rate (cfm): 120
Filter Media: Spun Bound Polyester
Dimensions (feet):
Discharge Area Dimensions (feet): 5 gallon bucket
Cleaning Mechanism (shake) (air psi): Air PSI
Other Data:

Scrubber

Type:
Model #, Serial #:
Efficiency:
Gas Differential Pressure (psi):
Liquor Differential Pressure (psi):
Liquor Flow (gpm):
Discharge Area Dimensions ($feet^2$):
Gas Flow (cfm):
Other Data:

Cyclone

Type:
Model #, Serial #:
Efficiency:
$PM_{2.5}$:
and PM_{10}:
Gas Flow (cfm):
Discharge Area Dimensions ($feet^2$):
Other Data:

Precipitator

Type:
Model #, Serial #:
Efficiency:
Gas Flow (cfm):
Gas Velocity (ft/sec):
Residence Time:
Gas Differential Pressure (psi):
Precipitation Rate (ft/sec):
Discharge Area Dimensions ($feet^2$):
Other Data:

Ad/Absorp

Type:
Model #, Serial #:
Efficiency:
Gas Flow:
Gas Velocity (ft/sec):
Gas Temp (degree F):
Bed Volume (ft^3):
Bed Dimensions (feet):
Capacity (hours):
Contaminant (lb/day):
Regeneration time (hours):

Other Type Silo Filter Sock Model #, Serial # Meridian Filter Sock 8in B4

Efficiency 90%

Gas Flow (cfm)_____ Discharge Area Dimensions (feet)_____

Other Data _____

V. Additional Information:

1. Attach Related Information on Chemicals or Materials that will be emitted. (MSDS Sheets, Company Information, etc.)

   Note: Indicate how much quantity are used per MSDSs

   ☒ Yes ☐ No, if not why? Malted Grain - 2,000,000 lbs

2. Fugitive Dust Control Plan (Attach if Necessary)
3. Attach Operation and Maintenance Manual of Pollution Control Equipment.

   ☒ Yes No, if not, why? _____
4. Attach Vendor Information or Manufacturer's Instructions on Pollution Control Equipment.

   ☒ Yes No, if not, why? _____

APPLICANT: I hereby certify that the information contained in this application, including supplemental forms and data, when required, is, to the best of my knowledge, complete and correct. I also agree to all fees for processing this permit and grant permission for YRCAA staff to enter the premises for inspection.

Signature Kevin Quinn Date 4/2/2025

Title Owner Date _____

Name and Title of Individual Filling out Form:

Name (print) Kevin Quinn

Signature Kevin Quinn

Name and Title of Contact Person, if Different than Above:

Name _____

Title _____

Name and Title of the Responsible Official for the permit, if Different than Above:

Name _____

Title _____

I. General Information

Type of Process:

The average production output of finished beer per year is about 744,000 gallons. The production is higher April through October and lower from November through March. The process flow diagram is attached. Bulk and bagged malt is delivered and stored, in silos and on pallet racking. Hops are also delivered and stored. The malt is milled in the mill room and moved to the grist case through a closed disk conveyor system. The milled malt is mixed with hot water and mashed. The resulting wort is drained off of the grain bed and is moved into the brew kettle where it is boiled, and hops are added. The wort is then moved to the whirlpool to help separate solids; hops are also added to the wort to impart aroma and flavor. Then the wort is moved through a heat exchanger to cool down. Once the wort is cooled it is moved to the fermentation tanks. After fermentation the beer is carbonated and conditioned. Then beer is packaged in kegs or cans and sold to distributors and retailers.

List of Air Contaminants:

Air emissions include Particulate Matters (PM10 and PM2.5), Carbon Monoxide (CO), Carbon Dioxide (CO2), Oxides of Nitrogen (Nox), Sulfur Dioxides (SO2), and Volatile Organic Compounds (VOCs)

III. Emission Data:

Emission Unit: Parker 50hp Boiler

Serial Number: 60971

Model Number: 104-50

Fuel Type: Natural Gas

Operating parameters:

Max PSI	Op. PSI	BTU/hr	Wkly ops hr.	Yr. ops hrs	Stack diam	Stack ht.
100	45psi	1,680,000	60	3120	18"	15'

Estimated boiler operation times are based off average production during a 5-day work week and 50-week work year.

Emission Estimates and Calculations:

Calculations and estimations are based on estimates from Environmental Protection Agency AP-42 (table 1.4-1 and 1.4-2), and the above operating parameters.

https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf

Table is for Parker 50HP boiler only

Pollutant	(lb/10^6SCF)	(lb/month)	(lb/yr)
Nox	100	43	505
CO	84	36	425
CO2	120,000	51323	606550
Lead	0.0005	0.0002	0.0025
N20	2.2	0.9	11.1
PM (total)	7.6	3.3	38.4
PM (condensable)	5.7	2.4	28.8
PM (filterable)	1.9	0.8	9.6
SO2	0.6	0.3	3.0
TOC	11	4.7	55.6
Methane	2.3	1.0	11.6
VOC	5.5	2.4	27.8

III. Emission Data:

Emission Unit: Cleaver Brooks 20hp Boiler

Serial Number: 1620002010010

Model Number: CFH-700-20HP-15ST

Fuel Type: Natural Gas

Operating parameters:

Max PSI	Op. PSI	BTU/hr	Wkly ops hr.	Yr. ops hrs	Stack diam	Stack ht.
50	9.4	669,500	40	2080	6"	22'

Estimated boiler operation times are based off of average production during a 5 day work week and 50 week work year.

Emission Estimates and Calculations:

Calculations and estimations are based on estimates from Environmental Protection Agency AP-42 (table 1.4-1 and 1.4-2), and the above operating parameters.

https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf

Table is for Cleaver Brooks 20HP boiler Pollutant	(lb/10^6SCF)	(lb/month)	(lb/yr)
Nox	100	11	134
CO	84	10	113
CO2	120,000	13635	161145
Lead	0.0005	0.0001	0.0007
N20	2.2	0.2	3.0
PM (total)	7.6	0.9	10.2
PM (condensable)	5.7	0.6	7.7
PM (filterable)	1.9	0.2	2.6
SO2	0.6	0.1	0.8
TOC	11	1.2	14.8
Methane	2.3	0.3	3.1
VOC	5.5	0.6	7.4

III. Emission Data:

Emission Unit: Parker 9.5hp Boiler

Serial Number: 53508

Model Number: 103-9.5

Fuel Type: Natural Gas

Operating parameters:

Max PSI	Op. PSI	BTU/hr	Wkly ops hr.	Yr. ops hrs	Stack diam	Stack ht.
100	40psi	318,000	20	1040	10"	30'

Estimated boiler operation times are based off of average production during a 5 day work week and 50 week work year.

Emission Estimates and Calculations:

Calculations and estimations are based on estimates from Environmental Protection Agency AP-42 (table 1.4-1 and 1.4-2), and the above operating parameters.

https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf

Table is for Parker 9.5HP Boiler only

Pollutant	(lb/10^6SCF)	(lb/month)	(lb/yr)
Nox	100	3	32
CO	84	2	27
CO2	120,000	3238	38270
Lead	0.0005	0.0000	0.0002
N20	2.2	0.06	0.70
PM (total)	7.6	0.21	2.42
PM (condensable)	5.7	0.15	1.82
PM (filterable)	1.9	0.05	0.61
SO2	0.6	0.02	0.19
TOC	11	0.30	3.51
Methane	2.3	0.06	0.73
VOC	5.5	0.15	1.75

Emission Unit: Meridian Silo 1

Serial Number: 602012 12 37606

Model Number: 1220EWVIJBC

Manufacturer: Meridian

Contents: Malted Barley

Air Pollutant Control Equipment: Meridian Filter Sock 8in B4

Operating parameters:

Capacity (lb)	Vent tube diameter	Vent Tube Height	Emissions
68,000	8"	4'	PM-10, PM-2.5

Grain silos are filled on a per-need basis. Grain deliveries are 48,000lbs per delivery. Average filling rate is 1 delivery per 2 weeks in the summer and one delivery per month through the winter.

Emission Estimates and Calculations:

Emission rates are unknown. During silo filling, a fabric filter vent sock is to be used on the 8" silo vent. The fabric filter sock is estimated to have a >90% efficiency rating.

Emission Unit: Meridian Silo 2

Serial Number: 6052002

Model Number: 1220EWVIJBC

Manufacturer: Meridian

Contents: Malted Barley

Air Pollutant Control Equipment: Meridian Filter Sock 8in B4

Operating parameters:

Capacity (lb)	Vent tube diameter	Vent Tube height	Emissions
68,000	8"	4'	PM-10, PM-2.5

Grain silos are filled on a per-need basis. Grain deliveries are 48,000lbs per delivery. Average filling rate is 1 delivery per 2 weeks in the summer and one delivery per month through the winter.

Emission Estimates and Calculations:

Emission rates are unknown. During silo filling, a fabric filter vent sock is to be used on the 8" silo vent. The fabric filter sock is estimated to have a >90% efficiency rating.

III. Emission Data:

Emission Unit: Lennox Heater

Model Number: LF24-75A

Fuel Type: Natural Gas

Operating parameters:

BTU/hr	Wkly ops hr.	Yr. ops hrs	Stack diam	Stack ht.
75,000	0	140	4"	20'-30'

Heaters are installed to prevent freezing in the production area, they have not been used since 2020.

Emission Estimates and Calculations:

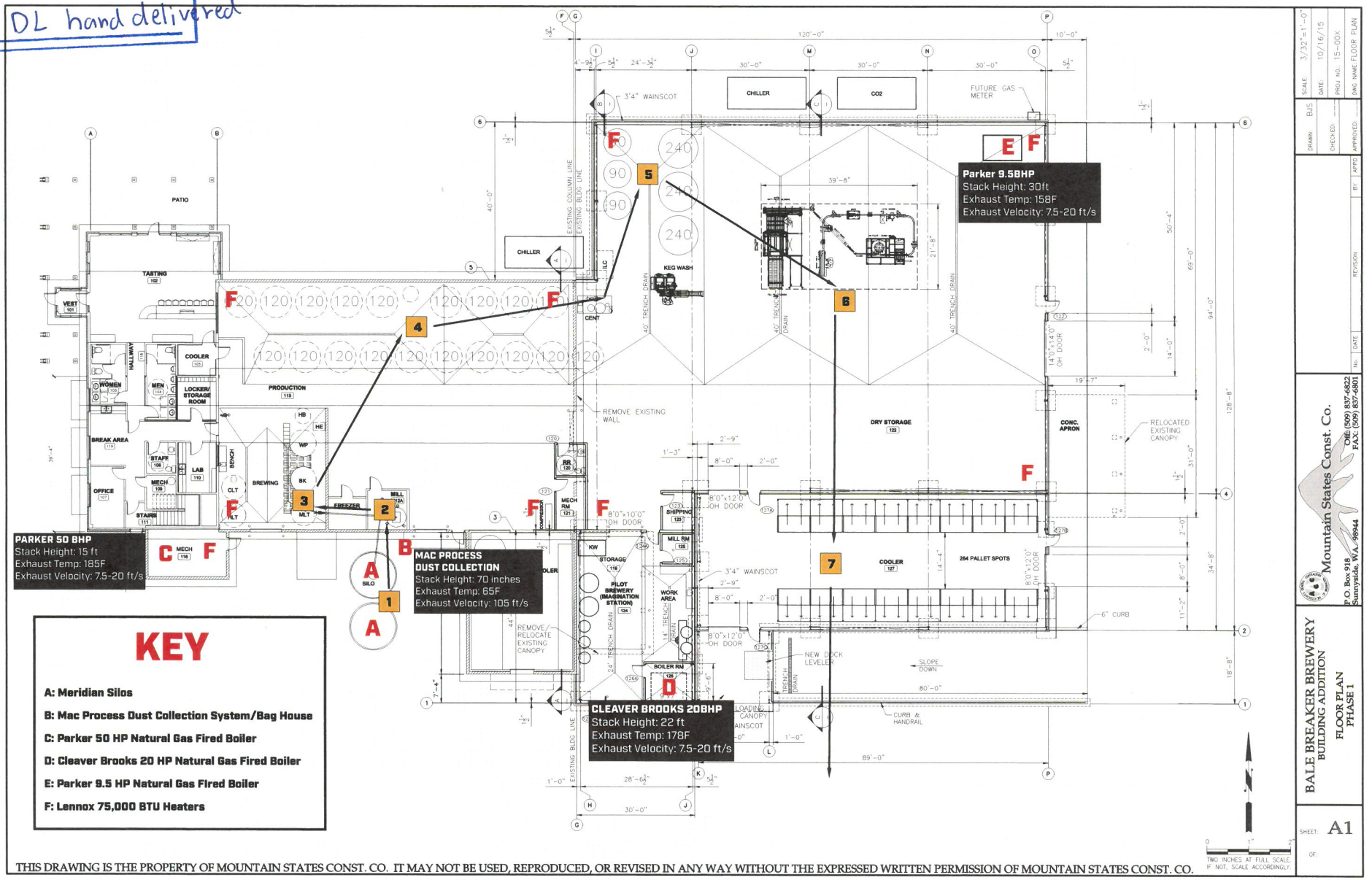
Calculations and estimations are based on estimates from Environmental Protection Agency AP-42 (table 1.4-1 and 1.4-2), and the above operating parameters.

https://www.epa.gov/sites/default/files/2020-09/documents/1.4_natural_gas_combustion.pdf

Table is for Lennox Heater only

Pollutant	(lb/10^6SCF)	(lb/month)	(lb/yr)
Nox	100	0	1.01
CO	84	0	0.85
CO2	120,000	0	1215.04
Lead	0.0005	0	0.00
N20	2.2	0	0.02
PM (total)	7.6	0	0.08
PM (condensable)	5.7	0	0.06
PM (filterable)	1.9	0	0.02
SO2	0.6	0	0.01
TOC	11	0	0.11
Methane	2.3	0	0.02
VOC	5.5	0	0.06

Annual pollutant estimates are based on a theoretical maximum use of 10hrs/day for 2 weeks per year. Historical use has been approximately 24hrs every 5 years.



SCALE: 3/32"=1'-0"
DATE: 10/16/15
PROJ. NO.: 15-00X
DWG. NAME: FLOOR PLAN
DRAWN: BJS
CHECKED:
APPROVED:
BY: APP'D
No.: DATE: REVISION:

Mountain States Const. Co.
P.O. Box 918
Sunnyside, WA 98944
OFF: (509) 837-6822
FAX: (509) 837-6801

BALE BREAKER BREWERY
BUILDING ADDITION
FLOOR PLAN
PHASE 1

SHEET: A1
OF: