OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

SIMPLE

AIR CONTAMINANT DISCHARGE PERMIT

DEQ Eastern Region Bend Office
475 NE Bellevue Drive, Suite 110
Bend, Oregon 97701

This permit is being issued in accordance with the provisions of ORS 468A.040 and based on the land use compatibility findings included in the permit record.

ISSUED TO:

Black Butte Ranch Corporation
PO Box 800
Sisters, OR 97759

INFORMATION RELIED UPON:

Application No.: 32426
Date Received: 5/29/2020

PLANT SITE LOCATION:

Black Butte Maintenance
71225 McAllister Road
Sisters, OR 97759
(Black Butte Ranch)

LAND USE COMPATIBILITY FINDING:

Approving Authority: Deschutes County
Approval Date: 5/21/2020

ISSUED BY THE DEPARTMENT OF ENVIRONMENTAL QUALITY

Mark W Bailey, Eastern Region AQ, Manager

FEB 16 2022
Date

Source(s) Permitted to Discharge Air Contaminants (OAR 340-216-8010):

Table 1 Code	Source Description	SIC/NAICS
Part B, 43	Incinerators with two or more tons per day capacity.	4953/ 562213
Part B, 88	All sources subject to RACT under OAR 340 division 232, BACT or LAER under OAR 340 division 224, a NESHAP under OAR 340 division 244, a NSPS under OAR 340 division 238, or State MACT under OAR 340-244-0200(2)	
Part B, 85	All other sources, both stationary and portable, not listed herein which would have actual emissions, if the source were to operate uncontrolled, of 5 or more tons per year of direct PM2.5 or PM10 if located in a PM2.5 or PM10 nonattainment or maintenance area, or 10 or more tons per year of any single criteria pollutant if located in any part of the state	

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1.0 DEVICE, PROCESS AND POLLUTION CONTROL DEVICE (PCD) IDENTIFICATION

1.1. The devices, processes and pollution control devices regulated by this permit are the following:

Devices and Processes Description	Device ID	Pollution Control Device Description	PCD ID
Air Curtain Incinerator- Air Burners Inc. Model S220 (5 tons/hour capacity)	ACI	NA	NA
Blower Diesel Engine (three-cylinder turbo) approx. 49 HP (37 KW) HATZ-Model 3H50TIC	ENG	US EPA Tier 4 Final	NA
Fugitive Emissions	FUG	NA	NA

2.0 DEFINITIONS

The following definitions apply to this permit, along with the definitions in 40 CFR 60.2977, and OAR 340 Division 200:

2.1. "Clean lumber" means wood or wood products that have been cut or shaped and include wet, air-dried, and kiln-dried wood products. Clean lumber does not include wood products that have been painted, pigment-stained, or pressure-treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote;

2.2. "Wood waste" is untreated wood and untreated wood products, including tree stumps (whole or chipped), trees, tree limbs (whole or chipped), bark, sawdust, chips, scraps, slabs, millings and shavings, all free of dirt. Wood waste does not include:

a. Grass, grass clippings, bushes, shrubs, and clippings from bushes and shrubs from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands;
b. Clean lumber;
c. Treated wood and treated wood products, including wood products that have been painted, pigment-stained, or pressure treated by compounds such as chromate copper arsenate, pentachlorophenol, and creosote, or manufactured wood products that contain adhesives or resins (e.g., plywood, particleboard, flake board, and oriented strand board);

2.3. "Yard waste" means grass, grass clippings, bushes, shrubs and clippings from bushes and shrubs. They come from residential, commercial/retail, institutional, or industrial sources as part of maintaining yards or other private or public lands. Yard waste does not include two items:

a. Construction, renovation and demolition wastes.
b. Clean lumber.

3.0 GENERAL EMISSION STANDARDS AND LIMITS

3.1. Fugitive Emissions

a. The permittee must take reasonable precautions to prevent fugitive dust emissions from leaving the property of a source. Reasonable precautions include, but are not limited to: [OAR 340-208-0210]
   i. Using, where possible, water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;
   ii. Applying water or other suitable chemicals on unpaved roads, materials stockpiles, and other surfaces which can create airborne dusts;
   iii. Enclosing (full or partial) materials stockpiles in cases where application of water or other suitable chemicals are not sufficient to prevent particulate matter, including dust, from becoming airborne;
   iv. Covering, at all times when in motion, open bodied trucks transporting materials likely to become airborne;
   v. Promptly removing earth or other material that does or may become airborne from paved streets; and
b. If requested by DEQ, the permittee must:
   i. Prepare and submit a fugitive emission control plan within 60 days of the request;
   ii. Implement the DEQ approved plan whenever fugitive emissions leave the property for more than 18 seconds in a six-minute period; and
   iii. Keep the plan on site and make the plan available upon request. [OAR 340-208-0210]
c. In no case may fugitive dust emissions leaving the ACI operational work site of a source for a period or periods totaling more than 18 seconds in a six-minute period. Fugitive emissions must be measured by EPA Method 22 with the minimum observation time of six minutes. This monitoring will be done on a quarterly basis.

3.2. Particulate Matter Emissions

The permittee must comply with the following particulate matter emission limits.

a. Particulate matter emissions from the ACI must not exceed 0.10 grains per dry standard cubic foot. [OAR 340-226-0210(2)(c)]

3.3. Particulate Matter Fallout

The permittee must not cause or permit the deposition of any particulate matter larger than 250 microns in size at sufficient duration or quantity, as to create an observable deposition upon the real property of another person. [OAR 340-208-0450]

3.4. Nuisance and Odors

The permittee must not cause or allow the emission of odorous or other fugitive emissions so as to create nuisance conditions off the ACI operation work site. Nuisance conditions will be verified by DEQ personnel. [OAR 340-208-0300]

3.5. Complaint Log

The permittee must maintain a log of all complaints received by the permittee in person, in writing, by telephone or through other means that specifically refer to air pollution, odor, or nuisance concerns associated with the permitted facility. Documentation must include: [OAR 340-214-0114]

a. The date the complaint was received;
b. The date and time the complaint states the condition was present;
c. A description of the pollution or odor condition;
d. The location of the complainant/receptor relative to the plant site;
e. The status of plant operation or activities during the complaint's stated time of pollution or odor condition; and
f. A record of the permittee's actions to investigate the validity of each complaint and a record of actions taken for complaint resolution.

3.6. Fuels and Fuel Sulfur Content

The permittee must not use any fuels other than ultralow sulfur diesel with a sulfur content that cannot exceed 0.0015% sulfur by weight.

4.0 SPECIFIC PERFORMANCE AND EMISSION STANDARDS

4.1. 40 CFR Part 60 Subpart EEEE Opacity Limits for Other Solid Waste Air Curtain Incinerators (OSWI) and the State Visible Emissions Rules

When operating, the ACI and the blower engine must follow the most stringent rules as an OSWI. The permittee must process less than 35 tons of wood waste, clean lumber, and yard waste a day and be in compliance with Conditions 5.1.c.ii.A and 5.1.c.ii.B. The permittee must comply with the following visible emission limits for the ACI:

a. Within 60 days after the ACI reaches the charge rate at which it will operate, but no later than 180 days after its initial startup, emissions from the ACI must not exceed the following limits: [40 CFR 60.2971]:
    i. 10% opacity (six-minute average) on normal operation, except as described in Condition 4.1.a.ii. This applies at all times except during periods of startup, shutdown, and malfunctions.;
    ii. The opacity limitation is 20 percent (6-minute average) during the startup period that is within the first 30 minutes of operation [40 CFR 60.2971]. The

20 percent limit is more restrictive than the CFR and must be followed under OAR 340-208-0110(4).

b. The limitations in paragraph (a) of this section apply at all times except during malfunctions.
c. Compliance must be determined using Condition 8.1 [40 CFR 60.8(c) and 40 CFR 60.2971]
d. The permittee must comply with the following visible emission limits from the ACI operations, as applicable. Emissions from the ACI must not equal or exceed an average of 20% opacity. Opacity must be measured as a six-minute block average using EPA Method 9 or an alternative monitoring method approved by DEQ that is equivalent to EPA Method 9. [OAR 340-208-0110(4)]. This 20 percent limit applies during startup, shutdown and malfunctions.

4.2. 40 CFR Part 63 Subpart ZZZZ Requirements for Internal Combustion Engine

The Blower Engine is subject to the National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR Part 63, Subpart ZZZZ). Per 40 CFR 63.6590(c)(1), the permittee must meet the requirements of Subpart ZZZZ by meeting the requirements of the Standards of Performance for Compression Ignition Internal Combustion Engines, 40 CFR Part 60 Subpart IIII. No further requirements apply for this engine under Part 63 Subpart ZZZZ.

4.3. 40 CFR Part 60 Subpart IIII Fuel Requirements for Internal Combustion Engine

The permittee must use diesel fuel that meets the following standards for nonroad diesel fuel in the Blower Engine: [40 CFR 60.4207(b) and 40 CFR 80.510(b)] Sulfur content: 15 ppm (0.0015%) maximum.

4.4. 40 CFR Part 60 Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines and the State Visible Emissions Rules

Per 40 CFR 60.4204(b) and 60.4201, the blower engine must meet the following emission standards:

a. PM not to exceed 0.03 g/kW-hr (0.022 g/HP-hr);
b. NOx + NMHC not to exceed 4.7g/kW-hr (3.45 g/HP-hr);
c. CO not to exceed 5.0 g/kW-hr (3.6 g/HP-hr); and
d. Opacity will be less than 20% opacity [40 CFR 89.113 & 40 CFR 1039] while operating at normal operation of the ACI:
e. Use a certified engine to power the blower;
f. The permittee must comply with the following visible emission limits from the ACI engine blower operations, as applicable. Emissions from the ACI engine blower operation must not equal or exceed an average of 20% opacity. Opacity must be measured as a six-minute block average using EPA Method 9 or an alternative monitoring method approved by DEQ that is equivalent to EPA Method 9. [OAR 340-208-0110(4)]

4.5. 40 CFR Part 60 Subpart IIII General Provisions

The permittee must comply with the applicable General Provisions as noted in Table 3 at the end of this permit. [40 CFR 60.4218]

5.0 OPERATION AND MAINTENANCE REQUIREMENTS

5.1. Air Curtain Incinerator Operation and Maintenance

The permittee must comply with the following applicable conditions for the ACI and the following must be in the Operation and Maintenance Plan:

a. ACI: The air blower manifold length must be equal to the length of the burning area for an ACI operation using a manufactured aboveground container and blower system;
b. Manufacturer's specifications: ACIs must meet manufacturer's specifications for installation, operation and maintenance to ensure complete combustion of exhaust gas. Manufacturer's specifications must be kept on site and be available for inspection by DEQ staff;
c. The permittee will insure the ACI operates with the following operational limits which shall be outlined in the Operations Plan required by Condition 5.2;
    i. Burning must be conducted only between the hours of 7am -7pm (based on a calendar day);
    ii. The permittee may not operate the ACI more than the following:
        A. This facility may operate up to a total of 7 hours each calendar day. The hours of operation that are counted are those hours between end of start-up of combustion and beginning of cool down which starts ½ hour after the last load being added.
        B. As an OSWI source (40 CFR 60.2888) the ACI is only allowed to burn up to 35 tons per day.
        C. The facility may operate up to 5 tons per hour.
d. 40 CFR Part 60 Subpart EEEE, authorized materials. The permittee is only allowed to burn the materials listed below: [40 CFR 60.2970(b):
    i. 100% wood waste;
    ii. 100% clean lumber;
    iii. 100% yard waste; and
    iv. 100% mixture of only wood waste, clean lumber, and/or yard waste.
e. Operating conditions:
    i. The ACI must be operated only by operators who have been properly trained in accordance with the training section in the Operations Plan submitted to and approved by DEQ in accordance with Condition 5.2;
    ii. No fires shall be started or material added to existing fires when any of the following occurs:
        1. The local fire protection agency or the Oregon Department of Forestry has banned burning for that area;

2. The National Weather Service has issued an air stagnation advisory for the area in which the ACI is operating. Air stagnation alerts are posted on the National Weather Service website.

iii. An operator must remain with the ACI at all times when it is operating;

iv. Start-up conditions: Only distillate oil, diesel fuel, natural gas, or liquefied petroleum gas may be used to ignite the ACI. The amount of any oil-based accelerants used must be minimized to ensure compliance with Condition 4.1.b.;

v. Material must not be loaded into the ACI such that it will protrude above the air curtain (blower airflow);

vi. The proper blower speed must be maintained so as to meet emissions standards and minimize smoke and ash becoming airborne. The blower must be operating when and as long as any material in the ACI is burning;

f. Material Stockpiles:

i. The permittee must operate in accordance with the Material Stockpiles section of the Operations Plan submitted to and approved by DEQ in accordance with Condition 5.2;

ii. The permittee must manage material stockpiles in quantities and under condition to do their best to prevent spontaneous combustion, this management will be addressed in the facility O&M Plan;

iii. The permittee must take adequate measures at the end of each day to ensure that no emissions emanate from materials left in the ACI overnight by:

A. Letting the fire burn out completely; or

B. Quenching ash if it is produced, if needed;

g. Startup/Shutdown:

i. The permittee must operate in accordance with the Startup/Shutdown section of the Operations Plan submitted to and approved by DEQ in accordance with Condition 5.2;

h. Authorized Materials Management:

i. The permittee must operate in accordance with the Authorized Materials Management section of the Operations Plan submitted to and approved by DEQ in accordance with Condition 5.2;

ii. Dirt on the authorized materials must be minimized;

i. Ash handling and disposal: follow as per the Operations Plan

5.2. Air Curtain Incinerator Operations Plan

a. The permittee must submit a draft Operations Plan to the DEQ regional office from where the ACI permit was issued, for approval within 30 days of the permit being issued. The permittee must comply with the Operations Plan immediately upon DEQ approval.

b. The Operations Plan must include sections for each of the activities listed below and how the permittee will operate and manage the following:

i. Operator training program section, outlining proper training for ACI operators;
ii. Operation limits according to Condition 5.1.c;
iii. Material stockpiles in accordance with Condition 5.1.f;
iv. Startup/Shutdown procedures in accordance with Condition 5.1.g;
v. Authorized materials in accordance with Conditions 5.1.d and 5.1.h;
vi. Ash handling in accordance with Condition 5.1.i.

c. The Operations Plan must include a Material Feed Rate Section that indicates how the facility will visibly document the amount of waste that will be burned daily. This evaluation will relate the visible volume of waste to the weight of the waste. This section will describe the methodology for determining the weight of material fed into the ACI on an hourly and daily basis.

d. The Operations Plan must include an Hours of Operation Section:
The permittee must keep records of the following information that must be the initialed by the operator:
A. The date of entry of the records;
B. Date and time the ACI is ignited;
C. Date and time the engine is started;
D. Time of day when the permittee ceases feeding authorized materials to the ACI;
E. Time of day the engine is turned off (hours of engine operation);
F. Type of material fed to the ACI each day;
G. Total hours of operation when material is fed to the ACI per day;
H. Daily hours of engine operation and fuel usage (gallons);
I. Documentation to show compliance with ACI operation under condition 5.1.c.

e. The permittee must review the Operations Plan annually;

f. Any changes to the Operations Plan must include explanations for why the changes are necessary and must be submitted to the DEQ regional office from where the ACI permit was issued at least 30 days prior to any requested change. The permittee will document the review of the Operations Plan; and

g. The updated plan must be approved by DEQ before any changes in operations under this plan are made.

5.3. 40 CFR Part 60 Subpart IIII Operation and Maintenance of Internal Combustion Engine

a. The permittee must demonstrate compliance with the applicable emission standards in Condition 4.4 by purchasing an engine certified to the applicable emission standards.

b. The permittee must install and configure the engine according to the manufacturer's emission-related specifications. [40 CFR 60.4211(c)]

c. The permittee must operate and maintain the engine to comply with the required emission standards over the entire life of the engine [40 CFR 60.4206] by doing all of the following: [40 CFR 60.4211(a)]
i. Operating and maintaining the engine and control device according to the manufacturer's emission-related written instructions;
ii. Meeting the requirements of 40 CFR 89, 94 and/or 1068, as applicable.

d. If the stationary ACI internal combustion engine is equipped with a diesel particulate filter to comply with the emission standards in 40 CFR 60.4204, the

diesel particulate filter (DPF) must be installed with a backpressure monitor that notifies you when the high backpressure limit of the engine is approached. [40 CFR 60.4209(b)]

6.0 PLANT SITE EMISSION LIMITS

6.1. Plant Site Emission Limits (PSEL)

The permittee must not cause or allow plant site emissions to exceed the following: [OAR 340-222-0040 and/or OAR 340-222-0041, OAR 340-222-0060]

Pollutant	Limit	Units
PM	24	tons per year
PM_{10}	14	
$PM_{2.5}$	9	
SO_2	39	
NO_X	39	
CO	99	
VOC	39	
GHGs (CO2e)	74,000	

6.2. Annual Period

The annual plant site emissions limits apply to any 12-consecutive calendar month period. [OAR 340-222-0035]

7.0 SOURCE RISK LIMITS

7.1. Chronic Source Risk Limit Conditions: [OAR 340-245-0110(2)(a)&(3)(a)]

a. When operating the ACI the permittee must limit the material burned to 43,800 green tons per annual period.
b. When operating the ACI blower engine the permittee must limit the diesel fuel consumed to 20,848 gallons per annual period.

7.2. Annual Period

The cancer and chronic noncancer source risk limits apply to any 12-consecutive month period. [OAR 340-245-0110(1)(a)]

7.3. Acute Source Risk Limit Conditions: [OAR 340-245-0110(2)(a)&(3)(a)]

a. When operating the ACI the permittee must limit the material burned to 40 green tons per 24 hour period;
c. When operating the ACI the permittee must limit the material burned to the hours of 7am-7pm;
b. When operating the ACI blower engine the permittee must limit the fuel consumed to 19 gallons per 24 hour period.

7.4. 24 hour Period

The acute noncancer source risk limits apply to the 12 hour period per calendar day between the hours of 7am and 7pm. [OAR 340-245-0110(1)(b)]

8.0 COMPLIANCE DEMONSTRATION

8.1. 40 CFR Part 60 Subparts EEEE (OSWI) Opacity Limits Monitoring Requirements

a. As an OSWI the ACI will operate using EPA Method 9 to determine compliance with the opacity limitation in Condition 4.1.a.i as determined by a 6-minute average opacity value during normal operation. [40 CFR 60.2971 and 40 CFR 60.2972]
b. As an OSWI the ACI will operate using EPA Method 9 to determine compliance with the opacity limitation in Condition 4.1.a.ii as determined by a 6-minute average opacity value during startup periods that are within the first 30 minutes of operation. [40 CFR 60.2971 and 40 CFR 60.2972]
c. The monitoring results from Conditions 8.1.a through 8.1.d shall be used to determine compliance with the state opacity limit in Condition 4.1.d for any 6-minute block average. [OAR 340-208-0110(2)]
d. The permittee has conducted an initial test for opacity on the ACI. The permittee will keep those records of the initial performance test at the site.
e. Follow up opacity tests:
    i. The permittee must conduct quarterly EPA Method 9 tests during each operating quarter no more than 3 months following the date of the previous test during both a startup period that is within the first 30 minutes of operation and during normal operation except as allowed by Condition 8.1.f;
    ii. In accordance with 40 CFR 60.2972, after the initial test for opacity the permittee must conduct annual tests no more than 12 months following the date of your previous test. However, if the ACI has been out of operation for more than 12 months following the date of the previous test, then you must conduct a test for opacity upon startup of the unit. The results of a quarterly test may be used to meet this NSPS test requirement.
f. The permittee is not required to conduct the quarterly opacity test if the ACI is shut down two months within the quarter; [OAR 340-208-0110]
g. The permittee must provide DEQ at least 30 days prior notice of any performance test to afford DEQ the opportunity to have an observer present, and keep DEQ informed if the date should change. If after the 30-day notice for an initially

scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the permittee must notify DEQ as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with DEQ by mutual agreement. [40 CFR 60.8(d)]

8.2. PSEL Compliance Monitoring using Emission Factors

The permittee must calculate the emissions for each 12-consecutive calendar month rolling period based on the following calculation for each pollutant except GHGs: [OAR 340-222-0080]

$$E = \Sigma(EF \times P) \times 1 \text{ ton}/2000 \text{ pounds}$$

Where:

E = pollutant emissions (tons/year);
Σ = symbol representing "summation of";
EF = pollutant emission factor (see Condition 18.0);
P = process production (see Condition 19.0)

8.3. Emission Factors

The permittee must use the default emission factors provided in Condition 18.0 for calculating pollutant emissions, unless alternative emission factors are approved in writing by DEQ. The permittee may request or DEQ may require using alternative emission factors provided they are based on actual test data or other documentation (e.g., AP-42 compilation of emission factors) that has been reviewed and approved by DEQ. [OAR 340-222-0080]

8.4. Greenhouse Gas Emissions

The permittee must calculate greenhouse gas emissions in metric tons and short tons for each 12-consecutive calendar month period to determine compliance with the GHG PSEL by using the DEQ Fuel Combustion Greenhouse Gas Calculator: https://www.oregon.gov/deq/FilterDocs/ghgCalculatorFuelCombust.xlsx. [OAR 340-215-0040]

8.5. PSEL Compliance Monitoring

The permittee must demonstrate compliance with the PSEL by totaling the emissions from all point sources calculated under Conditions 8.2 and 6.2. [OAR 340-222-0080]

9.0 SPECIAL CONDITIONS

9.1. The permittee will only operate the ACI a total of 7 hours in one calendar day. The hours of operation are those hours between end of the start-up of the combustion and beginning of cooling down being ½ hour after the last load being added. (Being an OSWI source this hour limit will limit the material burned to 35 tons per day since the capacity of the ACI is 5 tons per hour).

9.2. The permittee will not burn woody waste in the ACI from any sources outside the Black Butte Ranch operations.

10.0 SOURCE TESTING

10.1. The permittee will conduct a source test on the ACI if requested by DEQ as per regulation OAR 340-212-0120.

11.0 MONITORING AND SUBMITTALS

11.1. Visible Emissions Monitoring

a. Visible emission monitoring under Condition 8.1 and Condition 4.1.
b. Visible emission performance test as required by Condition 8.1 and the quarterly testing under Condition 8.1.e
c. Fugitive emission monitoring using Method 22 according to Condition 3.1.c on a quarterly basis.

11.2. Particulate Matter Emissions Monitoring

As long as the visible emissions are in compliance with Condition 8.1 the grain loading is assumed to be in compliance with Condition 3.2.a.

11.3. Fuel and Fuel Sulfur Content Monitoring

The permittee will demonstrate compliance with fuel and fuel sulfur content Condition 3.6 and Condition 4.3 through a fuel oil certification from the supplier or by sample results.

11.4. 40 CFR Part 60 Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines-Monitoring Requirement

The blower engine must meet the emission standards:

a. To meet the emission standard for the Conditions 4.4.a - 4.4.c., the facility may use an emissions certification document from the manufacturer or conduct a source test to show compliance. If the permittee decides to show compliance by source testing then the source test is required to be conducted within 6 months of the permit being issued.
b. To meet the emission standard for the Condition 4.4.d, the facility will show compliance when conducting the opacity evaluation on the Industrial Air Curtain Incinerator under Condition 4.1.

11.5. Submittal of Documents/Show Compliance

a. Permittee will submit an Operations Plan within 30 days of permit issuance according to Condition 5.2
b. Permittee will show Operations Maintenance of Internal Combustion Engine is in compliance under Condition 5.3.a by purchasing an engine that is certified.

12.0 RECORDKEEPING REQUIREMENTS

12.1. NSPS Opacity Recordkeeping for Air Curtain Incinerators

To demonstrate compliance with Conditions 8.1 and 4.1, the permittee must keep records of all EPA Method 9 opacity tests in either paper copy or computer-readable format that can be printed upon request, unless DEQ approves another format. The records must be kept at the permittee's home office, for at least 5 years, and made available within 24 hours to DEQ upon request. Operating conditions during the opacity readings must be documented and include the following: [40 CFR 60.2973]

a. Operating capacity information;
   i. Hours of operation per day on the ACI
   ii. Hours of engine operation per day
b. All other records required by the EPA Method 9 Visible Emission Observation Form. The permittee will use the EPA Method 9 forms and complete all the details in the form.

12.2. To demonstrate compliance with operation and maintenance requirements for the Blower Engine in Condition 5.3, the permittee must keep records of the following information for the compression ignition internal combustion engine: [OAR 340-214-0110 and OAR 340-226-0100]

a. Engine certification: Documentation from the manufacturer that the engine is certified to meet the emission standards in Condition 4.4.b and information as required in 40 CFR Parts 89 and 1039, as applicable, and the applicable requirements for 2013 or later model year non-emergency engines;
b. The following notifications and all documentation supporting any notification:
   i. Notification of any physical or operational change which may increase the emission rate of any air pollutant, postmarked 60 days or as soon as practicable before the change is commenced and must include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change;
c. Records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the engine;
d. Records of maintenance performed on the engine over the entire life of the engine;
e. If the engine is equipped with a diesel particulate filter (DPF), records of any notifications that the high backpressure limit of the engine is approached; and
f. Fuel requirements by monitoring the sulfur content of each shipment of diesel received by:

i. Obtaining a billing statement or purchase receipt to indicate that the diesel burned meets the requirements of Condition 3.6 from each vendor at least once per year for shipments of fuel received; or
ii. Obtaining a fuel content certificate from each vendor at least once per year for shipments of diesel received; or
iii. Analyzing or having analyzed by a contract laboratory a representative sample taken by the permittee from each vendor at least once per year for shipments of diesel received.

g. Records to demonstrate compliance with Condition 3.6 and Condition 5.3 must be kept at the permittee's home office and made available within 24 hours to DEQ upon request.

12.3. To demonstrate compliance with Condition 5.1 and 7.1, the permittee must, at a minimum, meet the following requirements:

a. A written record or log of the ACI operation and maintenance must be maintained at the site and made available upon request. This record or log must be organized such that compliance can be readily determined and must include the following:
i. Initials of the individual logging the operations;
ii. Date and daily hours of operation, including start and stop times of the ACI and the engine;
iii. Daily, the amount of time the ACI was operated; normal operation is between end of start-up of combustion and beginning of cool down which commences ½ hour after the last load being added;
iv. Daily, the amount of fuel burned by the ACI blower engine (this may be conservatively based on the hours of operation times the engine fuel consumption when operating at the ACI capacity of 5 tons/hour);
v. Monthly and rolling 12-month totals of the hours of operation, and amount of material burned in the ACI;
vi. Monthly and rolling 12-month totals of the hours of operation, and amount of fuel burned in the ACI blower engine;
vii. Any instances of spontaneous combustion and what the permittee did to minimize emissions;
viii. The results of any on-site inspections that identified any unauthorized materials and the disposal method of the unauthorized materials;

b. Records of results of all initial and annual opacity tests in either paper copy or computer-readable format that can be printed upon request, unless DEQ approves another format; [40 CFR 60.2973]
c. Records of ash generated for disposal;
d. A copy of any operating instructions must be kept at the burn site, followed by the permittee, and made available upon request;
e. A copy of all operator training certificates from the manufacturer of the ACI;
f. Records must be maintained for at least 5 years. The records may be maintained on site for a minimum of two years and must be available at all times for inspection by DEQ. The permittee may keep the records off site for the remaining 3 years; [40 CFR 60.2973]

12.4. Excess Emissions

a. The permittee must maintain the records of excess emissions listed below and as defined in OAR 340-214-0300 through 340-214-0340, recorded on occurrence. Typically, excess emissions are caused by process upsets, startups, shutdowns or scheduled maintenance. In many cases, excess emissions are evident when visible emissions are greater than 20% opacity as a six-minute block average.
   i. The date and time of the beginning of the excess emissions event and the duration or best estimate of the time until return to normal operation;
   ii. The date and time the permittee notified DEQ of the event;
   iii. The equipment involved;
   iv. Whether the event occurred during planned startup, planned shutdown, scheduled maintenance or as a result of a breakdown, malfunction or emergency;
   v. Steps taken to mitigate emissions and corrective action taken, including whether the approved procedures for a planned startup, shutdown or maintenance activity were followed;
   vi. The magnitude and duration of each occurrence of excess emissions during the course of an event and the increase over normal rates or concentrations as determined by continuous monitoring or best estimate (supported by operating data and calculations); and
   vii. The final resolution of the cause of the excess emissions;
b. If there is an ongoing excess emission caused by an upset or breakdown, the permittee must immediately take action to minimize emissions by reducing or ceasing operation of the equipment or facility, unless doing so could result in physical damage to the equipment or facility, or cause injury to employees. In no case may the permittee operate more than 48 hours after the beginning of the excess emissions, unless continued operation is approved by DEQ in accordance with OAR 340-214-0330(4).
c. In the event of any excess emissions which are of a nature that could endanger public health and occur during non-business hours, weekends or holidays, the permittee must immediately notify DEQ by calling the Oregon Emergency Response System (OERS). The current number is 1-800-452-0311.
d. If startups or shutdowns may result in excess emissions, the permittee must submit startup/shutdown procedures used to minimize excess emissions to DEQ for prior authorization, as required in OAR 340-214-0310. New or modified procedures must be received by DEQ in writing at least 72 hours prior to the first occurrence of the excess emission event. The permittee must abide by the approved procedures and have a copy available at all times.
e. The permittee must maintain a log of all excess emissions in accordance with OAR 340-214-0340(3).

12.5. Retention of Records

Unless otherwise specified, the permittee must retain all records for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application and make them available to DEQ upon request. The permittee must maintain the two (2) most recent years of

records onsite for permanent facilities. The permittee must maintain records at the main office for a five-year rolling period. [OAR 340-214-0114]

13.0 REPORTING REQUIREMENTS

13.1. NSPS Opacity Reporting for Air Curtain Incinerators

The permittee must submit the following: [40 CFR 60.2973(d) and (e)]

a. Submit the results (each 6-minute average) of the initial opacity tests no later than 60 days following the initial test. Submit annual opacity test results within 12 months following the previous report; and
b. Submit initial and annual opacity test reports as electronic or paper copy on or before the applicable submittal date.

13.2. Excess Emissions

a. The permittee must notify DEQ of excess emissions events if the excess emission is of a nature that could endanger public health.
b. The permittee must also submit follow-up reports summarizing records of excess emissions as required in Condition 12.4 when required by DEQ. Such notice must be provided as soon as possible, but never more than one hour after becoming aware of the problem. Notice must be made to the regional office identified in Condition 15.2 by email, telephone, facsimile or in person.

13.3. Semi-annual

a. The permittee must submit a semi-annual report if visible emissions are observed under Condition 8.1.e and fugitive emissions are observed under Condition 3.1. The first semi-annual report (January 1 through June 30th) will be submitted by July 30th. The second semi-annual report (July 1 through December 31st) will be submitted with the Annual Report (Condition 13.4) by February 15th of the following year.

13.4. Annual Report

For each year this permit is in effect, the permittee must submit to DEQ by **February 15** two (2) paper copies and one (1) electronic copy of the following information for the previous calendar year:

a. Operating parameters:
   i. Daily total hours of operation for each day; normal operation is between end of start-up of combustion and beginning of cool down which commences ½ hour after the last load being added; Condition 12.3.a.iii;

ii. Daily amount of fuel burned (based on hours of operation) by the ACI blower engine and hours of operation for the day; Condition 12.3.a.iv;
iii. Monthly and rolling 12-month totals of the hours of operation, and amount of fuel burned in the ACI blower engine; Condition 12.3.a.vi;
iv. Monthly and rolling 12-month totals of the hours of operation, and quantity of material burned in the ACI in tons; Condition 12.3.a.v; (tons are defined by capacity, 5 tons/hr times hours of operation)
v. Results of all opacity tests;

b. Calculations of annual pollutant emissions determined each month in accordance with Condition 8.2;
c. A brief summary listing the date, time, and the affected device/process for each excess emission that occurred during the reporting period;
d. Summary of complaints relating to air quality received by permittee during the year in accordance with Condition 3.5;
e. List permanent changes made in facility process, production levels, and pollution control equipment which affected air contaminant emissions; and
f. Submit the semi-annual report according to Condition 13.3, if required during this reporting period.

13.5. Greenhouse Gas Registration and Reporting

a. If the calendar year greenhouse gas emissions (CO_2e) are ever greater than or equal to 2,756 tons (2,500 metric tons), the permittee must annually register and report its greenhouse gas emissions with DEQ in accordance with OAR 340 Division 215. If the facility burns more than 1,700 tons (340 hours of operation) of material (Condition 2.2) for the year the facility will exceed the 2,500 metric tons and may need to register with the DEQ Greenhouse Gas Program.
b. If the calendar year greenhouse gas emissions (CO_2e) are less than 2,756 tons (2,500 metric tons) for three consecutive years, the permittee may stop reporting greenhouse gas emissions but must retain all records used to calculate greenhouse gas emissions for the five years following the last year that they were required to report. The permittee must resume reporting its greenhouse gas emissions if the calendar year greenhouse gas emissions (CO_2e) are greater than or equal to 2,756 tons (2,500 metric tons) in any subsequent calendar year.

13.6. Notice of Change of Ownership or Company Name

The permittee must notify DEQ in writing using a DEQ "Transfer Application" form within 60 days after the following:

a. Legal change of the name of the company as registered with the Corporations Division of the State of Oregon; or
b. Sale or exchange of the activity or facility.

13.7. Construction or Modification Notices

The permittee must notify DEQ in writing using a DEQ "Notice of Intent to Construct" form, or other permit application forms and obtain approval in accordance with OAR 340-210-0205 through 340-210-0250 before:

a. Constructing, installing or establishing a new stationary source that will cause an increase in any regulated pollutant emissions;
b. Making any physical change or change in operation of an existing stationary source that will cause an increase, on an hourly basis at full production, in any regulated pollutant emissions; or
c. Constructing or modifying any air pollution control equipment.

14.0 ADMINISTRATIVE REQUIREMENTS

14.1. Permit Modifications

Application for a modification of this permit must be submitted within 60 days prior to the source modification. When preparing an application, the applicant should also consider submitting the application 180 days prior to allow DEQ adequate time to process the application and issue a permit before it is needed. A special activity fee must be submitted with an application for the permit modification. The fees and two (2) copies of the application must be submitted to the DEQ Business Office listed in Condition 15.1.

14.2. Annual Compliance Fee

The permittee must pay the annual fees specified in OAR 340-216-8020, Table 2, Part 2 and 3 for a Simple ACDP by **December 1** of each year this permit is in effect. An invoice indicating the amount, as determined by DEQ regulations will be mailed prior to the above date. **Late fees in accordance with Part 5 of the table will be assessed as appropriate.**

14.3. Change of Ownership or Company Name Fee

The permittee must pay the non-technical permit modification fee specified in OAR 340-216-8020, Table 2, Part 4 with an application for changing the ownership or the name of the company.

14.4. Special Activity Fees

The permittee must pay the special activity fees specified in OAR 340-216-8020, Table 2, Part 4 with an application to modify the permit.

15.0 DEQ CONTACTS / ADDRESSES

15.1. Business Office

The permittee must submit payments for invoices, applications to modify the permit, and any other payments to DEQ's Business Office:

Oregon Dept. of Environmental Quality
Financial Services – Revenue Section
700 NE Multnomah St., Suite 600
Portland, OR 97232-4100

15.2. Permit Coordinator

The permittee must submit all notices and applications that do not include payment to the Permit Coordinator.

DEQ Air Quality Permit Coordinator
Eastern Region Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701

15.3. Report Submittals

Unless otherwise notified, the permittee must submit all reports (annual reports, source test plans and reports, etc.) to DEQ's Eastern Region. If you know the name of the Air Quality staff member responsible for your permit, please include it:

DEQ Air Quality Permit Coordinator
Eastern Region Bend Office
475 NE Bellevue Dr., Suite 110
Bend, OR 97701

15.4. Web Site

Information about air quality permits and DEQ's regulations may be obtained from the DEQ web page at www.oregon.gov/deq/.

16.0 GENERAL CONDITIONS AND DISCLAIMERS

16.1. Permitted Activities

a. Until this permit expires or is modified or revoked, the permittee is allowed to discharge air contaminants from the following:
   i. Processes and activities directly related to or associated with the devices/processes listed in Condition 1.0 of this permit;
   ii. Any categorically insignificant activities, as defined in OAR 340-200-0020, at the source; and
   iii. Construction or modification changes that are Type 1 or Type 2 changes under OAR 340-210-0225 that are approved by DEQ in accordance with OAR 340-210-0215 through 0250, if the permittee complies with all of the conditions of DEQ's approval to construct and all of the conditions of this permit.

b. Discharge of air contaminants from any other equipment or activity not identified herein is not authorized by this permit.

16.2. Other Regulations

In addition to the specific requirements listed in this permit, the permittee must comply with all other applicable legal requirements enforceable by DEQ

16.3. Conflicting Conditions

In any instance in which there is an apparent conflict relative to conditions in this permit, the most stringent conditions apply. [OAR 340-200-0010]

16.4. Masking of Emissions

The permittee must not cause or permit the installation of any device or use any means designed to mask the emissions of an air contaminant that causes or is likely to cause detriment to health, safety or welfare of any person or otherwise violate any other regulation or requirement. [OAR 340-208-0400]

16.5. DEQ Access

The permittee must allow DEQ's representatives access to the plant site and pertinent records at all reasonable times for the purposes of performing inspections, surveys, collecting samples, obtaining data, reviewing and copying air contaminant emissions discharge records and conducting all necessary functions related to this permit in accordance with ORS 468.095.

16.6. Permit Availability

The permittee must have a copy of the permit available at the facility at all times. [OAR 340-216-0020(3)

16.7. Open Burning

The permittee may not conduct any open burning except as allowed by OAR 340, Division 264.

16.8. Asbestos

The permittee must comply with the asbestos abatement requirements in OAR 340, Division 248 for all activities involving asbestos-containing materials, including, but not limited to, demolition, renovation, repair, construction and maintenance.

16.9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

16.10. Permit Expiration

a. A source may not be operated after the expiration date of the permit, unless any of the following occur prior to the expiration date of the permit: [OAR 340-216-0082]
   i. A timely and complete application for renewal of this permit or for a different ACDP has been submitted; or
   ii. A timely and complete application for renewal or for an Oregon Title V Operating Permit has been submitted, or
   iii. Another type of permit (ACDP or Oregon Title V Operating Permit) has been issued authorizing operation of the source.
b. For a source operating under an ACDP or Oregon Title V Operating Permit, a requirement established in an earlier ACDP remains in effect notwithstanding expiration of the ACDP, unless the provision expires by its terms or unless the provision is modified or terminated according to the procedures used to establish the requirement initially.

16.11. Permit Termination, Revocation, or Modification

DEQ may terminate, revoke or modify this permit pursuant to OAR Chapter 340 Division 216. [OAR 340-216-0082].

17.0 CLEANER AIR OREGON GENERAL CONDITIONS AND DISCLAIMERS

17.1 Construction or Modification Notices for TEUs

The permittee must notify DEQ in writing using a DEQ "Notice of Intent to Construct" form, or other permit application forms and obtain approval in accordance with OAR 340-245-0060(4)(c) before:

a. Constructing, installing or establishing any of the following Toxics Emissions Units (TEU) that will cause an increase in any regulated pollutant emissions;
   i. Aggregated under OAR 340-245-0060(4)(c)(B); or
   ii. Significant under OAR 340-245-0060(4)(c)(C);
b. Making any physical change or change in operation of an existing TEU that will cause any increase in any toxic air contaminant emissions; or
c. Constructing or making any physical change or change in operation of any air pollution control equipment.

17.2 Reassessment of Risk

The permittee must reassess the source risk for cancer, chronic noncancer, and acute noncancer risk based on any of the following conditions:

a. Zoning or land use changes in a way that may increase risk; [OAR 340-245-0100(8)(a)(F)&(G);
b. Modification of a physical feature of the source that was used as a modeling parameter in the risk assessment that may increase risk; [OAR 340-245-0100(8)(a)(D);
c. A Risk Based Concentration in OAR 340-245-8040 Table 4 for a Toxic Air Contaminant that is emitted by this source has been added or the value lowered, leading to an increase in risk; [OAR 340-245-0100(8)(b)(B)];
d. Risk assessment procedures in Division 245 change that may increase risk, or impact the implementation or effectiveness of the Risk Reduction Plan; [OAR 340-245-0100(8)(b)(C)]; or
e. When notified in writing by DEQ that the permittee must update or correct its previous risk assessment.

17.3 Permit Modifications

a. The permittee must apply for a permit modification under OAR 340 Division 216 and submit fees as required under OAR 340-245-0100(8)(g) and Condition 15.1 (business office address) for the following modifications:

i. Modify an established Source Risk Limit or any risk limits or conditions necessary under Division 245;
ii. Request an extension to a compliance date as outlined in OAR 340-245-0100(8)(a)(C)(i)-(iii);
iii. Terminate postponement of risk reductions; [OAR 340-245-0100(8)(a)(E)]
iv. Modify air monitoring requirements; [OAR 340-245-0100(8)(a)(H)] or
v. Revise or update the approved risk assessment.

b. If DEQ has provided notice to the permittee that a modification under Division 245 is required, the permittee must submit the necessary information required under OAR 340-245-0100(3) to DEQ 90 days after the date that DEQ sends such written notice.

18.0 EMISSION FACTORS

The emission factors below are from the "Air Curtain Incinerator Emissions Factor Determination" written by the San Joaquin Valley Air Pollution Control District. Table 1 below summarizes the emission factors selected for an ACI burning woody biomass derived from agricultural sources and forest vegetation.

Pollutant	Emission Factor** (lbs/hr)	Source
NOx	5	Derivation of NOx Emission Factor for Air Curtain Incineration of Woody Biomass
SOx	0.5	ARB Open Burn for Orchard and Vine Crops and Forest Biomass
$PM_{2.5}$	5.5	USDA, Baker, Oregon Air Curtain Test
PM_{10}	6.5	Average of USDA Baker, Oregon and USDA San Bernardino Air Curtain Tests
PM	8.5	DEQ estimate *
CO	13	USDA, Baker, Oregon Air Curtain Test
VOC	4.5	Average of USDA Baker, Oregon and USDA San Bernardino Air Curtain Tests

*AP42-Table 13.1-4(Metric Units) Emission Factor for prescribe burning by US Region-for Pacific Northwest region, the average PM10 is 77.4% of PM, therefore, PM EF =(1.3 lb/ton)/ 0.774 =1.7
PM EF at capacity = (1.7 lb/ton)(5 tons/hr) = 8.5 lbs/hr.

** Emission Factor based on ACI 5 tons per hour operation max capacity

Table 2 below includes wood ash handling emission factors, which are for the combined activities of unloading from a dump truck and spreading coal fly ash at a landfill.

Table 2: Emission Factor for Wood Ash Handling			
Pollutant	**Emission Factor (lb/ton)**	**Emission Factor (lbs/hr)**	**Source**
PM10	0.23	1.15	Fugitive particulate emission factors for dry fly ash disposal, Journal of the Air & Waste Management Association, 63(&): 806-818, 2013
PM	0.3	1.5	DEQ Estimate**
PM2.5	0.035	0.18	Fugitive particulate emission factors for dry fly ash disposal Journal of the Air & Waste Management Association 63(&):806-818, 2013

**AP42-Table 13.1-4(Metric Units) Emission Factor for prescribed burning by US Region-for Pacific Northwest region, the average PM10 is %77.4 PM, therefore, PM EF = 0.23 lb/ton /0.774 =0.30
Ash Handling – ash is 1.042% of the wood

Table 3: Emission Factors for Engine		
Pollutant	**Emission Factor g/Kwh (lbs/hr)**	**Source**
PM	0.01 (0.0008)	USEPA Tier 4 certified diesel engine emission standards
CO	0.3 (0.02)	
NMHC (VOC)	0.26 (0.0212)	
NO_x	4.4 (0.3589)	
SO_2	(0.0021)	AP-42 Sec 3.3

19.0 PROCESS/PRODUCTION RECORDS

Emissions Device or Activity	Process or Production Parameter	Frequency
ACI	Hours of Operation	Daily and annual
ACI engine	Diesel burned (gallons) and hours of operation	Daily and annual
Ash handling	Hours of Ash handled operation	Daily and annual

20.0 ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ACDP	Air Contaminant Discharge Permit
ACI	Air Curtain Incinerator
ASTM	American Society for Testing and Materials
AQMA	Air Quality Maintenance Area
calendar year	The 12-month period beginning January 1st and ending December 31st
CAO	Cleaner Air Oregon
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO_2e	Carbon Dioxide Equivalent
DEQ	Oregon Department of Environmental Quality
dscf	dry standard cubic foot
EPA	US Environmental Protection Agency
FCAA	Federal Clean Air Act
Gal	Gallon(s)
GHG	Greenhouse Gas
gr/dscf	grains per dry standard cubic foot
HAP	Hazardous Air Pollutant as defined by OAR 340-244-0040
I&M	Inspection and Maintenance
lb	Pound(s)
MMBtu	Million British thermal units
NA	Not Applicable
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO_X	Nitrogen Oxides
NSPS	New Source Performance Standard
NSR	New Source Review
O_2	Oxygen
OAR	Oregon Administrative Rules
ORS	Oregon Revised Statutes
O&M	Operation and Maintenance
Pb	Lead
PCD	Pollution Control Device
PEMS	Predictive Emission Monitoring System
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10 microns in size
$PM_{2.5}$	Particulate Matter less than 2.5 microns in size
ppm	parts per million
PSD	Prevention of Significant Deterioration
PSEL	Plant Site Emission Limit
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
scf	standard cubic foot
SER	Significant Emission Rate
SIC	Standard Industrial Code
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
Special Control Area	as defined in OAR 340-204-0070
TACT	Typically Achievable Control Technology
TEU	Toxics Emissions Units
VE	Visible Emissions
VOC	Volatile Organic Compound
year	A period consisting of any 12-consecutive calendar months

21.0 GENERAL PROVISIONS

Table 3 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII Part 60 Standards of Performance for New Stationary Sources Subpart A – General Provisions			
General Provisions Citation	**Subject of Citation**	**Applies to Subpart**	**Explanation**
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4219.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	

Table 3 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII Part 60 Standards of Performance for New Stationary Sources Subpart A – General Provisions			
General Provisions Citation	**Subject of Citation**	**Applies to Subpart**	**Explanation**
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§60.14	Modification	Yes	
§60.15	Reconstruction	Yes	
§60.16	Priority list	Yes	
§60.17	Incorporations by reference	Yes	
§60.18	General control device requirements	No	
§60.19	General notification and reporting requirements	Yes	