

February 22, 2024

Wayne Kooy
Pinnacle Renewable Holdings Inc.
543 Granville Street, Suite 1100
Vancouver, BC V6C 1X8

RE: Preliminary Air Discharge Permit for Wood Pellet Processing Facility

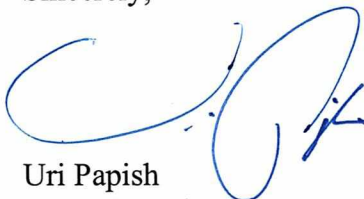
Dear Mr. Kooy:

A preliminary determination to issue Air Discharge Permit (ADP) 24-3624 has been completed for ADP Application CO-1057 pursuant to Section 400-110(4) of the General Regulations for Air Pollution Sources of the Southwest Clean Air Agency (SWCAA). Public notice for ADP Application CO-1057 was published in the permit section of SWCAA's website on July 29, 2022. SWCAA has determined that substantial public interest exists for this permitting action. Therefore, a thirty (30) day public comment period will be provided prior to a final determination.

Electronic copies of ADP 24-3624 and the associated Technical Support Document are available for public review in the "Permits Open for Public Comment" section under the "Air Permits" link on SWCAA's website (<http://www.swcleanair.gov>). Original copies are enclosed for your files. If you have any comments on this preliminary determination, please notify SWCAA within the specified comment period. If no comments are received, your final ADP will be issued at the conclusion of the comment period.

If you have any questions or comments, or desire additional information, please contact me or Danny Phipps at (360) 574-3058, extension 124.

Sincerely,



Uri Papish
Executive Director

UP:edp

Enclosure: Technical Support Document and Air Discharge Permit 24-3624





SWCAA
Southwest Clean Air Agency

DRAFT

**AIR DISCHARGE PERMIT
24-3624**

Preliminary Issued: February 22, 2024

Pinnacle Renewal Holdings (USA) Inc. (Drax)
125 East Mill Road
Longview, WA 98632

SWCAA ID – 2760

REVIEWED BY: _____
Clinton Lamoreaux, Chief Engineer

APPROVED BY: _____
Uri Papish, Executive Director

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1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	Biosizer/Scalpers	Enclosed Conveyor
2	Biomass Rotary Dryer	Regenerative Thermal Oxidizer (RTO) Wet Electrostatic Precipitator (WESP) For RTO - Low Sulfur Fuel (Nat Gas)
3	Shaving Receiving	Walking Floor Trucks, Covered Conveyors
4	Hammermill No. 1	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
5	Hammermill No. 2	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
6	Hammermill No. 3	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
7	Hammermill No. 4	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
8	Pelletizer No. 1	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
9	Pelletizer No. 2	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
10	Pelletizer No. 3	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
11	Pelletizer No. 4	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
12	Pelletizer No. 5	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
13	Pelletizer No. 6	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
14	Pelletizer No. 7	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)

ID No.	Equipment/Activity	Control Equipment/Measure
15	Pelletizer No. 8	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
16	Pelletizer No. 9	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
17	Pelletizer No. 10	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
18	Pelletizer No. 11	Regenerative Catalytic Oxidizer (RCO) Fabric Filtration For RCO - Low Sulfur Fuel (Nat Gas)
19	Pellet Storage Dome	Enclosure
20	Loadout System	Cascade Chute
21	Wet Material Stockpile	High moisture content (approximately 50%)
22	Emergency Generator Engine	Low Sulfur Fuel ($\leq 0.0015\%$ by wt), Limited Operation (≤ 100 hr/yr) Maintenance and Testing EPA Tier 2 Certification Diesel Particulate Filtration
23	Fire Pump Engine	Low Sulfur Fuel ($\leq 0.0015\%$ by wt), Limited Operation (≤ 100 hr/yr) Maintenance and Testing EPA Tier 3 Certification Diesel Particulate Filtration
24	Haul Roads	Fugitive Control and Monitoring, Watering, Street Sweeping

2. Permit Requirements

The following tables detail the specific requirements of this Air Discharge Permit (ADP). In addition to the requirements listed below, equipment at this facility may be subject to other federal, state, and local regulations. The requirement number is identified in the left-hand column. The text of the requirement is contained in the middle column. The emission unit, equipment, or activity to which the requirement applies is listed in the right-hand column.

Emission Limits

Req. No.	Emission Limits	Equipment/ Activity ID No.																		
1.	<p>Emissions from the Biomass Rotary Dryer exhaust stack must not exceed any of the following:</p> <table><thead><tr><th>Pollutant</th><th colspan="2">Emission Limit</th></tr></thead><tbody><tr><td>Nitrogen Oxides</td><td>228 tpy</td><td>131 ppmvd</td></tr><tr><td>Carbon Monoxide</td><td>184 tpy</td><td>175 ppmvd</td></tr><tr><td>Volatile Organic Compounds</td><td>66 tpy</td><td>15 lb/hr</td></tr><tr><td>Particulate Matter, total</td><td>22 tpy</td><td>0.015 gr/dscf</td></tr><tr><td>Sulfur Dioxide</td><td>21 tpy</td><td>—</td></tr></tbody></table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the Technical Support Document (TSD) for this ADP. The short-term emission limits for particulate matter and volatile organic compounds are expressed as 1-hour averages. The short-term emission limits for carbon monoxide and nitrogen oxides are expressed as 24-hour block averages and compliance is determined using continuous monitoring data. All short-term averages must be adjusted to 10% O₂.</p>	Pollutant	Emission Limit		Nitrogen Oxides	228 tpy	131 ppmvd	Carbon Monoxide	184 tpy	175 ppmvd	Volatile Organic Compounds	66 tpy	15 lb/hr	Particulate Matter, total	22 tpy	0.015 gr/dscf	Sulfur Dioxide	21 tpy	—	2
Pollutant	Emission Limit																			
Nitrogen Oxides	228 tpy	131 ppmvd																		
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Volatile Organic Compounds	66 tpy	15 lb/hr																		
Particulate Matter, total	22 tpy	0.015 gr/dscf																		
Sulfur Dioxide	21 tpy	—																		
2.	<p>Emissions from the exhaust of the RCO controlling the Pelletizers and Hammermills must not exceed any of the following:</p> <table><thead><tr><th>Pollutant</th><th colspan="2">Emission Limit</th></tr></thead><tbody><tr><td>Nitrogen Oxides</td><td>0.94 tpy</td><td>—</td></tr><tr><td>Carbon Monoxide</td><td>53.6 tpy</td><td>0.22 lb/ODT</td></tr><tr><td>Particulate Matter, total</td><td>20.45 tpy</td><td>0.005 gr/dscf</td></tr><tr><td>Volatile Organic Compounds</td><td>66 tpy</td><td>15 lb/hr</td></tr></tbody></table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP. The short-term emission limits are determined as 1-hour averages, uncorrected for O₂ percentage.</p>	Pollutant	Emission Limit		Nitrogen Oxides	0.94 tpy	—	Carbon Monoxide	53.6 tpy	0.22 lb/ODT	Particulate Matter, total	20.45 tpy	0.005 gr/dscf	Volatile Organic Compounds	66 tpy	15 lb/hr	4-18			
Pollutant	Emission Limit																			
Nitrogen Oxides	0.94 tpy	—																		
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Volatile Organic Compounds	66 tpy	15 lb/hr																		
3.	<p>Emissions from the exhaust of the Pellet Storage Dome must not exceed the following:</p> <table><thead><tr><th>Pollutant</th><th>Emission Limit</th></tr></thead><tbody><tr><td>Carbon Monoxide</td><td>6.0 tpy</td></tr></tbody></table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP.</p>	Pollutant	Emission Limit	Carbon Monoxide	6.0 tpy	19														
Pollutant	Emission Limit																			
Carbon Monoxide	6.0 tpy																			

Req. No.	Emission Limits	Equipment/ Activity ID No.						
4.	<p>Emissions from the Haul Roads must not exceed any of the following:</p> <table><tr><th colspan="2">Pollutant</th></tr><tr><td>Particulate Matter, PM₁₀, total</td><td>2.25 tpy</td></tr><tr><td>Particulate Matter, PM_{2.5}, total</td><td>0.55 tpy</td></tr></table> <p>The long-term emission limits are 12-month rolling sums calculated consistent with Section 6 of the TSD for this ADP.</p>	Pollutant		Particulate Matter, PM ₁₀ , total	2.25 tpy	Particulate Matter, PM _{2.5} , total	0.55 tpy	24
Pollutant								
Particulate Matter, PM ₁₀ , total	2.25 tpy							
Particulate Matter, PM _{2.5} , total	0.55 tpy							
5.	Visible emissions from all process units except the Biomass Rotary Dryer exhaust stack and Engines must not exceed zero percent (0%) opacity for more than three (3) minutes in any 1-hour period as determined in accordance with SWCAA Method 9.	1, 3-21, 24						
6.	Visible emissions from the Biomass Rotary Dryer exhaust stack must not exceed ten percent (10%) opacity for more than three (3) minutes in any 1-hour period as determined in accordance with SWCAA Method 9.	2						
7.	Visible emissions from the Emergency Generator Engine and Fire Pump Engine must not exceed five percent (5%) opacity for more than three (3) minutes in any 1-hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400) except during startup. For the purposes of this requirement, the startup period ends when the earlier of the following operating events occurs: (a) The engine has reached normal operating temperature; or (b) The engine has been operating for 15 minutes.	22-23						

Operating Limits and Requirements

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
8.	Reasonable precautions must be taken at all times to prevent and minimize fugitive emissions from plant operations.	Facility-wide
9.	Operations that cause or contribute to a nuisance odor must use recognized good practice and procedures to reduce these odors to a reasonable minimum.	Facility-wide
10.	Emission units and activities identified in this ADP must be maintained and operated in total and continuous conformity with the conditions identified in this ADP. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this ADP, including directing the facility to cease operations until corrective action can be completed.	Facility-wide
11.	Each pollution control device must be operated whenever the processing equipment served by that air pollution control device is in operation. Control devices must be operated and maintained in accordance with the manufacturer's specifications. Furthermore, air pollution control devices must be operated in a manner that minimizes emissions.	Facility-wide

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
12.	All exhausts must be discharged vertically into the ambient air above the level of the building roof. Any device that obstructs or prevents vertical discharge is prohibited.	Facility-wide
13.	A bag leak detection system must be installed downstream of the Hammermill Baghouse and the Pelletizer Baghouse. The leak detection systems must be operated whenever the baghouses are in operation except for system breakdowns, out-of-control periods, calibration checks or maintenance. Each leak detection system must be installed, operated, and maintained in accordance with the requirements in 40 CFR 60.256(c)(1) (found in Subpart Y). Baghouse leak alarms must be addressed in accordance with the requirements in 40 CFR 60.256(c)(3). For the purposes of this requirement, the "Administrator" referenced in 40 CFR 60.256(c) is SWCAA. This requirement is superseded by the Compliance Assurance Monitoring Plan required by 40 CFR 64 when the plan is approved by SWCAA.	4-18
14.	Prior to the initial source test, the RTO must operate at a minimum temperature of 1,500°F (3-hour block average). Thereafter, the RTO must be operated within the range of operating temperatures (3-hour block average) at which compliance with the permitted emission limits was demonstrated during the most recent source emissions test and at a temperature that demonstrates at least 95% destruction efficiency (mass basis, 1-hour average).	2
15.	Prior to the initial source test, the RCO must operate at a minimum temperature of 700°F (3-hour block average). Thereafter, the RCO must be operated within the range of operating temperatures (3-hour block average) at which compliance with the permitted emission limits was demonstrated during the most recent source emissions test and at a temperature that demonstrates at least 95% destruction efficiency (mass basis, 1-hour average).	4-18
16.	Operating parameters of the WESP must be maintained at the following levels, expressed as a 15-minute average: (a) The power in each of the four WESP fields must be maintained at a minimum of 50kV*800mA; and (b) The WESP recycle water must be maintained at a pH ranging from 5-9.	2
17.	The permittee must maintain adequate spare parts to make routine repairs to the Hammermill and Pelletizer bag leak detection systems as necessary.	4-18
18.	The furnace that feeds the rotary dryer must only be fired on wood products. The Permittee must employ work practices to assure that only clean fuel (no rock or dirt, etc.) is combusted in the furnace.	2
19.	Natural gas is the only supplemental fuel approved for use in the RTO and RCO.	2, 4-18
20.	The Permittee must only purchase ultra-low sulfur diesel with a maximum fuel sulfur content of 15 ppmw or less. Any other fuel must be approved by SWCAA, in writing, prior to use.	22-23
21.	The Emergency Generator Engine and Fire Pump Engine must be equipped with non-resettable hour meters to record hours of operation.	22-23

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
22.	Operation of the Emergency Generator Engine and Fire Pump Engine for maintenance checks and readiness testing must not exceed 100 hours per year, each. Emergency operation of the emergency engines is not limited.	22-23
23.	Operation of the Emergency Generator Engine and Fire Pump Engine is limited to maintenance checks, readiness testing, and as necessary to provide emergency service.	22-23
24.	A sufficient quantity of replacement filters, filter bags, or cartridges, as applicable, must be kept on site and readily available. Replacements of filters, filter bags and cartridges must be performed at the manufacturer's specified intervals or more frequent, as necessary.	4-18
25.	A street sweeper (or similar device) must be used to clean paved roads weekly when significant rainfall has not occurred for 15 days or more, or more frequently as needed to prevent fugitive dust.	Facility-wide

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
26.	With the exception of data logged by a computerized data acquisition system, each record required by this ADP must include the date and the name of the person making the record entry, at minimum. If a control device or process is not operating, a record must be made to that effect.	Facility-wide
27.	All records required by this ADP must be kept for a minimum period of no less than five (5) years and must be maintained in a form readily available for inspection by SWCAA representatives.	Facility-wide
28.	Excess emissions and upset conditions must be recorded for each occurrence.	Facility-wide
29.	For each product used or produced at the facility that contains VOC, HAP, or TAP, the Permittee must maintain purchase receipts for quantities, Safety Data Sheet information, and Technical Data Sheets in a readily accessible form.	Facility-wide
30.	<p>The permittee must install and maintain a system to continuously measure the emission rate of NO_x, CO, and the concentration of O₂ from the Regenerative Thermal Oxidizer exhaust stack. Each continuous monitoring system (CMS) must be maintained and certified in accordance with Appendix C of this Permit.</p> <p>Hourly emission rates must be calculated based on monitored emission concentration and exhaust flow. Hourly emission averages must be based on discrete clock hours (block average). 24-hr block average emission concentrations must be defined as the average emission concentration during each of the most recent 24 operating hours excluding startup/shutdown periods.</p> <p>Startup is considered complete when heat from the furnace is used to dry wood, or sixteen (16) hours after furnace starts burning fuel, whichever is shorter.</p>	2

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
31.	Operational data for the WESP must be monitored and recorded as follows: (a) Secondary voltage in each ESP field Recorded daily; (b) Current level in each ESP field Recorded daily; (c) pH of the recycle water Recorded weekly; and (d) Maintenance and Repair Activities Recorded for each Occurrence.	2
32.	Hourly and 24-hour averages of the following data for the dryer must be recorded by the Data Acquisition and Handling System (DAHS) and kept readily available for on-site inspection: (a) NO _x emission concentration (ppmvd @ 10% O ₂); (b) NO _x emission rate (lb/hr); (c) CO emission concentration (ppmvd @ 10% O ₂); (d) CO emission rate (lb/hr); and (e) O ₂ concentration (dry volume percent).	2
33.	Operational data for the Biomass Rotary Dryer and RTO must be recorded as follows: (a) CMS calibration results Recorded for each occurrence; (b) CMS cylinder gas audit results Recorded for each occurrence; (c) CMS maintenance/repair activities Recorded for each occurrence; and (d) RTO temperature Monitored continuously, and an hourly average recorded for each 3-hour block.	2
34.	Operational Data for the Hammermill and Pelletizer baghouses, and RCO must be monitored and recorded as follows: (a) Baghouse differential pressure Recorded weekly; (b) Baghouse hours of operation Recorded monthly; (c) Baghouse filter bag replacement Recorded for each occurrence; (d) Leak detector output Monitored continuously, and an hourly average recorded for each clock hour; (e) RCO temperature Monitored continuously, and an hourly average recorded for each 3-hour block; and (f) Maintenance and repair activities Recorded for each occurrence.	4-18
35.	The average temperature of the burner chambers and recovery chambers of the RTO must be monitored continuously, and an hourly average recorded for each clock hour. Within 90 days of the submittal of the initial source test report for the RTO the Permittee must submit a compliance assurance monitoring plan to SWCAA for demonstrating continuous compliance with the VOC emission limits. After approval by SWCAA, the Permittee must operate in compliance with the compliance monitoring plan until a Title V permit is issued for the facility incorporating compliance assurance monitoring for this unit.	2

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
36.	The average temperature of the burner and recovery chambers of the RCO must be monitored continuously and an hourly average recorded for each clock hour. Within 90 days of the submittal of the initial source test report for the RCO the Permittee must submit a compliance assurance monitoring plan to SWCAA for demonstrating continuous compliance with the VOC emission limits. After approval by SWCAA, the Permittee must operate in compliance with the compliance monitoring plan until a Title V permit is issued for the facility incorporating compliance assurance monitoring for this unit.	4-18
37.	At least once per calendar month, a brief qualitative observation for the purpose of identifying the presence of visible emissions from emission units subject to an opacity limit must be performed during daylight hours while each unit is under normal operation (i.e., not in startup, shut down, or upset). (a) If no visible emissions are observed, a record must be made and no further action is necessary; or (b) If visible emissions are observed, then the Permittee must verify that the unit is meeting the applicable emissions limit. If the limit is being met, a record must be made and no further action is necessary; and (c) If the unit is exceeding the applicable emissions limit, then the Permittee must report the excess emissions, make a record, and take corrective actions until such time as compliance with the limit can be demonstrated.	Facility-wide
38.	The dates the street sweeper and water truck are used on the mill roads must be recorded for each occurrence.	Facility-wide

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
39.	Emission testing of the RCO must be conducted no later than 180 days after initial operation, or 60 days after reaching maximum production rates, whichever is sooner. Subsequent emission testing must be conducted no later than the end of the month that the initial testing was completed every two (2) years thereafter, in accordance with Appendix A. Emission testing may be conducted within three calendar months preceding the month in which the test is due. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.	4-18
40.	Emission testing of the RTO must be conducted no later than 180 days after initial operation, or 60 days after reaching maximum production rates. Subsequent emission testing must be conducted no later than the end of the month that the initial testing was completed every two (2) years thereafter, in accordance with Appendix B. Emission testing may be conducted within three calendar months preceding the month in which the test is due. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.	2

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
41.	Within 180 days of initial operation, the outlet of the storage dome must be tested for CO. CO testing must be conducted using a test protocol approved by SWCAA.	19

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
42.	Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than twelve (12) hours after discovery for emissions that represent a potential threat to human health or safety; (b) As soon as possible, but no later than forty-eight (48) hours after discovery for emissions which the Permittee wishes to claim as unavoidable pursuant to SWCAA 400-107(1); and (c) No later than thirty (30) calendar days after the end of the month of discovery for all other excess emissions.	Facility-wide
43.	Deviations from permit conditions must be reported no later than 30 days after the end of the month during which the deviation is discovered.	Facility-wide
44.	All air quality related complaints received by the Permittee must be reported to SWCAA within three (3) calendar days of receipt. Complaint reports must include the date and time of the complaint, the name and contact information (if available) for the complainant, the nature of the complaint, and any actions taken by the Permittee to address the complaint.	Facility-wide
45.	An annual emissions inventory report must be submitted to SWCAA by March 15 for emissions from the previous calendar year in accordance with SWCAA 400-105(1). Each report must contain, at a minimum, the following information: (a) The annual sum of emissions of NO _x , CO, VOC, PM, PM ₁₀ , PM _{2.5} , SO ₂ , TAPs, and HAPs; (b) Annual natural gas burned in the RCO and RTO; (c) Hours of operation for the Hammermill and Pelletizer baghouses; (d) Total amount of miles driven on haul roads; (e) Total throughput for the facility in oven dry tons; and (f) The annual hours of operation for the Emergency Generator and Fire Pump Engine.	Facility-wide
46.	The permittee must report the information listed below to SWCAA no later than 30 days after the end of each calendar quarter. The respective reporting period is the previous calendar quarter: (a) Hourly data from the CMS (ppm @ 10% O ₂ , lb/hr); (b) Three-hour block averages temperatures for the RCO and RTO; (c) Results of all CMS quarterly audits conducted during the reporting period; and (d) Identification of any periods in which CMS data is not available, and an explanation of why.	2, 4-8

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
47.	The results of all emission testing required by this ADP must be reported to SWCAA in writing within forty-five (45) calendar days of test completion.	2,4-18
48.	Within ten (10) business days of initiating normal operation of the Biomass Rotary Dyer, Hammermills, and Pelletizers, each, the Permittee must notify SWCAA that the unit is operating.	2, 4-18

3. General Provisions

Req. No.	General Provisions
A.	For the purpose of ensuring compliance with this ADP, duly authorized representatives of the Southwest Clean Air Agency must be permitted access to the Permittee's premises and the facilities being constructed, owned, operated and/or maintained by the Permittee for the purpose of inspecting said facilities. These inspections are required to determine the status of compliance with this ADP and applicable regulations and to perform or require such tests as may be deemed necessary.
B.	The provisions, terms, and conditions of this ADP bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
C.	The requirements of this ADP survive any transfer of ownership of the source or any portion thereof.
D.	This ADP must be posted conspicuously at or be readily available near the source.
E.	This ADP will be invalidated, in whole or in part, if construction or installation of any new or modified equipment has not commenced within eighteen (18) months from date of issuance, if construction is discontinued for a period of eighteen (18) months or more without prior SWCAA approval, or if construction is not completed within a reasonable time.
F.	This ADP does not supersede requirements of other agencies with jurisdiction and further, this ADP does not relieve the Permittee of any requirements of any other governmental agency. In addition to this ADP, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
G.	Compliance with the terms of this ADP does not relieve the Permittee from the responsibility of compliance with SWCAA General Regulations for Air Pollution Sources, previously issued Regulatory Orders, RCW 70A.15, Title 173 WAC or any other applicable emission control requirements, nor from the resulting liabilities and/or legal remedies for failure to comply.
H.	If any provision of this ADP is held to be invalid, all unaffected provisions of the ADP will remain in effect and be enforceable.
I.	No change in this ADP will be made or be effective except as may be specifically set forth by written order of the Southwest Clean Air Agency upon written application by the Permittee for the relief sought.

Req. No.	General Provisions
J.	The Southwest Clean Air Agency may, in accordance with RCW 70A.15, impose such conditions as are reasonably necessary to assure the maintenance of compliance with the terms of this ADP, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.

Appendix A
Emission Testing Requirements
Regenerative Catalytic Oxidizer

1. Background

The purpose of this testing is to quantify emissions from the regenerative catalytic oxidizer and to provide an adequate assurance of compliance with the terms and conditions of this ADP.

2. Test Constituents and Test Methods

- (a) Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
- (b) O₂ and CO₂ using EPA Methods 3 or 3A;
- (c) Moisture content of stack gas using EPA Method 4;
- (d) Filterable particulate matter using EPA Method 5;
- (e) Condensable particulate matter using EPA Method 202;
- (f) Carbon monoxide (CO) using EPA Method 10;
- (g) Nitrogen oxides (NO_x) using EPA Method 7E;
- (h) Visible emissions (opacity) using EPA Method 9 and SWCAA Method 9;
- (i) Total Gaseous Organic Compounds (TGOC), as isopropyl alcohol, using EPA Methods 25A or 18 and 25A;
- (j) Total Gaseous Organic Compounds (TGOC) using EPA Method 25A (measured as propane). Non-VOC components measured using EPA Method 18 or a non-methane cutter may be subtracted from a TGOC value determined using EPA Method 25A. Use of a non-methane cutter must be approved by SWCAA in advance; and
- (k) Speciated VOCs using some combination of EPA methods 320, 308, NCASI 94.01 or, NCASI 98.01, OR NCASI A105.01¹

¹ Speciated VOCs to include, at a minimum acetaldehyde, acrolein, benzene, formaldehyde, methanol, phenol, acetic acid, propionic acid, and propionaldehyde.

3. Test Plan and Notification

A comprehensive test plan must be submitted to SWCAA for review and approval a minimum of ten (10) business days prior to the proposed test date. SWCAA must be notified a minimum of three (3) business days prior to the proposed test date so that a SWCAA representative may be present during testing.

4. Test Requirements

- (a) Test Dates. Emission testing of the Regenerative Catalytic Oxidizer must be conducted no later than 180 days after initial operation, or 60 days after reaching maximum production rates. Subsequent emission testing must be conducted no later than the end of the month that the initial testing was completed every two (2) years thereafter. Emission testing may be conducted within the three calendar months preceding the month in which the test is due. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.
- (b) Test Duration. Tests must include a minimum of three (3) test runs, each at least one hour in duration. Method 9 runs can be six minutes in duration if no emissions are observed.
- (c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit. Testing must be performed for all

Appendix A
Emission Testing Requirements
Regenerative Catalytic Oxidizer

of the constituents at the exhaust of the oxidizer. Testing is also required at the inlet for methods 1-4, and TGOC.

- (d) Source Operations. Source operations during the emissions test must be representative of the maximum intended level of operation. Inability to achieve maximum level of intended operation must be preapproved by SWCAA in advance of performing the test.
- (e) Test Records. A complete record of operation related parameters, including process startups and shutdowns, control equipment startups and shutdowns, and any adjustments made during testing must be kept during emissions testing to correlate operations with emissions and must be recorded in the test results final report. Include a summary of production related parameters, which must include at a minimum catalyst operating temperature and total production but must also include other relevant process information.

5. Reporting Requirements

Unless otherwise directed by SWCAA, a final test report must be prepared and submitted in a suitable format to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, must contain the following information:

- (a) A brief description of the purpose of the test, for example, an initial test, a periodic test required by an ADP, a test required by a federal, state, or local rule or regulation, or a test required to determine compliance with a Notice to Correct;
- (b) Description of the unit being tested, including manufacturer, model number, serial number, and design capacity of the equipment;
- (c) The location and description of the discharge point (stack, port, etc.), including the dimensions (diameter, length and width, or other) and height above ground level. A photo of the discharge point is highly recommended;
- (d) The location of the sample ports or test location and a description of how the sampling location relates to the discharge point. For example, the sampling location may be in a square duct some distance away from the discharge point, which is a round stack. A photo of the sample ports or test location is highly recommended;
- (e) Time and date of the test and identification and qualifications of the personnel involved;
- (f) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
- (g) Test results must be reported in:
 - (1) ppmv, dry, corrected to 10% O₂ for gaseous pollutants;
 - (2) gr/dscf; and
 - (3) pound per hour (lb/hr).
- (h) Summary of air pollution control systems or equipment operating conditions during the test;
- (i) Summary of production related parameters, which must include at a minimum RCO temperatures and total production;
- (j) A description of the test methods or procedures used, including all field data, quality assurance/quality control procedures and documentation;
- (k) A description of the analytical procedures used, including all laboratory data, quality assurance/quality control procedures and documentation;
- (l) Copies of field data and example calculations;

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- (m) Chain of custody information;
- (n) Calibration documentation;
- (o) Discussion of any abnormalities associated with the results; and
- (p) A statement signed by a senior management official of the testing firm certifying the validity of the source test report. Reports with material mistakes or misinformation may be rejected by SWCAA.

6. Changes to Testing Requirements

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

Appendix B

Emission Testing Requirements

Regenerative Thermal Oxidizer

1. Background

The purpose of this testing is to quantify emissions from the regenerative thermal oxidizer and to provide an adequate assurance of compliance with the terms and conditions of this ADP.

2. Test Constituents and Test Methods

- (a) Sample ports, traverse points, volumetric flow rate, gas velocity, and temperature using EPA Methods 1 and 2;
- (b) O₂ and CO₂ using EPA Methods 3 or 3A;
- (c) Moisture content of stack gas using EPA Method 4;
- (d) Filterable particulate matter using EPA Method 5;
- (e) Condensable particulate matter using EPA Method 202;
- (f) Visible emissions (opacity) using EPA Method 9 and SWCAA Method 9;
- (g) Total Gaseous Organic Compounds (TGOC), as isopropyl alcohol, using EPA Methods 25A or 18 and 25A (each combined or individual stack);
- (h) Total Gaseous Organic Compounds (TGOC) using EPA Method 25A (measured as propane). Non-VOC components measured using EPA Method 18 or a non-methane cutter may be subtracted from a TGOC value determined using EPA Method 25A. Use of a non-methane cutter must be approved by SWCAA in advance; and
- (i) Speciated VOCs using some combination of EPA methods 320, 308, NCASI 94.01 or, NCASI 98.01 or NCASI A105.01¹.

¹ Speciated VOCs to include, at a minimum acetaldehyde, acrolein, benzene, formaldehyde, methanol, phenol, acetic acid, propionic acid, and propionaldehyde.

3. Test Plan and Notification

A comprehensive test plan must be submitted to SWCAA for review and approval a minimum of ten (10) business days prior to the proposed test date. SWCAA must be notified a minimum of three (3) business days prior to the proposed test date so that a SWCAA representative may be present during testing.

4. Test Requirements

- (a) Test Dates. Emission testing of the Regenerative Thermal Oxidizer must be conducted no later than 180 days after initial operation and within 60 days of reaching maximum production. Subsequent emission testing must be conducted no later than the end of the month that the initial testing was completed every two (2) years thereafter. Emission testing may be conducted within the three calendar months preceding the month in which the test is due. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.
- (b) Test Duration. Tests must include a minimum of three (3) test runs, each at least one (1) hour in duration. Method 9 runs can be six minutes in duration if no emissions are observed.
- (c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit. Testing must be performed for all of the constituents at the exhaust of the oxidizer. Testing is also required at the inlet for methods 1-4, and total TGOC.

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Emission Testing Requirements
Regenerative Thermal Oxidizer

- (d) Source Operations. Source operations during the emissions test must be representative of the maximum intended level of operation at the lowest operating temperature. Inability to achieve maximum level of intended operation must be preapproved by SWCAA in advance of performing the test.
- (e) Test Records. A complete record of operation related parameters, including process startups and shutdowns, control equipment startups and shutdowns, and any adjustments made during testing must be kept during emissions testing to correlate operations with emissions and must be recorded in the test results final report. Include a summary of production related parameters, which may include fuel type, operating temperature, process throughput, pressure or pressure drop, pH, recirculation rates, or other parameters unique to the operation of the RTO.

5. Reporting Requirements

Unless otherwise directed by SWCAA, a final test report must be prepared and submitted in a form suitable to SWCAA within forty-five (45) calendar days of test completion and, at a minimum, must contain the following information:

- (a) A brief description of the purpose of the test, for example, an initial test, a periodic test required by an ADP, a test required by a federal, state, or local rule or regulation, or a test required to determine compliance with a Notice to Correct;
- (b) Description of the unit being tested, including manufacturer, model number, serial number, and design capacity of the equipment;
- (c) The location and description of the discharge point (stack, port, etc.), including the dimensions (diameter, length and width, or other) and height above ground level. A photo of the discharge point is highly recommended;
- (d) The location of the sample ports or test location and a description of how the sampling location relates to the discharge point. For example, the sampling location may be in a square duct some distance away from the discharge point, which is a round stack. A photo of the sample ports or test location is highly recommended;
- (e) Time and date of the test and identification and qualifications of the personnel involved;
- (f) Summary of results, reported in units and averaging periods consistent with the application emissions standard or unit;
- (g) Test results must be reported in:
 - (1) ppmv, dry, corrected to 10% O₂ for gaseous pollutants;
 - (2) gr/dscf, corrected to 10% O₂ for particulate; and
 - (3) pound per hour (lb/hr).
- (h) Summary of air pollution control systems or equipment operating conditions during the test;
- (i) Summary of production related parameters, which may include fuel type, operating temperature, process throughput, pressure or pressure drop, pH, recirculation rates, or other parameters unique to the operation of the unit being tested;
- (j) A description of the test methods or procedures used, including all field data, quality assurance/quality control procedures and documentation;
- (k) A description of the analytical procedures used, including all laboratory data, quality assurance/quality control procedures and documentation;

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- (l) Copies of field data and example calculations;
- (m) Chain of custody information;
- (n) Calibration documentation;
- (o) Discussion of any abnormalities associated with the results; and
- (p) A statement signed by a senior management official of the testing firm certifying the validity of the source test report. Reports with material mistakes or misinformation may be rejected by SWCAA.

6. Changes to Testing Requirements

The source test must be conducted as specified in the sections above. The Permittee may submit a written request to SWCAA for approval of minor modifications to the requirements above or the testing schedule. Upon review of the request and in accordance with EPA delegation, SWCAA will inform the Permittee in writing of any approved modifications.

Appendix C
CEMs Performance Specification Requirements
Regenerative Thermal Oxidizer

1. Background

The purpose of the following requirements is to demonstrate the accuracy and proper operation of the CMS for NO_x, CO, and CEMs for O₂.

2. Test Constituents and Test Methods

CEMS in use at the facility must satisfy the requirements of the performance specifications listed below. The Relative Accuracy Test Audit (RATA) required for each CEMS must be conducted during simultaneous test periods.

- a. **NO_x.** The continuous monitoring system for the emission rate of **NO_x** (ppmvd @ 10% O₂, lb/hr) from the exhaust stack of the biomass rotary dryer must be installed and maintained in accordance with the requirements and specifications found in the following regulations:
 - 40 CFR 60 Appendix B, Performance Specification 2
 - 40 CFR 60 Appendix F
- b. **O₂.** The continuous monitoring system for the emission rate of **O₂** (% volume) from the exhaust stack of the biomass rotary dryer must be installed and maintained in accordance with the requirements and specifications found in the following regulations:
 - 40 CFR 60 Appendix B, Performance Specification 3
 - 40 CFR 60 Appendix F
- c. **CO.** The continuous monitoring system for the emission rate of **CO** (ppmvd @ 10% O₂, lb/hr) from the exhaust stack of the biomass rotary dryer must be installed and maintained in accordance with the requirements and specifications found in the following regulations:
 - 40 CFR 60 Appendix B, Performance Specification 4 or 4a
 - 40 CFR 60 Appendix F
- d. **Flow.** The continuous monitoring system for the flow rate (dscfm) from the exhaust stack of the biomass rotary dryer must be installed and maintained in accordance with the requirements and specifications found in the following regulations:
 - 40 CFR 60 Appendix B, Performance Specification 6
 - 40 CFR 60 Appendix F
- e. **RATA/RAA/Audit Reports.** Quarterly audit results (i.e., cylinder gas audit results required for three straight quarters while RATA result are due the fourth quarter) must be submitted to SWCAA as part of each quarterly report. RATA results must be submitted to SWCAA within 45 days of test completion.