

May 12, 2021

Mr. Scott Collins Applied Plant Science, Inc. 1625 Heritage Street Woodland, WA 98674

Subject: Final Approval for Installation of Replacement Wastewater Evaporator

Dear Mr. Collins:

A final determination to issue Air Discharge Permit 21-3465 has been completed for Air Discharge Permit Application CO-1039 pursuant to Section 400-110(4) of the General Regulations for Air Pollution Sources of the Southwest Clean Air Agency (SWCAA). Public notice for Air Discharge Permit Application CO-1039 was published on SWCAA's internet website on April 9, 2021. SWCAA did not receive a request for a public comment period in response to the public notice, and has concluded that significant public interest does not exist for this determination. Therefore, a public comment period will not be provided for this permitting action. Electronic copies of Air Discharge Permit 21-3465 and the associated Technical Support Document are available for public review in the permit section of SWCAA's internet website (http://www.swcleanair.org/permits/adpfinal.asp). Original copies are enclosed for your files.

This Air Discharge Permit may be appealed directly to the Pollution Control Hearings Board (PCHB) at P.O. Box 40903, Olympia, Washington 98504-0903 within 30 days of receipt as provided in RCW 43.21B.

If you have any comments, or desire additional information, please contact me or Clint Lamoreaux at (360) 574-3058, extension 131.

Sincerely,

Uri Papish

Executive Director

UP:cl

Enclosures: Air Discharge Permit 21-3465 and Technical Support Document

SOUTHWEST CLEAN AIR AGENCY

AIR DISCHARGE PERMIT SWCAA 21-3465

Issued: May 12, 2021

Facility Name: Applied Plant Science Physical Location: 1625 Heritage Street

Woodland, Washington 98674

SWCAA ID: 2509

REVIEWED BY:

Paul T Mairose Chief Engineer

APPROVED BY: Uri Papish, Executive Director

Appendix A

Appendix B

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Source Emission Testing Requirements

Performance Monitoring Requirements

1. Equipment/Activity Identification

ID No.	Generating Equipment/Activity	# of Units	Control Measure/Equipment	# of Units
1	Camus Boiler 1 (6.0 MMBtu/hr)	1	Low emission burners, Low sulfur fuel (natural gas)	1
2	Camus Boiler 2 (6.0 MMBtu/hr)	1	Low emission burners, Low sulfur fuel (natural gas)	1
3	Wastewater Evaporator (Encon model N66V4-438 (XH), 4.976 MMBtu/hr)	1	Capacity limitation, Low sulfur fuel (natural gas)	N/A
4	Tankless Water Heaters (0.380 MMBtu/hr each)	6	Low emission burners, Low sulfur fuel (natural gas)	6
5	Space Heaters	~20	Low sulfur fuel (natural gas)	N/A

2. Permit Terms and Conditions

The following tables detail the specific terms and conditions of this permit. In addition to the requirements listed below, equipment at this facility may be subject to additional federal, state, and local regulations. The permit term or requirement number is identified in the left hand column. The permit term or requirement is contained in the middle column. The emission unit, equipment, or activity to which the permit term or condition applies is listed in the right hand column.

Air Discharge Permit 18-3264 is superseded in its entirety by this Air Discharge Permit.

2.1 Emission Limits

No.		Emission Limits	Equipment/ Activity
1.	Facilitywide emissions must not exceed the following:		Facilitywide
	Pollutant Nitrogen Oxides Carbon Monoxide	Emission Limit (Annual) 3.00 tons per year 4.02 tons per year	
		t be calculated using the methodology described in the Technical this Air Discharge Permit.	

No.		Emiss	sion Limits		Equipment/ Activity
2.	Emissions from Camus Boiler 1 must not exceed:			1	
	Pollutant Nitrogen Oxide Carbon Monoxide	Emission Limit ppmvd @ 3% O ₂ (1-hour average) 12 50	Emission Limit lb/hr (1-hr average) 0.09 0.22	Emission Limit tons (Annual) 0.38 0.97	
	hour long test runs in	accordance with App	endix A of this permit.	he average of three one- Annual emissions must apport Document for this	
3.	Emissions from Camu	s Boiler 2 must not e	xceed:		2
	hour long test runs in	accordance with A	ppendix A of this per	Emission Limit tons (Annual) 0.38 0.97 he average of three one- mit. Annual emissions the Technical Support	
	Document for this Air				
4.		Emission Limit ppmvd @ 3% O ₂ (1-hour average) 80 100 hourly emission limit	Emission Limit 1b/hr (1-hr average) 0.48 0.37 ts is determined from t	Emission Limit tons (Annual) 0.71 0.54 he average of three one-	3
	calculated using the n Air Discharge Permit	nethodology describ	ed in the Technical Su	nual emissions must be pport Document for this	
5.	Visible emissions from all equipment and activities at the facility must not exceed zero percent opacity for more than 3 minutes in any one hour period as determined in accordance with SWCAA Method 9 (See Appendix A of SWCAA 400).			Facilitywide	

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2.2 Operating Limits and Requirements

No.	perating Limits and Requirements Operating Limits and Requirements	Equipment/ Activity
6.	Natural gas consumption by the Wastewater Evaporator must not exceed 14.25 MMscf per calendar year.	3
7.	To minimize the potential for adverse odor impacts from wastewater tank pump-outs and maintenance, the Permittee must: (a) Filter any powered air discharge from the tank or vacuum truck servicing the tank through a 55 gallon drum of activated carbon or an equivalent or superior control system approved by SWCAA in writing; and (b) During each pump-out or maintenance event, monitor the discharge of the odor control system for breakthrough odor that could cause an odor nuisance offsite and take immediate corrective action to address any breakthrough nuisance odor. If a potential nuisance odor is detected, the pump-out or maintenance activity must cease until corrective action has been taken to address the potential odor impact. Corrective action may include, but is not limited to: slowing the pump rate, confirming the vacuum hose is not drawing air, adding a scrubber or additional adsorbent vessel, or replacing the adsorbent media.	3
8.	Wastewater tank hatches and openings must remain closed except as necessary for periodic monitoring, tank maintenance, or wastewater transfer.	3
9.	The Permittee must use recognized good practice and procedures to reduce odors to a reasonable minimum.	Facilitywide
10.	The exhaust from Camus Boiler 1, Camus Boiler 2, and the Wastewater Evaporator must be discharged vertically into the ambient air above the roof of the building that houses the respective unit. Any device that obstructs or prevents vertical discharge is prohibited	1 - 3
11.	If the test results from any performance monitoring event for Camus Boiler 1, Camus Boiler 2, or the Wastewater Evaporator indicate that emission concentrations may exceed a permitted emission concentration, the Permittee must either perform 60 minutes of additional monitoring to more accurately quantify CO and NO _X emissions, or initiate corrective action. Additional testing or corrective action must be initiated as soon as practical but no later than three days after the potential exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be conducted within three days following completion of any corrective action to confirm that the corrective action has been effective. Corrective action must be pursued until observed emission concentrations no longer exceed the permitted emission concentrations. Initiation of corrective action does not shield the Permittee from enforcement actions by SWCAA.	1 - 3
12.	All material handling with the potential to create fugitive dust must be conducted within the enclosed building and away from any open doors, windows or other ventilation to the outside of the building.	Facilitywide

No.	Operating Limits and Requirements	Equipment/ Activity
13.	Emission units identified in this Permit must be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.	Facilitywide

2.3 Monitoring and Recordkeeping Requirements

No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity
14.	The Wastewater Evaporator mist eliminator must be inspected monthly to assure it is good repair and operating properly. If the results of an inspection of the mist eliminator indicate a problem with operation of the mist eliminator, the Permittee must correct the operational problem before returning the Wastewater Evaporator to service.	3
15.	 The following information must be collected, recorded at the intervals specified below, and readily available on-site for inspection: (a) The total amount of natural gas consumed facilitywide must be recorded for each calendar month. Billing records may serve this purpose; (b) The total amount of natural gas consumed by the Wastewater Evaporator must be recorded for each calendar month. (c) Maintenance activities that may affect emissions from Camus Boiler #1, Camus Boiler #2, and the Wastewater Evaporator must be logged for each occurrence; (d) Excess emissions must be recorded for each occurrence; (e) The results of each inspection of the wastewater evaporator mist eliminator must be recorded; and (f) All air quality related complaints, including odor complaints, received by the Permittee and the results of any subsequent investigation or corrective action must be recorded for each occurrence. 	Facilitywide
16.	With the exception of data logged electronically or billing records, each record required by this Air Discharge Permit must include the date and the name of the person making the record entry.	Facilitywide
17.	All records required by this Air Discharge Permit must be kept on site for a minimum period of no less than three years and must be available for inspection by SWCAA representatives.	Facilitywide

2.4 Emission Monitoring and Testing Requirements

No.	Emission Monitoring and Testing Requirements	Equipment/ Activity
18.	Source emissions testing of Camus Boiler 1 and Camus Boiler 2 must be conducted initially and at least once every five years as described in Appendix A of this Permit.	1, 2

No.	Emission Monitoring and Testing Requirements	Equipment/ Activity
19.	Performance monitoring of Camus Boiler 1, Camus Boiler 2, and the Wastewater Evaporator must be conducted at least annually as described in Appendix B of this Permit. Initial performance monitoring of the Wastewater Evaporator must be conducted as described in Appendix B of this Permit.	1 - 3

2.5 Reporting Requirements

No.	Reporting Requirements	Equipment/ Activity
20.	The Permittee must notify SWCAA in writing within ten (10) days after completing initial startup of the facility. This will allow proper inspections and observations to be conducted for the new equipment.	3
21.	The results of all source emissions testing conducted in accordance with Appendix A must be reported to SWCAA within 45 days of test completion.	1, 2
22.	The results of all performance monitoring conducted in accordance with Appendix B must be reported to SWCAA within 15 days of test completion.	1 - 3
23.	 Excess emissions must be reported to SWCAA as follows: (a) As soon as possible, but no later than 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 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 30 days after the end of the month of discovery for all other excess emissions. 	Facilitywide
24.	Deviations from permit conditions must be reported no later than 30 days after the end of the month during which the deviation is discovered.	Facilitywide
25.	 The following emissions related records must be reported to SWCAA by March 15th for the previous calendar year: (a) The total amount of natural gas consumed by Camus Boiler #1, Camus Boiler #2, the Wastewater Evaporator, the Tankless Water Heaters (all units combined), and facilitywide. If individual units are not equipped with individual fuel meters, fuel use may be apportioned between individual units using capacity and operating records. (b) Air emissions of criteria air pollutants, volatile organic compounds, toxic air pollutants (TAPs), and hazardous air pollutants (HAPs). 	Facilitywide

3. General Provisions

No.	General Provisions
A.	The equipment specified in this Permit must be maintained and operated in total and continuous conformity with the conditions identified in this Permit. SWCAA reserves the right to take any and all appropriate action to maintain the conditions of this Permit, including directing the facility to cease operations until corrective action can be completed.
B.	For the purpose of ensuring compliance with this Permit, 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 Permit and applicable regulations and to perform or require such tests as may be deemed necessary.
C.	The provisions, terms and conditions of this Permit bind the Permittee, its officers, directors, agents, servants, employees, successors and assigns, and all persons, firms, and corporations acting under or for the Permittee.
D.	The requirements of this Permit survive any transfer of ownership of the source or any portion thereof.
E.	This Permit must be posted conspicuously at or be readily available near the source.
F.	Approval to construct, install, or modify specific pollution generating equipment becomes invalid if construction or installation is not commenced within eighteen months after the date of issuance of this Permit, if construction or installation is discontinued for a period of eighteen months or more, or if construction or installation is not completed within a reasonable time.
G.	This Permit does not supersede requirements of other Agencies with jurisdiction and further, this Permit does not relieve the Permittee of any requirements of any other governmental Agency. In addition to this Permit, the Permittee may be required to obtain permits or approvals from other agencies with jurisdiction.
H.	Compliance with the terms of this Permit 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.
I.	If any provision of this Permit is held to be invalid, all unaffected provisions of the Permit will remain in effect and be enforceable.
J.	No change in this Permit 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.
K.	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 Permit, the Washington Clean Air Act, and the applicable rules and regulations adopted under the Washington Clean Air Act.
L.	For the purpose of determining whether a violation of a requirement in this Permit has occurred, nothing in this permit precludes the use, including the exclusive use, of any credible evidence or information, relevant to whether the facility would have been in compliance with applicable requirements if the appropriate performance or compliance test had been performed.

Appendix A Source Emission Testing Requirements Camus Boiler 1, Camus Boiler 2

1. Introduction:

a. The purpose of this testing is to quantify emissions of nitrogen oxides and carbon monoxide emitted from Camus Boiler 1 and Camus Boiler 2 to assure compliance with the emission limitations contained in this Air Discharge Permit.

2. Testing Requirements:

a. Initial source emissions testing of Camus Boiler 1 and Camus Boiler 2 was conducted in November 2017. Subsequent source emissions testing of Camus Boiler 1 and Camus Boiler 2 must be conducted no later than the end of November every 5 calendar years following the initial source emissions test. The next test on this schedule is due November 2022. The use of an alternative test schedule must be pre-approved by SWCAA in writing. Tests conducted more than three months before the required due date will not satisfy the periodic source emission testing requirement without prior approval from SWCAA.

Source	Next Test Due	Subsequent Test Frequency
Camas Boiler 1	November 2022	Every 5 years
Camas Boiler 2	November 2022	Every 5 years

The Permittee must provide adequate and safe access to sampling ports meeting the criteria of EPA Method 1 (40 CFR 60, Appendix A) for Camus Boiler 1 and Camus Boiler 2.

- b. A comprehensive test plan must be submitted to SWCAA for review and approval at least 10 calendar days prior to testing.
- c. SWCAA must be notified of the test date at least 5 calendar days prior to testing.
- d. Unless otherwise specified, for each boiler, testing for each constituent must consist of a minimum of three sampling runs of the duration specified below. For the purpose of determining compliance with the NO_X and CO emission limits, the average of the results from the three runs will be compared to the relevant emission limit.

Constituent	Test Method or Equivalent ¹	Minimum Test Duration		
Stack gas velocity, flow rate	EPA Methods 1 and 2	N/A		
Stack gas dry molecular weight, O ₂ , CO ₂	EPA Method 3A	N/A		
Stack gas moisture content	EPA Method 4	60 minutes		
Nitrogen oxides	EPA Method 7E	60 minutes		
Carbon monoxide	EPA Method 10	60 minutes		

The use of an alternate or equivalent test method must be pre-approved by SWCAA in writing.

Appendix A Source Emission Testing Requirements Camus Boiler 1 and Camus Boiler 2

3. Source Operation:

- a. A complete record of production related parameters applicable to the testing, including but not limited to the following must be kept during emissions testing to correlate operations with emissions and must be recorded in the final report of the test results:
 - 1. Unit startups and shutdowns
 - 2. Boiler firing rate (fuel flow rate or fuel consumption rate)
- b. Source operations during emissions testing must be representative of the most challenging of the intended operating conditions (e.g. full load).

4. Reporting:

The results of all required testing must be submitted to SWCAA within 45 days of test completion. Unless otherwise directed by SWCAA, a single hard copy of the report and an electronic copy (e.g. portable document format (.pdf)) of the report must be submitted. The report must include, as a minimum:

- (a) A description of the source including manufacturer, model number and design capacity of the equipment, and the location of the sample ports or test locations.
- (b) Time and date of the test and identification and qualifications of the personnel involved.
- (c) A summary of results, reported in units and averaging periods consistent with the applicable emission standard or limit. CO and NO_X emissions must be reported in units of ppmvd @ 3% O₂ and pounds per hour.
- (d) A summary of control system or equipment operating conditions.
- (e) A summary of production related parameters.
- (f) A description of the test methods or procedures used including all field data, quality assurance/quality control procedures and documentation.
- (g) A description of the analytical procedures used including all laboratory data, quality assurance/quality control procedures and documentation.
- (h) Copies of field data and example calculations.
- (i) Chain of custody information.
- (j) Calibration documentation.
- (k) Discussion of any abnormalities associated with the results.
- (1) A statement signed by the senior management official of the testing firm certifying the validity of the source test report.

5. Changes to Testing Requirements:

Emission testing 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 Performance Monitoring Requirements Camus Boiler 1, Camus Boiler 2, and Wastewater Evaporator

1. Introduction:

- a. The purpose of periodically monitoring the exhaust of the boilers and wastewater evaporator is to minimize emissions and provide a reasonable assurance that the units are operating properly.
- b. Periodic monitoring may be conducted with an electrochemical cell combustion analyzer, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

2. Monitoring Requirements:

a. Monitoring of Camus Boiler 1, Camus Boiler 2 and the Wastewater Evaporator to determine emission concentrations of the following constituents must be conducted annually no later than the end of November. In addition, monitoring of the Wastewater Evaporator must be conducted within 30 days of initial startup. Performance monitoring of a specific unit is not required during any year in which source emissions testing of that unit was performed pursuant to Appendix A of this Permit. The use of an alternative test schedule or method must be pre-approved by SWCAA in writing. For the Wastewater Evaporator, each burner must be monitored separately and the final results averaged for comparison with the emission limits for that unit.

Constituents to be Measured Carbon Monoxide (CO) Nitrogen Oxides (NO_X) Oxygen (O₂)

- b. Source operation during monitoring must be representative of maximum intended operating conditions during that year.
- c. Alternative monitoring methodologies must be pre-approved by SWCAA.

3. Minimum Quality Assurance/Quality Control Measures:

- a. The analyzer(s) response to span (calibration) gas of a known concentration (reference) must be determined before and after testing. No more than 12 hours may elapse between response checks. The test results are invalid if the analyzer zero or span drift exceeds 10% of the span value. The test may not be started until the calibration error (the difference between the reference concentration and the analyzer response) is no more than 10% of the span value.
- b. The CO and NO_X span gas concentrations must be no less than 50% and no more than 200% of the emission concentration corresponding to the permitted emission limit. A lower concentration span gas may be used if it is more representative of measured concentrations. Ambient air may be used to zero the CO and NO_X cells/analyzer(s) and span the oxygen cell/analyzer.

Appendix B Performance Monitoring Requirements Camus Boiler 1, Camus Boiler 2, and Wastewater Evaporator

3. Minimum Quality Assurance/Quality Control Measures (continued):

c. Sampling must consist of at least 1 test consisting of at least 5 minutes of data collection following a "ramp-up phase." The ramp-up phase ends when analyzer readings have stabilized (less than 5%/minute change in emission concentration). Emission concentrations must be recorded at least once every 30 seconds during testing. All test data collected following the ramp-up phase(s) must be reported to SWCAA. Alternative testing methods may be utilized provided pre-approval is obtained from SWCAA.

If the test results from any performance monitoring event for Camus Boiler 1, Camus Boiler 2, or the Wastewater Evaporator indicate that emission concentrations may exceed a permitted emission concentration, the Permittee must either perform 60 minutes of additional monitoring to more accurately quantify CO and NO_X emissions, or initiate corrective action. Additional testing or corrective action must be initiated as soon as practical but no later than three days after the potential exceedance is identified. Corrective action includes tuning, maintenance by service personnel, limitation of unit load, or other action taken to maintain compliance with permitted limits. Monitoring of unit emissions must be conducted within three days following completion of any corrective action to confirm that the corrective action has been effective. Corrective action must be pursued until observed emission concentrations no longer exceed the permitted emission concentrations. Initiation of corrective action does not shield the Permittee from enforcement actions by SWCAA.

4. Reporting:

- a. All monitoring results must be recorded at the facility and reported to SWCAA in writing using a format designated by the Agency. Results must be reported within 15 calendar days of completion. The following information must be included in the report:
 - (1) Time and date of the emissions evaluation;
 - (2) Identification of the personnel involved;
 - (3) Identification of the affected unit;
 - (4) A summary of results (NO_X, CO, O₂, etc.), reported in units consistent with the applicable emission standard(s) or limit(s);
 - (5) A summary of equipment operating conditions (e.g., firing rate, fuel flow, stack temperature, etc.);
 - (6) A description of the evaluation methods or procedures used, including all field data, quality assurance/quality control procedures and documentation; and
 - (7) Analyzer response check and calibration error documentation including calibration gas certificates.
- b. Individual data points must be reported as read. Final average monitoring results must be corrected to 3% O₂ in the exhaust gas and adjusted to reflect analyzer response to zero and span gases.

5. Changes to Testing Requirements:

Performance monitoring 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.



11815 NE 99th Street, Suite 1294 Vancouver, WA 98682 (360) 574-3058 www.swcleanair.org

State Environmental Policy Act DETERMINATION OF NONSIGNIFICANCE (DNS) – SWCAA 21-016

Description of proposal:

ADP Application CO-1039: The proponent has applied for a permit to install a new replacement natural gas-fired 4.976 MMBtu/hr wastewater evaporator. The new evaporator will replace an existing 1.74 MMBtu/hr wastewater evaporator. The combustion of natural gas in the wastewater evaporator will produce combustion emissions included nitrogen oxides and carbon monoxide. The wastewater itself has the potential to produce odor. With the proposed operating and emission limits, the new equipment will not have a significant adverse impact on ambient air quality. This permitting action is not expected to have a significant adverse impact on any element of the environment, including traffic, noise, glare, housing, or recreation opportunities.

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Position/title:

Applied Plant Science (Mr. Scott Collins)

Location of proposal, including street address if any:

1625 Heritage Street Woodland, WA 98674

Lead agency: Southwest Clean Air Agency

The lead agency for this proposal has determined that it does not have a probable significant impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist and other information on file with the lead agency. This information is available to the public on request.

	There is no comment period for this DNS.					
	This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 15 days from the date below. Comments must be submitted by					
Respo	nsible official:	Paul T. Mairose, P.E.				

Address: Southwest Clean Air Agency Phone: (360) 574-3058 ext. 130

11815 NE 99th Street, STE 1294 Vancouver, WA 98682-2322

Chief Engineer

Signature: Date: 5/12/21