SWCAA
Southwest Clean Air Agency

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Vancouver, WA 98682
(360) 574-3058
www.swcleanair.gov

September 14, 2023

David Mayer, EH&S Manager
Divert, Inc
23 Bradford St Suite 3
Concord, MA 01742-2971

RE: Preliminary Air Discharge Permit for Construction and Operation of a Renewable Natural Gas Production Facility

Dear Mr. Mayer:

A preliminary determination to issue Air Discharge Permit (ADP) 23-3604 has been completed for ADP Application CO-1058 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-1058 was published in the permit section of SWCAA's website on September 15, 2022. SWCAA received a request for a public comment period in response to the public notice. Therefore, a thirty (30) day public comment period will be provided for this permitting action.

Electronic copies of ADP 23-3604 and the associated Technical Support Document are available for public review in the "Open for Public Comment" section under the "Permits and Appeals" 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 John St.Clair at (360) 574-3058, extension 127.

Sincerely,

Uri Papish
Executive Director

UP:jts

Enclosure: Technical Support Document and Air Discharge Permit 23-3604

AIR DISCHARGE PERMIT
23-3604

Preliminary Issued: September 14, 2023

Divert, Inc.
1800 Prudential Blvd, Longview, WA 98632-9826

SWCAA ID – 2763

DRAFT

REVIEWED BY: _____
Clinton L. Lamoreaux, P.E.

APPROVED BY:_____
Uri Papish, Executive Director

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1. Equipment/Activity Identification

ID No.	Equipment/Activity	Control Equipment/Measure
1	De-packaging and Food Waste Processing	Process Enclosure
2	Anaerobic Digester and Anaerobic Membrane Bioreactors	Ferric Chloride and Leak Detection and Repair Program
3	Biogas Processing, H_2S Polisher	Ferric Oxide Hydroxide and Leak Detection and Repair Program
4	Biogas Processing, Pressure Swing Adsorber	Leak Detection and Repair Program
5	Centrate Processing	Process Enclosure and Leak Detection and Repair Program
6	Permeate Processing	Byoflex Air Stripper, Byoflex Neutralizer, Byoflex Acid Scrubber, Moving Bed Biofilm Reactors, and Leak Detection and Repair Program
7	Lochinvar Boiler, 2.0 MMBtu/hr	Ultralow Sulfur Fuel (Natural Gas)
8	John Zink ZULE Flare, 28.0 MMBtu/hr	Ultralow Sulfur Fuel (Natural Gas and Renewable Natural Gas) and Ultralow NO_X Technology

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 permit requirement is contained in the middle column. The emission unit, equipment, or activity to which the permit requirement applies is listed in the right-hand column.

Emission Limits

<table>
<tr><th>Req.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>1.</td><td>Ammonia emissions from the Byoflex Air Stripper purge vent must not exceed:
(a) 30 ppmvd, as a 1-hour average; and
(b) 145 lb/yr as a 12-month rolling sum.</td><td>6</td></tr>
<tr><td>2.</td><td>Emissions from the Lochinvar Boiler must not exceed any of the following:

<table><tr><th>Pollutant</th><th colspan="2">Emission Limits</th></tr><tr><td>Nitrogen Oxides</td><td>0.22 tpy</td><td>20 ppmvd</td></tr><tr><td>Carbon Monoxide</td><td>0.34 tpy</td><td>50 ppmvd</td></tr></table>
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 are determined as a 1-hour average, corrected to 3% O_2.</td><td>7</td></tr>
</table>

<table>
<tr><th>Req.</th><th>Emission Limits</th><th>Equipment/ Activity ID No.</th></tr>
<tr><td>3.</td><td>Visible emissions from the Lochinvar Boiler 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.</td><td>7</td></tr>
<tr><td>4.</td><td>While in normal flaring operation, emissions from the ZULE Flare must not exceed any of the following:

<table><tr><th>Pollutant</th><th colspan="2">Emission Limits</th></tr><tr><td>Nitrogen Oxides</td><td>0.31 tpy</td><td>0.025 lb/MMBtu</td></tr><tr><td>Carbon Monoxide</td><td>0.74 tpy</td><td>0.060 lb/MMBtu</td></tr><tr><td>Volatile Organic Compounds (as methane)</td><td>0.31 tpy</td><td>0.025 lb/MMBtu</td></tr><tr><td>Particulate Matter, PM_{10}, total</td><td>0.19 tpy</td><td>0.015 lb/MMBtu</td></tr><tr><td>Particulate Matter, $PM_{2.5}$, total</td><td>0.19 tpy</td><td>0.015 lb/MMBtu</td></tr></table>
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 a 1-hour average corrected to 7% O_2.</td><td>8</td></tr>
<tr><td>5.</td><td>While burning biogas in normal flaring operation, emissions from the ZULE Flare during must not exceed any of the following:

<table><tr><th>Pollutant</th><th colspan="2">Emission Limits</th></tr><tr><td>Sulfur dioxide</td><td>0.052 tpy</td><td>—</td></tr><tr><td>Hydrogen sulfide</td><td>—</td><td>2.0 ppmvd</td></tr></table>
The long-term emission limit is a 12-month rolling sum calculated consistent with Section 6 of the TSD for this ADP. The short-term emission limit is determined as a 1-hour average corrected to 7% O_2.</td><td>8</td></tr>
<tr><td>6.</td><td>Visible emissions from the ZULE Flare must not the following for more than three (3) minutes in any 1-hour period as determined in accordance with SWCAA Method 9:
(a) Zero percent (0%) opacity during normal flaring or normal standby operation;
(b) Zero percent (0%) or as otherwise specified by SWCAA during SWCAA-approved operation; or
(c) Twenty percent (20%) at all other times, including startup and shutdown.</td><td>8</td></tr>
<tr><td>7.</td><td>Volatile Organic Compounds, as propane, due to leaking pumps, compressors, flanges, heat exchangers, or other components in gas service must not exceed 0.067 tpy as a 12-month rolling sum.</td><td>1–6</td></tr>
</table>

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.	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
10.	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.	2–8
11.	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
12.	Good housekeeping procedures must be implemented to minimize the potential for odor from the facility. Liquid spills and solid materials must be cleaned as soon as practicable.	Facility-wide
13.	All valves, pumps, compressors, pressure relief valves, connectors, and any other equipment with the potential to release liquid or gaseous methane, H_2S, or VOC must be maintained to minimize the potential for liquid and gaseous leaks.	Facility-wide
14.	An Odor Management Plan must be developed and approved by SWCAA within six (6) months of this ADP issuance. Subsequent revisions to the plan must be submitted to SWCAA within thirty (30) days of completion. In the event of a complaint being received by the Permittee or SWCAA, the Odor Management Plan must be followed as soon as the complaint is received. SWCAA may require additional measures consistent with SWCAA 400-040(4) if the plan fails to adequately address odor impacts. Implementation of the corrective actions identified in the Odor Management Plan does not shield the Permittee from enforcement action.	Facility-wide
15.	A Leak Detection and Repair program must be developed and approved by SWCAA within six (6) months of this ADP issuance. The program must include monitoring of gaseous and liquid leaks, a procedure for minimizing leaks, and a procedure for corrective actions should a leak be detected. Implementation of the corrective actions identified in the Leak Detection and Repair program does not shield the Permittee from enforcement action.	Facility-wide
16.	All exhausts must be discharged vertically into the ambient air above the level of any associated building roof or structure. Any device that obstructs or prevents vertical discharge is prohibited.	1–8

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
17.	Pressure monitors must be installed as required by the manufacturer or as otherwise specified and continuously operated. The monitors must be: (a) Be capable of continuously monitoring gas pressure; (b) Have an accuracy certified by the respective manufacturer of: (1) ±0.1 iwc over the device's respective operating range for measuring pressures 10 iwc or less; and (2) ±10% over the device's respective operating range for measuring pressures above 10 iwc; and (c) Calibrated at least every thirty-six (36) months or as specified by the manufacturer, whichever is more frequent.	2–4
18.	The Anaerobic Digester, Anaerobic Membrane Bioreactors, or H_2S Polisher, or any portion thereof, is not allowed to vent uncontrolled to atmosphere, unless otherwise specified in this ADP. The opening of a safety relief valve due to overpressure or an emergency is not considered in this prohibition but must be included in the annual emissions inventory and may be considered an upset or to have caused excess emissions.	2–4
19.	Access hatches, covers, or other pass throughs that can be opened and closed must be kept closed when access is not needed for normal operation. This does not apply to openings that by design are always open.	5 and 6
20.	Biogas and renewable natural gas flow meters must be installed as required by the manufacturer or as otherwise specified and continuously operated. The meters must: (a) Be capable of continuously monitoring the gas flow; (b) Certified by the manufacturer to have an accuracy of ±5% over the device's respective operating range; and (c) Calibrated at least every thirty-six (36) months or as specified by the manufacturer, whichever is more frequent.	2, 3, and 4
21.	The Lochinvar Boiler must discharge vertically through an unobstructed stack at least 23 feet above grade.	4
22.	The Lochinvar Boiler must only be fired on natural gas.	4
23.	The Byoflex Acid Scrubber operational parameters must meet the following during periods in which the Air Stripper is in normal operation and treating permeate: (a) pH of 3.0 or lower, as a 1-hour average; and (b) Scrubber liquor density of 9.8 lb/gal or higher, as a 1-hour average.	6
24.	Natural gas flow meters must be installed as required by the manufacturer or as otherwise specified and continuously operated. The meter must: (a) Be capable of continuously monitoring the gas flow; (b) Certified by the manufacturer to have an accuracy of ±5% over the device's respective operating range; and (c) Calibrated at least every thirty-six (36) months or as specified by the manufacturer, whichever is more frequent.	7 and 8

Req. No.	Operating Limits and Requirements	Equipment/ Activity ID No.
25.	The ZULE Flare is limited to 876 hr/yr, as a 12-month rolling sum, of normal flaring operation. Emergency operation and normal standby operation are not restricted.	8
26.	The Permittee may request, in writing to SWCAA, additional flaring under circumstances not specifically listed in this ADP or for more than 876 hr/yr, which SWCAA may approve on a case-by-case basis. Such request must include, at minimum: (a) The date that flaring would commence; (b) The date that flaring would cease; and (c) A description as to why the specific circumstance or increase in flaring hours is warranted. Unless otherwise specified by SWCAA in the approval, all requirements in the ADP would remain in effect while flaring under a SWCAA-approved operation.	8
27.	The ZULE Flare must discharge vertically through an unobstructed stack at least 40 ft above grade.	8
28.	The ZULE Flare must only be fired on natural gas, biogas, renewable natural gas, or any combination thereof.	8
29.	When in normal flaring operation (except during startup and shutdown), or SWCAA-approved operation, the ZULE Flare must be operated: (a) At a minimum temperature of 1,400 °F as a 1-hour rolling average; (b) With a minimum retention time of 0.7 s; and (c) With a flame present at all times.	8
30.	When in normal standby operation, the ZULE Flare must be operated with a flame at all times, unless the pilot light is shut down.	8
31.	At least three temperature monitoring devices must be installed on the ZULE Flare as required by the manufacturer or as otherwise specified and continuously operated. Each monitoring device must: (a) Be capable of continuously monitoring the flare temperature; (b) Certified by the manufacturer to have a minimum accuracy of ±15 °F over the device's operating range; and (c) Calibrated at least every thirty-six (36) months or as specified by the manufacturer, whichever is more frequent.	8
32.	Sufficient replacement or repair parts for the Anaerobic Digestion System, including Biogas Processing, Centrate and Permeate Processing System, and ZULE Flare must be kept on site and readily available. Replacement or repair must be performed at the manufacturer's specified intervals or more frequent, as necessary.	2–8

Monitoring and Recordkeeping Requirements

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
33.	Except for data logged by a computerized data acquisition system, each record required by this ADP must include the date, time, data value(s), 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
34.	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
35.	Excess emissions and upset conditions must be recorded for each occurrence.	Facility-wide
36.	For each component monitored for leaks, the Permittee must record the following: (a) The date and time of monitoring; (b) The component identification and type (e.g., valve, flange, pump, etc.); (c) The monitoring method being used for leak detection; and (d) The presence of absence of a leak and if monitored by a gas analyzer, the measured concentration.	Facility-wide
37.	If a leak is detected, the leak must be repaired as soon as possible, but in no case later than fifteen (15) calendar days after discovery.	2–6
38.	If the leak cannot be repaired without a process shutdown, the repair may be delayed until the next process shutdown at which time the leak shall be repaired. Each component determined to have a leak is considered to be leaking until such time as it is repaired.	2–6
39.	After a repair has been completed on a leaking component, the component must be monitored again for leaks. The Permittee must record the following: (a) The date and time of initial monitoring; (b) The component identification and type (e.g., valve, flange, pump, etc.); (c) The date the repair was completed; and (d) The results of the final monitoring and if monitored by a gas analyzer, the measured concentration.	2–6
40.	The following must be recorded in an operation and maintenance log: (a) Any excess emissions or upset condition that may result in the emission of air pollutants must be recorded for each occurrence; (b) The hours of operation must be recorded once per month for the: (1) Anaerobic Digester; (2) Lochinvar Boiler; and (3) ZULE Flare in normal flaring, normal standby, emergency, and SWCAA-approved operation, each; and (c) Each period during which an emission control device is not operating due to maintenance, repair, or any other activity that may affect the emission of air pollutants must be recorded for each occurrence.	Facility-wide

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
41.	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 the unit is under normal operation (i.e., not in startup, shut down, or upset). If no visible emissions are observed, then a record of the observations must be made, and no further action is necessary.	Facility-wide
42.	If any visible emissions are observed during a qualitative observation of emission units, then the Permittee must: (a) Take corrective action until no visible emissions are observed or quantify visible emissions using SWCAA Method 9 or another method approved, in advance by SWCAA; and (b) Record all observations and corrective actions taken. If visible emissions cannot be reduced to zero or be verified to comply with the visible emissions limit within one (1) business day of discovery, then the Permittee must report the excess emissions, make a record, and take corrective actions until the unit can be demonstrated to comply with the limit.	Facility-wide
43.	The Permittee must retain all records pertaining to the implementation of the Odor Management Plan, including implementation, monitoring, response, and complaint resolution.	Facility-wide
44.	The following De-packaging and Food Waste Processing system operational data must be monitored and recorded: (a) The quantity of food waste processed, at least daily; and (b) The volume of liquid slurry transferred from the equalization tanks to the anaerobic digester, at least daily.	1
45.	The following Anaerobic Digestion and Biogas Processing system operational data must be monitored and recorded: (a) The quantity and concentration of iron chloride added, at least daily; (b) Anaerobic digester pressure (iwc), continuously; (c) Anaerobic digester biogas production flow rate (acfm or scfm), continuously; and (d) Renewable natural gas flow rate delivered to the pipeline (acfm or scfm), continuously.	2–4
46.	The H_2S Polisher system must be inspected at least once each calendar month for system integrity and necessary repairs or replacements made as soon as possible. Any maintenance activities must be recorded.	3
47.	The H_2S Polisher system (Tank R620-01) must be monitored and recorded for the following information, at minimum: (a) Biogas flow rate into the system (acfm or scfm), continuously; (b) Pressure drop across the system (iwc), continuously; (c) The inlet hydrogen sulfide concentration (ppmv), each calendar week; and (d) The outlet hydrogen sulfide concentration (ppmv), each calendar week.	3

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
48.	The following Centrate Processing operational data must be monitored and recorded: (a) Volume or mass of return anaerobic sludge, at least daily; (b) Volume or mass of waste anaerobic sludge, at least daily; and (c) Volume or mass of centrifuge solids offtake, at least daily.	5
49	The Byoflex Air Stripper low-nitrogen permeate effluent stream must be sampled for ammonia. At least three (3) samples per calendar week must be obtained with samples at least 24-hours apart and analyzed from ammonia concentration (mg/L).	6
50	If any Byoflex Air Stripper low-nitrogen permeate effluent stream ammonia sample exceeds 150 mg/L, then the permit must: (a) Take corrective action to reduce the effluent stream ammonia concentration; (b) Resample the effluent stream for ammonia within three (3) hours of discovery and every three (3) hours thereafter if the effluent stream ammonia concentration cannot be reduced; and (c) If the effluent stream ammonia concentration cannot be reduced below 150 mg/L within twelve (12) hours of discovery, then the Permittee must report the deviation to SWCAA and continue to take corrective actions to reduce the ammonia concentration.	6
51.	The following Byoflex Air Stripper operational data must be monitored and recorded: (a) Ammonia inlet concentration (mg/L) in the permeate inlet stream, at least each calendar week; (b) Ammonia outlet concentration (mg/L) in the low-nitrogen permeate effluent stream, at least three (3) times per calendar week, with samples taken at least twenty-four (24) hours apart; (c) Ammonia concentration in the purge vent (ppmvd), at least each calendar week; (d) pH of the permeate inlet stream, continuously; (e) Temperature of the permeate inlet stream; (f) Date and time of periods in which the Air Stripper is and is not in operation; and (g) Date, time, and duration for each instance in which the purge vent is discharging to atmosphere.	6
52.	The following Byoflex Acid Scrubber operational data must be monitored and recorded: (a) pH of the Acid Scrubber liquor, as a 1-hour average, continuously; and (b) Density (lb/gal) of the Acid Scrubber liquor, as a 1-hour average, continuously.	6

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
53.	The following Moving Bed Biofilm Reactor operational data must be monitored and recorded: (a) Water flow rate (gal/hr), as a 1-hour average, continuously; (b) Inlet ammonia concentration (mg/L), at least three (3) samples per calendar week, with samples at least 24-hours apart; and (c) Outlet ammonia concentration (mg/L), at least once per calendar month.	6
54.	While in normal standby operation, including startup, the following ZULE Flare operational data must be monitored and recorded: (a) The flare temperature (°F) for all temperature monitoring devices, continuously; and (b) The natural gas flow rate to the flare (scfm), continuously.	8
55.	While in normal flaring or SWCAA-approved operation, the following ZULE Flare operational data must be monitored and recorded: (a) The flare temperature (°F) for all temperature monitoring devices, continuously; (b) The origin point of the biogas or renewable natural gas being flared; (c) The biogas or renewable natural gas and natural gas flow rate to the flare (scfm), continuously; (d) The biogas or renewable natural gas pressure (iwc), continuously; and (e) Energy content (MMBtu/ft^3) of the biogas or renewable natural gas or combination of natural gas and biogas or renewable natural gas being sent to the flare for each event, at least hourly.	8
56.	While in emergency operation, the following ZULE Flare operational data must be monitored and recorded: (a) The flare temperature (°F) for all temperature monitoring devices, continuously; (b) The origin point of the biogas or renewable natural gas being flared; (c) The biogas, renewable natural gas, and natural gas flow rates to the flare (scfm), continuously; (d) The biogas and renewable natural gas pressure (iwc), continuously; (e) The most recent energy content (MMBtu/ft^3) that is representative of the biogas or renewable natural gas, initially, for the event. If the event lasts for more than twelve (12) hours, then the energy content must be determined every twelve (12) hours thereafter until the event is concluded; and (f) The most recent hydrogen sulfide concentration (ppmv) that is representative of the biogas or renewable natural gas being flared, initially, for the event. If the event lasts for more than twelve (12) hours, then the hydrogen sulfide concentration must be sampled every twelve (12) hours thereafter until the event is concluded.	8
57.	An alarm system must be installed and operated continuously to provide an alarm to operators if at any time combustion at the ZULE Flare ceases and does not automatically re-light. If operators are not on-site, the system must notify an off-site operator.	8

Req. No.	Monitoring and Recordkeeping Requirements	Equipment/ Activity ID No.
58.	Whenever biogas or renewable natural gas is sent to the ZULE Flare, the Permittee must record the following, at minimum: (a) The date, time, and duration of the event for each event; (b) The origin point of the biogas or renewable natural gas being flared; and (c) A description as to why the biogas or renewable natural gas could not be processed or otherwise avoid flaring.	8

Emission Monitoring and Testing Requirements

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
59.	All valves, pumps, compressors, pressure relief valves, connectors, and any other equipment with the potential to release liquid or gas must be identified and must be monitored for leaks at least each calendar quarter.	2–6
60.	The Anaerobic Digestion and Biogas Processing system must be monitored and recorded for the following information, at minimum: (a) Hydrogen sulfide concentration (ppmv) in the anaerobic digester headspace, at least three (3) days per calendar week; and (b) Hydrogen sulfide concentration (ppmv) at the outlet of the H_2S Polisher, at least three (3) days per calendar week.	2 and 3
61.	The following Permeate Processing system Air Stripper operational data must be monitored and recorded: (a) Ammonia outlet concentration (ppmv) from the Byoflex Air Stripper purge vent, at least once per calendar week; and (b) Flow rate (acfm or scfm) from the vent, continuously.	6
62.	The Lochinvar Boiler must be emission monitored in accordance with Appendix A: (a) Initially, within sixty (60) days of beginning normal operation; then (b) Once per calendar year, no later than December.	7
63.	Prior to sending biogas to the ZULE Flare, other than during an emergency, the biogas must be monitored and recorded for the following, at minimum: (a) Methane concentration (ppmv), continuously; and (b) Hydrogen sulfide concentration (ppmv) for each event, at least hourly	8

Req. No.	Emission Monitoring and Testing Requirements	Equipment/ Activity ID No.
64.	The ZULE Flare must be emission tested while burning biogas in accordance with Appendix B: (a) Initially, within sixty (60) days after achieving the maximum production rate, but no later than one hundred eighty (180) days after initial startup; and (b) Subsequent emission testing must be conducted no later than the end of the month in which initial testing was performed every five (5) years thereafter. Emission testing may be conducted within the three calendar months preceding the month in which the initial test was performed. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.	8
65.	The ZULE Flare must be emission tested while burning renewable natural gas in accordance with Appendix C: (a) Initially, within sixty (60) days after achieving the maximum production rate, but no later than one hundred eighty (180) days after initial startup; and (b) Subsequent emission testing must be conducted no later than the end of the month in which initial testing was performed every five (5) years thereafter. Emission testing may be conducted within the three calendar months preceding the month in which the initial test was performed. Emission testing conducted earlier requires prior approval by SWCAA. Testing before or after the due date does not modify or reset the test schedule.	8

Reporting Requirements

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
66.	Upset conditions must be reported to SWCAA as soon as possible after discovery by phone call or phone message, email, or fax. It is the Permittee's responsibility to verify that the upset conditions information was received.	Facility-wide
67.	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)(e) and (2); and (c) No later than thirty (30) calendar days after the end of the month of discovery for all other excess emissions.	Facility-wide
68.	Deviations from permit conditions must be reported as soon as possible but no later than thirty (30) days after the end of the month during which the deviation is discovered.	Facility-wide

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
69.	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
70.	At least once every calendar quarter, the Permittee must submit a Leak Detection and Repair report to SWCAA in writing, no later than the end of the month following the quarter. The report must contain the following, at minimum: (a) Identification of each valve, pump, compressor, pressure relief valve, connector, and any other equipment with the potential to release liquid or gas that is subject to the Leak Detection and Repair program; (b) The date and that monitoring was conducted; (c) Whether or not a leak was detected for each monitored component and the quantifiable value of the leak concentration, if measured, and a description of the leak; and (d) Whether or not the leak was repaired: (1) If the leak was repaired, whether the leak was repaired within fifteen (15) days of discovery, the date the leak was repaired, and the post-repair monitoring results; and (2) If the leak cannot be repaired within fifteen (15) days, the date of the anticipated repaired, including those leaks that cannot be repaired without a process shutdown.	2–6

Req. No.	Reporting Requirements	Equipment/ Activity ID No.
71.	An annual emissions inventory report must be submitted to SWCAA no later than 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 nitrogen oxides, carbon monoxide, volatile organic compounds, particulate matter (PM), PM_{10}, $PM_{2.5}$, sulfur dioxide, ammonia, hydrogen sulfide, toxic air pollutants, and hazardous air pollutants for each emission unit and operating scenario: (b) The annual number of hours that the facility operated; (c) The annual quantity of food waste processed; (d) The annual quantity of renewable natural gas produced and delivered to the pipeline (e) The number of hours that the Lochinvar boiler operated or the quantity of natural gas consumed; (f) For the ZULE Flare: (1) The number of hours operated in normal flaring of biogas, normal flaring of renewable natural gas, normal standby, emergency, and SWCAA-approved operation, each; (2) The annual quantity of natural gas consumed for each operational mode above; (3) The annual quantity of biogas and renewable natural gas burned; (g) The annual quantity of centrifuge solids offtake; and (h) The annual quantity of residuals offtake.	Facility-wide
72.	Emission monitoring results must be reported to SWCAA in writing within fifteen (15) calendar days of completion.	7
73.	Emission testing results required by this Permit must be reported to SWCAA in writing within forty-five (45) calendar days of test completion.	8
74.	The Permittee must notify SWCAA, in writing, of the initial start-up date of the facility into normal operating conditions. If the start-up is performed in stages, then the Permittee must report, in writing, the date of each phase. Any notification must be made within ten (10) business days of the start-up date.	Facility-wide

3. General Provisions

Req. No.	General Provisions
A.	For 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.

Req. No.	General Provisions
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 invalid 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, 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.
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 Monitoring Requirements
Lochinvar Boiler

1. Background

The purpose of periodically monitoring boiler exhaust is to minimize emissions and provide a reasonable assurance of proper operation. 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. Test Constituents and Test Methods

(a) Oxygen (O_2) using a calibrated portable combustion analyzer or EPA Methods 3 or 3A.
(b) Nitrogen oxides (NO_x) using a calibrated portable combustion analyzer or EPA Method 7E.
(c) Carbon monoxide (CO) using a calibrated portable combustion analyzer or EPA Method 10.

Combustion analyzers include electrochemical cell combustion analyzers, analyzers used for reference method testing, or other analyzers pre-approved by SWCAA.

3. Emission Monitoring Requirements

(a) Dates. Emission monitoring must be conducted:
  (1) Initially, within sixty (60) days of beginning normal operation; then
  (2) Subsequently, once per calendar year at least once within every twelve (12) month period no later than December 31, while firing on natural gas, unless the unit is not in use during that year, or a reference method source testing was conducted on that unit during that year.
(b) Source Operation. The Lochinvar Boiler operation during the monitoring must be representative of intended operating conditions.
(c) Data Collection.
  (1) Sampling must consist of at least one (1) test consisting of at least five (5) minutes of data collection following a "ramp-up phase." The ramp-up phase ends when analyzer readings have stabilized (less than 5% per minute change in emission concentration). Emission concentrations must be recorded at least once every thirty (30) seconds during the data collection phase. All test data collected following the ramp-up phase must be reported to SWCAA.
  (2) The analyzer(s) response to span gas of a known concentration must be determined before and after testing. No more than twelve (12) hours may elapse between span gas response checks. The results of the analyzer response will not be valid if the pre and post response check results vary by more than 10% of the known span gas value.
  (3) 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.
  (4) If the monitoring results from any monitoring event indicate that emission concentrations exceed the permitted emission limits for the unit, the Permittee must either perform sixty (60) minutes of additional monitoring to quantify CO and NO_X

Appendix A
Emission Monitoring Requirements
Lochinvar Boiler

emissions more accurately or initiate corrective action. Additional monitoring or corrective action must be initiated as soon as practical but no later than three (3) calendar days after the 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 (3) calendar days following completion of any corrective action to confirm that the corrective action has been effective. Initiation of corrective action does not shield the Permittee from enforcement.

4. Reporting Requirements

Monitoring results must be reported to SWCAA within fifteen (15) calendar days of tuning completion. The average of the results of each run is evaluated against the requirements of ADP 23-3604. Results must be submitted on forms provided by SWCAA or in an alternative format previously approved by SWCAA. The report must include the following information:

(a) A description of the emission unit including manufacturer, model number and facility designation;
(b) Time and date of the emissions evaluation;
(c) Identification of the personnel involved;
(d) Monitoring "tapes" or other direct information generated by the monitoring equipment;
(e) All collected data, calculations, and final results, reported in units consistent with the applicable emission standard or limit;
(f) Final test result concentrations will be corrected to 3% O_2;
(g) A summary of control system or equipment operating conditions;
(h) A description of the evaluation methods or procedures used including all field data, quality assurance/quality control procedures and documentation; and
(i) Calibration error checks documentation.

5. Changes to Requirements

Emission 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 tuning 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
ZULE Flare – Biogas

1. Background

The purpose of this testing is to quantify emissions from the ZULE Flare 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) O_2 and CO_2 using EPA Methods 3 or 3A.
(c) Moisture content of stack gas using EPA Method 4.
(d) Nitrogen oxides (NO_x) using EPA Method 7E.
(e) Carbon monoxide (CO) using EPA Method 10.
(f) Non-Methane Non-Ethane Volatile Organic Compounds (NMNEVOC), reported as methane, using EPA Method 25A or EPA Method 18. Method 18 results can be used to adjust Method 25A results to subtract non-VOC species. If a non-methane cutter is used, it should be noted in the test plan and additional documentation as to the accuracy and effectiveness of the cutter may be requested by SWCAA.
(g) Total sulfur compounds and hydrogen sulfide (H_2S) using ASTM D-5504, or equivalent on inlet gas.
(h) Tentatively identified compounds (TICs) using EPA Method 18, using GC/MS. Identify and quantify the compounds representing the ten (10) compounds in greatest abundance, other than methane, at minimum.
(i) Visible emissions (opacity) using SWCAA Method 9.
(j) F-Factor, dry basis (F_d), using EPA Method 19 or other SWCAA-approved energy content method.

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.
  (1) Initial testing must be completed within sixty (60) calendar days of reaching maximum production, but no later than one hundred eighty (180) calendar days after initial operation.
  (2) Subsequent emission testing must be conducted no later than August every five (5) years thereafter. Tests performed earlier than three (3) months prior to the required due date do not satisfy the testing requirements without prior written 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.

Appendix B
Emission Testing Requirements
ZULE Flare – Biogas

(c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit.

(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. For purposes of determining compliance with the emission limits listed in ADP 23-3604, untreated biogas prior to the H_2S Polisher must be sent to flare while the flare in is normal flaring or SWCAA-approved operation, in addition to any natural gas provided by the pilot.

(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, or other parameters unique to the operation of the unit being tested.

5. Reporting Requirements

A final test report must be prepared and submitted 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) O_2 and CO_2, moisture. Percent (%);

(2) NO_X, CO, SO_2, and H_2S.

(i) ppmv, dry, with no correction for O_2; and

(ii) pound per hour (lb/hr);

(3) NMNEVOC.

(i) ppmv, dry, with no correction for O_2, reported as methane; and

(ii) pound per hour (lb/hr), reported as methane;

(4) Total sulfur compounds, H_2S, and TICs. ppmv, dry;

(5) F_d. pound per million Btu (lb/MMBtu);

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Emission Testing Requirements
ZULE Flare – Biogas

(6) Visible Emissions. Percent (%); and
(7) Any other appropriate unit approved by SWCAA.

(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 emission generating units and 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;
(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 the 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
Emission Testing Requirements
ZULE Flare – Renewable Natural Gas

1. Background

The purpose of this testing is to quantify emissions from the ZULE Flare 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) O_2 and CO_2 using EPA Methods 3 or 3A.
(c) Moisture content of stack gas using EPA Method 4.
(d) Nitrogen oxides (NO_x) using EPA Method 7E.
(e) Carbon monoxide (CO) using EPA Method 10.
(f) Non-Methane Non-Ethane Volatile Organic Compounds (NMNEVOC), reported as methane, using EPA Method 25A or EPA Method 18. Method 18 results can be used to adjust Method 25A results to subtract non-VOC species. If a non-methane cutter is used, it should be noted in the test plan and additional documentation as to the accuracy and effectiveness of the cutter may be requested by SWCAA.
(g) Total sulfur compounds and hydrogen sulfide (H_2S) using ASTM D-5504, or equivalent on the inlet gas.
(h) Tentatively identified compounds (TICs) using EPA Method 18 on the inlet gas, using GC/MS. Identify and quantify the compounds representing the ten (10) compounds in greatest abundance, other than methane, at minimum.
(i) Visible emissions (opacity) using SWCAA Method 9.
(j) F-Factor, dry basis (F_d), using EPA Method 19 or other SWCAA-approved energy content method.

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.
  (1) Initial testing must be completed within sixty (60) calendar days of reaching maximum production, but no later than one hundred eighty (180) calendar days after initial operation.
  (2) Subsequent emission testing must be conducted no later than the month in which the initial test was performed every five (5) years thereafter. Tests performed earlier than three (3) months prior to the required due date do not satisfy the testing requirements without prior written 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.

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Emission Testing Requirements
ZULE Flare – Renewable Natural Gas

(c) Test Location. The Permittee must provide the necessary platform and sampling ports for testing personnel to perform a test of the emission unit.

(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. For purposes of determining compliance with the emission limits listed in ADP 23-3604, untreated biogas prior to the H_2S Polisher must be sent to flare while the flare in is normal flaring or SWCAA-approved operation, in addition to any natural gas provided by the pilot.

(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, or other parameters unique to the operation of the unit being tested.

5. Reporting Requirements

A final test report must be prepared and submitted 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) O_2 and CO_2, moisture. Percent (%);

(2) NO_X, CO, and SO_2;

(i) ppmv, dry, with no correction for O_2; and

(ii) pound per hour (lb/hr);

(3) NMNEVOC.

(i) ppmv, dry, with no correction for O_2, reported as methane; and

(ii) pound per hour (lb/hr), reported as methane;

(4) Total sulfur compounds, H_2S, and TICs. ppmv, dry;

(5) F_d. pound per million Btu (lb/MMBtu);

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(6) Visible Emissions. Percent (%); and
(7) Any other appropriate unit approved by SWCAA.

(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 emission generating units and 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;
(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 the 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.

PUBLIC NOTICE

Notice to the public is hereby given that the Southwest Clean Air Agency (SWCAA) is providing a thirty (30) day public comment period for the preliminary determination to issue Air Discharge Permit (ADP) 23-3604 to Divert, Inc. This preliminary determination authorizes the construction and operation of a food waste processing facility that uses anaerobic digestion to create biogas, of which a large portion is methane. Biogas is processed to concentrate methane, reduce hydrogen sulfide (a normal side reaction of this process), and remove carbon dioxide to make "renewable natural gas" for introduction into the natural gas pipeline.

Copies of the preliminary ADP and associated Technical Support Document are available for review at 11815 NE 99th Street, Suite 1294, Vancouver, Washington 98682-2322, Monday through Friday from 7:00 a.m. to 5:30 p.m. Electronic copies are available for review in the permit section of SWCAA's website, *http://swcleanair.gov*, under *Air Permits > Permits Open for Public Comment*. This material will be made available in other media, if necessary. All written or oral comments must be received by SWCAA within thirty (30) calendar days after the date of publication. If there is a demonstrated significant public interest, a public hearing may be held during the thirty-day comment period.