

**BUREAU OF AIR MANAGEMENT
NEW SOURCE REVIEW PERMIT
TO CONSTRUCT AND OPERATE A STATIONARY SOURCE**

Issued pursuant to Title 22a of the Connecticut General Statutes (CGS) and Section 22a-174-3a of the Regulations of Connecticut State Agencies (RCSA).

Owner/Operator	Hytone Ag-Grid, LLC
Address	7 Greenbriar Lane, Kennett Square, PA 19348
Equipment Location	2047 Boston Turnpike, Coventry, CT 06328
Equipment Description	Anaerobic Digestion Facility
Town-Permit Numbers	042-0006
Premises Number	31
Stack Numbers	1 and 2
Prior Permit Issue Date	August 16, 2021
Permit Issue Date	
Expiration Date	None

Katherine S. Dykes
Commissioner

Date

This permit specifies necessary terms and conditions for the operation of this equipment to comply with state and federal air quality standards. The Permittee shall at all times comply with the terms and conditions stated herein.

PART I. FACILITY DESCRIPTION

A. Premises

The anaerobic digestion facility is located at 2047 Boston Turnpike, Coventry, CT 06328 on a portion of a 72-acre-lot property owned by Hytone Farm, LLC. Hytone Ag-Grid, LLC leases 5.6 acres from Hytone Farm, LLC. The anaerobic digestion facility is located south of Hytone Farm, LLC's dairy barns.

B. Anaerobic Digestion Facility Description

The anaerobic digestion facility is comprised of the following components:
(See Part I.C of this permit for flow diagram)

1. Receiving Operation (U1a – U1d, C1a):
 - a. Solid and liquid Source Separated Organic Materials (SSOM) will be accepted including food scraps, liquid beverages and fat/oil/grease. Tankers will unload material via a hose connection through a bar screen separation system in order to remove contaminants greater than 3/8". The strained material is gravity drained into one of two holding tanks (27,000 gallons and 45,000 gallons). Air from the SSOM receiving tanks is filtered through a carbon adsorber (C1a) to remove odors.
 - b. Manure from the Hytone Farm dairy barns is first processed through a McLanahan Sand Separation System or equivalent. Before entering the receiving tank, it is gravity drained into a 27,000 gallon influent tank. Manure processed through the separator beyond the capacity of the receiving tank will be directed to the final storage tank.

All materials in these tanks are mixed via rotating submersible mixers. Material is then pumped into the digester via submersible chopper pumps.

A gravity overflow system prevents excess filling of the tanks. Any excess liquid gravity flows via underground piping into the nearby 6-million-gallon final storage tank. The tanks are also equipped with high limit alarms to notify the operator(s) when near capacity.

The tanks are covered by solid reinforced concrete lids to prevent unwanted objects from entering/falling into the system.

2. Anaerobic Digestion System (U1e, C1b):

The anaerobic digestion system consists of a mixed mesophilic anaerobic digester. The digester is a reinforced concrete tank constructed below grade with only the top four feet protruding from the ground. Manure and SSOM are pumped into the digester at a scheduled rate and are mixed into the system. Through a multistep process terminating in methanogenesis, anaerobic bacteria produce biogas. Biogas bubbles up through the liquid and is captured by an insulated floating high-density polyethylene (HDPE) cover. It then flows to the periphery of the tank and into a piped gas collection system and out of the tank. The optimal operating temperature for the digester is 100°F.

The biogas is then piped through an iron oxide based H₂S scrubber to reduce H₂S levels to an average of 200 ppm. Gas flows downward in the scrubber vessel through a bed of iron oxide

impregnated wood chips. Scrubbed biogas is then be piped directly to the CHP.

Digestate leaving the digester, directly from the receiving tanks, or directly from the sand separation system gravity flows by pipeline into a 6 million gallon final storage tank for long term storage, where it will be kept until it is to be used as fertilizer for the farm.

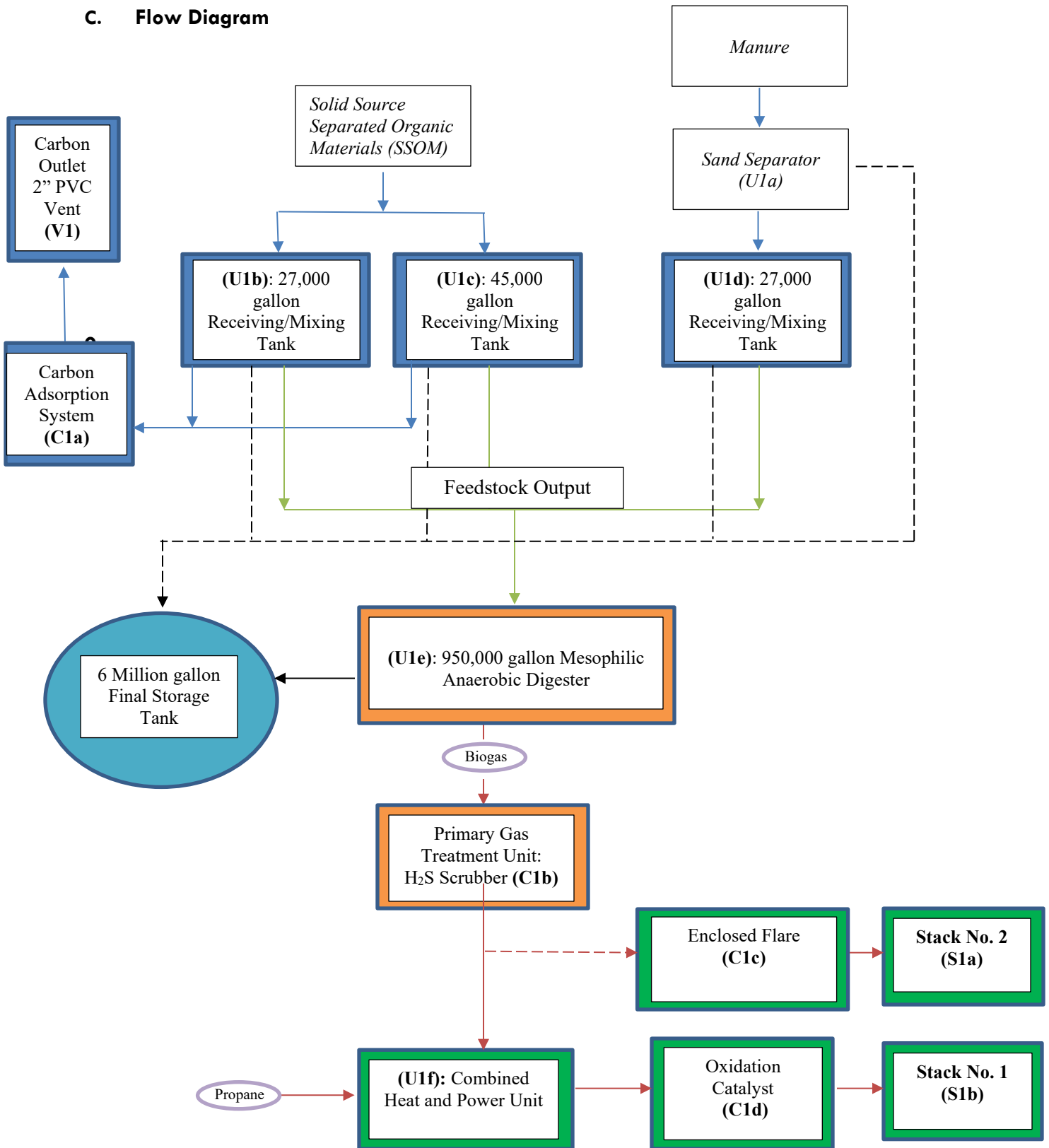
3. Combined Heat and Power System (U1f, C1d):

The biogas produced by the anaerobic digestion process is utilized to generate heat and electricity through the operation of a 778 HP MAN dual-fired engine generator (genset). The CHP unit is fueled by biogas during normal operation and temporarily by propane to start the production of biogas until enough biogas is produced to power the CHP unit, such as during the initial digester system startup, and at times when the digester chemistry must completely start anew, such as after a total digester cleanout. Once enough biogas has been produced, the CHP unit will operate using biogas. Excess heat produced by the CHP unit is utilized to keep the digester at the optimal 100°F operating temperature. Exhaust is treated by a catalytic oxidizer (C1d) to reduce emissions of Carbon Monoxide (CO), Volatile Organic Compounds (VOC) and Formaldehyde (CH₂O).

4. Enclosed Flare (C1c)

An enclosed flare is employed for the disposal of biogas as allowed in Part III.B. of this permit.

C. Flow Diagram



PART II. DESIGN SPECIFICATIONS

A. Equipment Design Specifications

1. *Receiving Operation (U1a thru U1d):*
 - a. McLanahan Sand Separation System (U1a)
 - b. SSOM⁽¹⁾ Receiving/Mixing Tank (U1b): 27,000 gallons
 - c. SSOM⁽¹⁾ Receiving/Mixing Tank (U1b): 45,000 gallons
 - d. Manure Receiving/Mixing Tank (U1c): 27,000 gallons

- (1) SSOM: as defined in Connecticut General Status (CGS) §22a-207(29) means organic materials, including but not limited to, food scraps, food processing residue and soiled or unrecyclable paper that has been separated at the point or source generation from nonorganic materials. For the purposes of this Permit, SSOM includes fats, oils and grease.

2. *Anaerobic Digestion System (U1e):*
 - a. Anaerobic Digester System (U1e): 950,000 gallons

3. *Combined Heat and Power Unit (U1f):*
 - a. Make and Model: MEG550B (Ser. No. M0606221355) – Genset: combination of MAN Engine (Model: E3262 LE212, Serial No. 81261438106138) and a Stamford generator (Model HC 163462, Serial No. X211362708)
 - b. Fuel Type(s): Biogas and Propane
 - c. Maximum Electrical Output: 580 kW

Note: The MAN Engine is a 778 HP, 4-Stroke Lean-Burn Spark-Ignition Engine.

B. Control Equipment Design Specifications

1. *Carbon Adsorption System (C1a, V1):*
 - a. Equipment Vented to the Carbon Adsorption System: 27,000 gallon and 45,000 gallon Receiving/Mixing Tanks (U1b and U1c)
 - b. Make and Model: General Carbon 55 gal “General”
 - c. Adsorbent: Activated Charcoal
 - d. Number of Beds: 2
 - e. Inlet Gas Temperature Range: 60°F
 - f. Design Pressure Drop Range Across Unit: 10 inches H₂O
 - g. Type of Regeneration: Source Shutdown
 - h. Operation Time Before Regeneration: 4-6 months
 - i. Pollutants Controlled: Organic Odors
 - j. Collection Efficiency: 90%
 - k. Overall Control Efficiency: 90%

2. *Primary Gas Treatment Unit - Scrubber (C1b):*

To remove H₂S, gas will be piped through a dry scrubber filled with iron oxide impregnated wood chips.

- a. Equipment Controlled: Anaerobic Digester (U1e)
- b. Make and Model: MVseer H₂S Plus, or Equivalent MV Technologies Hydrogen Sulfide (H₂S) Plus dry scrubber
- c. Type of Scrubber: Packed and Spray
- d. Design Pressure Drop Range Across Unit: 8-12 inches of H₂O

- e. Minimum Gas Flow Rate: 55 scfm
 - f. Pollutant Controlled: Hydrogen Sulfide
 - g. Collection Efficiency: 90%
 - h. Overall Control Efficiency: 90%
3. Enclosed Flare (C1c):
- a. Equipment Controlled: Primary Gas Treatment Unit – H₂S Scrubber (C1b)
 - b. Make and Model: Varec 244E, or equivalent
 - c. Fuel Type: Biogas
 - d. Pollutant Controlled: Biogas (Methane, Hydrogen Sulfide)
 - e. Collection Efficiency: 100%
 - f. Overall Control Efficiency: 99%
4. Oxidation Catalyst (C1d):
- a. Equipment Controlled: Combined Heat and Power Unit (U1f)
 - b. Make and Model: DCL 3-DC64-10CC
 - c. Pollutants Controlled: CO, VOC
 - d. Collection Efficiency: 100%
 - e. Overall Control Efficiency: 95%

C. Stack Parameters

Stack No.	Minimum Stack Height (ft)	Minimum Gas Flow Rate (acfm)	Minimum Stack Exit Temperature (°F)	Minimum Distance to Property Line (ft)
1 (S1b) CHP Unit/Oxidation Catalyst	20	2,358	350	490
2 (S1a) Enclosed Flare	20	180 ⁽¹⁾	1,400	375

⁽¹⁾ The minimum gas flow rate does not include combustion air

PART III. OPERATIONAL CONDITIONS

A. Definitions

Commencement of operation begins with the first input of organic material into the Anaerobic Digester (U1e). Prior to inputting food waste/manure into the system, the Mesophilic Digestion system will be seeded with a biology-rich sludge containing the bacteria needed to initiate the anaerobic digestion process. Biogas will not be generated at this point. SSOM/Manure will then be gradually inputted into the system to start the production of biogas.

B. Equipment

1. Receiving Operation (U1a thru U1d):
- a. Allowable Wastes:
 - i. Receiving/Mixing Tanks (U1b and U1c):
 - (A) Materials Received: SSOM: organic materials; including but not limited to, food scraps, food processing residue and soiled or unrecyclable paper that has

been separated at the point or source of generation from nonorganic materials; and fat/oil/grease (FOG).

- (B) Maximum Daily Throughput (U1b): 27,000 gallons
- (C) Maximum Daily Throughput (U1b): 45,000 gallons
- (D) Maximum Annual Throughput for U1b and U1c: 27,300 tons/year

ii. Receiving/Mixing Tank (U1d):

- (A) Material Received: Manure
- (B) Maximum Daily Throughput: 27,000 gallons
- (C) Maximum Annual Throughput: 21,200 tons/year

Note: The primary receiving tanks each have a liquid level sensor that is used to calculate volume. The conversion factor is 8.3 lb/gal for SSOM and Manure.

2. Anaerobic Digester (U1e):
 - a. Maximum Hourly Biogas Production: 11,000 ft³
 - b. Maximum Annual Biogas Production: 96.4 MMft³
 - c. Prior to utilization by the enclosed flare and the CHP unit, the biogas shall be conditioned by the Scrubber (C1b) to decrease the concentration of hydrogen sulfide to at or below 500 ppm (by volume).
3. Combined Heat and Power System (U1f):
 - a. Allowable Fuel Type: Biogas and Propane
 - b. Maximum H₂S Daily Average Content of the Biogas: 500 ppm (by volume)
 - c. Minimum Methane Content of the Biogas: 55% (by volume)
 - d. Maximum Fuel Firing Rate: 8,150 sft³/hour biogas and 54.12 gal/hour propane
 - e. Maximum Heat Input: 4,948,858 Btu/hour
 - f. Maximum Annual Fuel Usage: 67,826,740 ft³ biogas and 27,060 gal propane
4. Enclosed Flare (C1c):
 - a. Allowable Fuel: Biogas
 - b. Maximum H₂S Content: 500 ppm (by volume)
 - c. Maximum Fuel Firing Rate: 180 sft³/minute
 - d. Maximum Heat Input: 6.6 MMBtu/hr
 - e. Maximum Annual Hours of Operation: 8,760 hours
5. The Permittee shall maintain the combustion chamber temperature within the range recommended by the manufacturer to achieve compliance with the emission limits in this permit.
6. The Permittee may operate the CHP unit and the enclosed flare concurrently.
7. The Permittee shall not exceed 500 hours of startup/shutdown per calendar year for the CHP unit (U1f) and enclosed flare (C1c) combined.
8. The Permittee shall minimize emissions during periods of startup and shutdown of the CHP unit (U1f) by the following work practices and time constraints:
 - a. The oxidation catalyst shall not be bypassed during startup or shutdown.
 - b. Startup shall be defined as the period between initial firing of fuel in the engine and the time when the minimum oxidation catalyst temperature is reached.
 - c. The duration of startups and shutdowns shall not exceed 60 minutes.

9. The Permittee shall keep a hydrogen sulfide backup gas analyzer unit onsite or a loaner unit from the company that will be servicing the gas analyzer unit during the calibration/service time period.
10. The Permittee shall institute shutdown of the equipment in the event of a malfunction causing either an emission exceedance or a parameter monitored out of recommended range is not corrected within 60 minutes.
11. The Permittee shall not allow the release of biogas into the atmosphere at any time.
12. The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
13. The Permittee shall properly operate the control equipment at all times that this facility is in operation and emitting air pollutants.

PART IV. ALLOWABLE EMISSION LIMITS

The Permittee shall not cause or allow this equipment to exceed the emission limits stated herein at any time.

A. Allowable Emissions Limits

1. Enclosed Flare
 - a. Criteria Pollutants and Green House Gases (GHG)

Pollutant	lb/hr	TPY
PM/PM ₁₀ /PM _{2.5}	0.07	0.31
SO ₂	0.91	3.99
NO _x	0.45	1.97
VOC	0.4	1.75
CO	2.0	8.76
GHG (as CO ₂ e)		5729
CH ₄ (as part of GHG)	2.7	11.83

2. Combined Heat and Power System
 - a. Emission rates for Operation on Biogas
Criteria Pollutants and Green House Gases (GHG)

Pollutant	lb/hr
PM/PM ₁₀ / PM _{2.5}	0.16
SO ₂	0.7
NO _x	0.7
VOC	0.9
CO ¹	0.21
CH ₄ (as part of GHG)	10.01

¹ Emission limit for CO is not applicable for startup emissions, which are determined as described in Part IV.C.3.

- b. Emission Rates for Operation on Propane
Criteria Pollutants and Green House Gases (GHG)

Pollutant	lb/hr
PM/PM ₁₀ / PM _{2.5}	0.27
SO ₂	0.019
NO _x	1.71
VOC	1.20
CO	0.17
CH ₄ (as part of GHG)	0.033

- c. Annual Emissions for Operation on Biogas and Propane
Criteria Pollutants and Green House Gases (GHG)

Pollutant	TPY ²
PM/ PM ₁₀ / PM _{2.5}	0.73
SO ₂	3.07
NO _x	3.32
VOC	4.02
CO	0.92
GHG (as CO ₂ e)	4805
CH ₄ (as part of GHG)	43.84

² Annual emissions limitations for the CHP are representative of worst-case annual emissions of the CHP Unit operating for 8760 hours on biogas or 8260 hours on biogas and 500 hours on propane.

3. Total Facility Emissions
Criteria Pollutants and Green House Gases (GHG)

Pollutant	TPY ³
PM/ PM ₁₀ / PM _{2.5}	1.04
SO ₂	7.06
NO _x	5.29
VOC	5.77
CO	9.68
GHG(as CO ₂ e)	10534
CH ₄ (as part of GHG)	55.67

³ Total emissions limitations for the digester facility are representative of worst-case annual emissions of the CHP Unit operating for 8760 hours on biogas or 8260 hours on biogas and 500 hours on propane; and the enclosed flare operating for 8760 hours on biogas.

B. Hazardous Air Pollutants [STATE ONLY REQUIREMENT]

This equipment shall not cause an exceedance of the applicable Maximum Allowable Stack Concentration (MASC) for any Hazardous Air Pollutant (HAP) emitted and listed in RCSA Section

22a-174-29.

C. Demonstration of compliance with the above emission limits shall be met by calculating the emission rates using emission factors from the following sources:

1. Combined Heat and Power System

Fuel: Biogas

PM	Most recent approved stack test results	
PM ₁₀ /PM _{2.5}		
NO _x		
CO		
VOC		
SO _x		
GHG	CO ₂	172.4 lb/MMBtu (Based on 38% fuel CO ₂ passed through and 65% CH ₄ emission factor)
	CH ₄	Most recent approved stack test results
	N ₂ O	0.63 g/MMBtu – EPA Emission Factor for Biomass Fuels
	CO ₂ e	40 CFR Part 98 Subpart C

Fuel: Propane:

PM	Most recent approved stack test results	
PM ₁₀ /PM _{2.5}		
NO _x		
CO		
VOC		
SO _x		
GHG	CO ₂	136.05 lb/MMBtu – 40 CFR 98, Subpart C, Table C-1 and C-2
	CH ₄	0.0066 lb/MMBtu – 40 CFR 98, Subpart C, Table C-1 and C-2
	N ₂ O	0.0013 lb/MMBtu – 40 CFR 98, Subpart C, Table C-1 and C-2
	CO ₂ e	40 CFR Part 98 Subpart C

2. Enclosed Flare

NO _x	0.068 lb/MMBtu – AP42, Table 13.5-1	
CO	0.31 lb/MMBtu – AP42, Table 13.5-2	
VOC	0.4 lb/hr – Rockwood Farm (MA) – Permit No. X275354	
SO _x	500 ppm	
PM/PM ₁₀ /PM _{2.5}	0.07 lb/hr – Rockwood Farm (MA) – Permit No. X275354	
GHG	CO ₂	187.4 lb/MMBtu (Based on 38% fuel CO ₂ passed through and 60% CH ₄ content converted to CO ₂)
	CH ₄	Most recent approved stack test results
	N ₂ O	0.63 g/MMBtu – EPA Emission Factor for Biomass Fuel
	CO ₂ e	40 CFR Part 98 Subpart C

When calculating emissions for startup and shutdown as defined by Part III.B.8.b to demonstrate compliance with Part V.B.3.f, while operating using biogas the Permittee shall calculate CO startup emissions for the combined heat and power system (U1f) using an uncontrolled emission factor. Such factor shall be obtained by taking the CO results, in g/bhp-hr, from the most recent approved stack test for the engine operating using biogas and dividing by 0.05. For each fuel used, startup and shutdown emissions for all other pollutants shall be determined using the same emission factors as in

steady state operation.

The commissioner may require other means (e.g. stack testing) to demonstrate compliance with the above emission limits, as allowed by state or federal statute, law or regulation.

D. Opacity

The CHP system or the enclosed flare shall not exceed 10% opacity during any six-minute-block average as measured by 40 CFR Part 60, Appendix A, Reference Method 9.

PART V. MONITORING, RECORD KEEPING AND REPORTING REQUIREMENTS

A. Monitoring Requirements

1. Receiving/Mixing Operation (U1a thru U1d):
 - a. The Permittee shall monitor the type and quantity of waste introduced into each tank in the Receiving/Mixing Operation (U1a thru U1d).
 - b. The Permittee shall monitor the feedstock output from the Receiving Operation (U1a thru U1d) that goes into the Anaerobic Digester (U1e).

2. Anaerobic Digestion System

The Permittee shall continuously monitor the production of biogas from the Anaerobic Digester (U1e).

3. Combined Heat and Power Unit (U1f) and Enclosed Flare (C1c):
 - a. The Permittee shall monitor biogas and propane fuel fed to the CHP unit and monitor biogas fuel fed to the enclosed flare using a separate, non-resettable totalizing fuel metering device for each unit.
 - b. The Permittee shall continuously monitor the methane content (in percentage of biogas by volume) of the biogas going to the CHP unit.
 - c. The Permittee shall continuously monitor hydrogen sulfide content of the biogas (in percentage of biogas by volume) going to the CHP unit and to the enclosed flare.
 - d. The Permittee shall continuously monitor the oxidation catalyst inlet temperature (°F) and pressure drop (inches of water) across the catalyst bed. The Permittee shall maintain these parameters within the range recommended by the manufacturer to achieve compliance with the emission limits in this permit.

Note: The DCL Catalyst Monitor displays 4 hour rolling average inlet temperature, pressure drop across the catalyst and sounds an alarm when any parameter is out of compliance.
 - e. The Permittee shall continuously monitor the combustion chamber temperature of the enclosed flare when in operation.
 - f. The enclosed flare shall be equipped with instrumentation to monitor flame presence. The flame detection equipment shall be operated continuously and shall signal an alarm whenever the flame-out occurs. Spark ignition operation shall also be monitored.

Note: When the biogas flows through the flare line and the combustion chamber temperature is low, the spark ignition turns on. The lack of spark ignition does not indicate malfunctioning of the flare.

B. Record Keeping Requirements

1. Receiving/Mixing Operation (U1a thru U1d):

- a. The Permittee shall make and keep weekly and consecutive 12-month records of the type and quantity of waste introduced into each tank in the Receiving/Mixing Operation (U1a thru U1d).
 - b. The Permittee shall make and keep weekly and consecutive 12-month records of the feedstock output from the Receiving Operation (U1a thru U1d) that goes into the Anaerobic Digester (U1e).
2. Anaerobic Digestion System (U1e, C1b):
- a. The Permittee shall make and keep records of monthly and consecutive 12 months of biogas production fed to the Scrubber (C1b).
 - b. The Permittee shall continuously record the methane content (in percentage of biogas by volume) of the biogas going to the enclosed flare and CHP unit.
 - c. The Permittee shall continuously record the hydrogen sulfide content of the biogas (in percentage of biogas by volume) going to the enclosed flare and CHP unit.
 - d. The Permittee shall make and keep records of the clean out of the anaerobic digestion system. Such records shall contain the following information:
 - i. Date(s) of clean out event;
 - ii. Equipment affected;
 - iii. Date that the anaerobic digestion system was put back in service.
 - e. The Permittee shall make and keep records of all written recommendations and specifications from the manufacturer for proper operation of the equipment.
3. Enclosed Flare (C1c) and Combined Heat and Power System (U1f):
- a. The Permittee shall make and keep separate records for the CHP unit and enclosed flare of monthly and consecutive 12-month biogas and propane consumption. The consecutive 12-month consumption of each fuel used shall be determined by adding the current month's fuel consumption to that of the previous 11 months. The Permittee shall make these calculations within 30 days of the end of the previous month.
 - b. The Permittee shall calculate and record the monthly and consecutive 12-month PM, PM₁₀, PM_{2.5}, SO₂, NO_x, VOC, CO, methane and GHG emissions in units of tons for each allowable fuel used (biogas and propane). The consecutive 12-month emissions shall be determined by adding (for each pollutant) the current month's emissions to that of the previous 11 months. Such records shall include a sample calculation for each pollutant. The Permittee shall make these calculations within 30 days of the end of the previous month.
 - c. Emissions during startup and shutdown shall be counted towards the annual emission limitation in Part IV.A.3 of this permit.
 - d. When the enclosed flare is operating, the Permittee shall continuously record the combustion chamber temperature.
 - e. The Permittee shall make and keep records of emission stack test results, date testing was performed and Department review/approval.
 - f. To demonstrate compliance with the limit in Part III.B.7 of this permit, the Permittee shall make and keep records of the occurrence and duration of any startup, shutdown or malfunction of the equipment/air pollution control equipment. Such records shall contain the following information:
 - i. Type of event (startup, shutdown or malfunction)
 - ii. Equipment affected;
 - iii. Date of event;
 - iv. Duration of event (minutes);
 - v. Total emissions of NO_x, VOC and CO emitted (lb/time) during the event; and
 - vi. Type of fuel used to restart the CHP unit if the event is a startup.
 - g. The Permittee shall continuously record the oxidation catalyst inlet temperature (°F) and pressure drop (inches of water) across the catalyst bed.

4. Inspections
 - a. The Permittee shall make and keep records of the inspection of the Carbon Adsorption System (C1a), scrubber (C1b), CHP unit (U1f), oxidation catalyst (C1d) and enclosed flare (C1c). Such records shall include:
 - i. The name of the person conducting the inspection;
 - ii. The date of the inspection;
 - iii. The results, recommendations and actions taken during the inspection; and
 - iv. The date the adsorbent for the carbon adsorption device are replaced (if applicable).
 - b. The Permittee shall conduct an inspection and tune-up of the CHP unit a minimum of once per calendar year or in accordance with all applicable subparts of Title 40 CFR Part 60. Each subsequent annual tune-up shall be performed no earlier than 180 days after the previous tune-up conducted. The inspection and tune-up of the emission unit shall be conducted according to the manufacturer's recommended procedures, or, if the manufacturer's recommendations are not available, according to best available practices.
5. The Permittee shall make and keep records of the times the gas analyzer gets sent off site for calibration. Such records shall contain the following information:
 - a. The date the gas analyzer was removed from service;
 - b. The date the gas analyzer was sent off site;
 - c. The date the backup or loaner gas analyzer was installed;
 - d. The date the gas analyzer was received and installed back in service.
6. The Permittee shall keep all records required by this permit for a period of no less than five years and shall submit such records to the commissioner upon request.

C. Reporting Requirements

1. The Permittee shall submit a copy of the extension of the lease with Hytone Farm, LLC for the 5.6 acres of land, which constitutes this premises, a year before the expiration of such lease or, without such lease, an application to modify this permit showing compliance with the regulations applicable at such time.

The Permittee shall submit the above notification to DEEP.BAM.AirPermits@ct.gov

2. The Permittee shall notify the commissioner in writing of any exceedance of an operating parameter, and shall identify the cause or likely cause of such exceedance, all corrective actions and preventive measures taken with respect thereto, and the dates of such actions and measures as follows:
 - a. For any hazardous air pollutant, no later than 24 hours after such exceedance commenced; and
 - b. For any other regulated air pollutant or operating parameter, no later than ten days after such exceedance commenced.
 - c. The Permittee shall submit the above notifications to the Supervisor of the Compliance Analysis & Coordination Unit, Enforcement Section, Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.

PART VI. STACK EMISSION TEST REQUIREMENTS

Stack emission testing shall be performed in accordance with the [Emission Test Guidelines](#) available on the DEEP website at www.ct.gov/deep/stacktesting.

A. CHP Unit

Note: The CHP unit (Dual-Fired Engine) is not a certified engine.

1. The Permittee shall conduct recurrent stack testing for the engine operating on biogas and propane for CO, VOC, and NO_x in accordance with 40 CFR Part 60 Subpart JJJJ.
2. The Permittee shall conduct recurrent stack testing for the engine operating on biogas for CO, methane, hydrogen sulfide, formaldehyde and acrolein within five years from the date of the previous stack test in accordance with Connecticut Emission Test Guidelines to demonstrate compliance with BACT and permit emission limitations.
3. The Permittee shall conduct recurrent stack testing for the engine operating on propane for CO within five years from the date of the previous stack test in accordance with Connecticut Emission Test Guidelines to demonstrate compliance with BACT and permit emission limitations.

B. Enclosed Flare

The Permittee shall conduct recurrent stack testing within five years from the date of the previous stack test to determine compliance with the minimum destruction efficiency of 99% for methane. All compliance testing shall be conducted using test methods and procedures detailed in 40 CFR Part 60 Appendix A.

C. Stack test results shall be reported as follows:

1. All pollutants in units of lb/hr.
2. HAPs in units of µg/m³.
3. Hydrogen Sulfide, Methane, Formaldehyde, Acrolein in units of ppm at actual conditions.

PART VII. OPERATION AND MAINTENANCE REQUIREMENTS

- A.** The Permittee shall operate and maintain this equipment in accordance with the manufacturer's specifications and written recommendations.
- B.** The Permittee shall properly operate the control equipment at all times that this equipment is in operation and emitting air pollutants.

PART VIII. SPECIAL REQUIREMENTS

- A.** The Permittee shall comply with all applicable sections of the following New Source Performance Standard(s) at all times.

40 CFR Part 60, Subpart A and JJJJ - Standards for Performance for Stationary Spark Ignition Internal Combustion Engines

Copies of the Code of Federal Regulations (CFR) are available online at the U.S. Government Printing Office website.

B. Premises Emissions Summary

1. On January 1st of each calendar year, if the potential emissions of NO_x and/or VOC from the premises are equal to or greater than 25 tons per year per pollutant, then for such pollutant(s), the Permittee shall:
 - a. Monitor NO_x and/or VOC emissions, as applicable, from the premises for such calendar year.
 - b. Calculate and record annual NO_x and/or VOC emissions, as applicable, from the premises for such calendar year, in units of tons. The Permittee shall make these calculations on or before February 1st of the following year with respect to the previous calendar year. Such records shall include a sample calculation(s).
 - c. If actual NO_x and/or VOC emissions, as applicable, from the premises are equal to or greater than 25 tons for such calendar year, the Permittee shall submit to the commissioner, on or before March 1st of the following year, an annual emissions summary with respect to the premises for the previous calendar year. Such summary shall be submitted on forms prescribed or provided by the commissioner.

 2. A Permittee is exempt from Part VIII.B.1 requirements of this permit if, on January 1st of the subject year, the premises was operating in accordance with any of the following:
 - a. A valid Title V permit issued pursuant to RCSA section 22a-174-33;
 - b. RCSA section 22a-174-33a; or
 - c. RCSA section 22a-174-33b.
- C.** The Permittee shall not cause or permit the emission of any substance or combination of substances which creates or contributes to an odor beyond the property boundary of the premises that constitutes a nuisance as set forth in RCSA Section 22a-174-23. [STATE ONLY REQUIREMENT]
- D.** The Permittee shall operate this facility at all times in a manner so as not to violate or contribute significantly to the violation of any applicable state noise control regulations, as set forth in RCSA Sections 22a-69-1 through 22a-69-7.4. [STATE ONLY REQUIREMENT]

PART IX. ADDITIONAL TERMS AND CONDITIONS

- A.** This permit does not relieve the Permittee of the responsibility to conduct, maintain and operate the regulated activity in compliance with all applicable requirements of any federal, municipal or other state agency. Nothing in this permit shall relieve the Permittee of other obligations under applicable federal, state and local law.
- B.** Any representative of the DEEP may enter the Permittee's site in accordance with constitutional limitations at all reasonable times without prior notice, for the purposes of inspecting, monitoring and enforcing the terms and conditions of this permit and applicable state law.
- C.** This permit may be revoked, suspended, modified or transferred in accordance with applicable law.
- D.** This permit is subject to and in no way derogates from any present or future property rights or other rights or powers of the State of Connecticut and conveys no property rights in real estate or material, nor any exclusive privileges, and is further subject to any and all public and private rights and to any federal, state or local laws or regulations pertinent to the facility or regulated activity affected thereby. This permit shall neither create nor affect any rights of persons of municipalities who are not

parties to this permit.

- E.** Any document, including any notice, which is required to be submitted to the commissioner under this permit shall be signed by a duly authorized representative of the Permittee and by the person who is responsible for actually preparing such document, each of whom shall certify in writing as follows: "I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information may be punishable as a criminal offense under Section 22a-175 of the Connecticut General Statutes, under Section 53a-157b of the Connecticut General Statutes, and in accordance with any applicable statute."
- F.** Nothing in this permit shall affect the commissioner's authority to institute any proceeding or take any other action to prevent or abate violations of law, prevent or abate pollution, recover costs and natural resource damages, and to impose penalties for violations of law, including but not limited to violations of this or any other permit issued to the Permittee by the commissioner.
- G.** Within 15 days of the date the Permittee becomes aware of a change in any information submitted to the commissioner under this permit, or that any such information was inaccurate or misleading or that any relevant information was omitted, the Permittee shall submit the correct or omitted information to the commissioner.
- H.** The date of submission to the commissioner of any document required by this permit shall be the date such document is received by the commissioner. The date of any notice by the commissioner under this permit, including but not limited to notice of approval or disapproval of any document or other action, shall be the date such notice is personally delivered or the date three days after it is mailed by the commissioner, whichever is earlier. Except as otherwise specified in this permit, the word "day" means calendar day. Any document or action which is required by this permit to be submitted or performed by a date which falls on a Saturday, Sunday or legal holiday shall be submitted or performed by the next business day thereafter.
- I.** Any document required to be submitted to the commissioner under this permit shall, unless otherwise specified in writing by the commissioner, be directed to: Office of Director; Engineering & Enforcement Division; Bureau of Air Management; Department of Energy and Environmental Protection; 79 Elm Street, 5th Floor; Hartford, Connecticut 06106-5127.